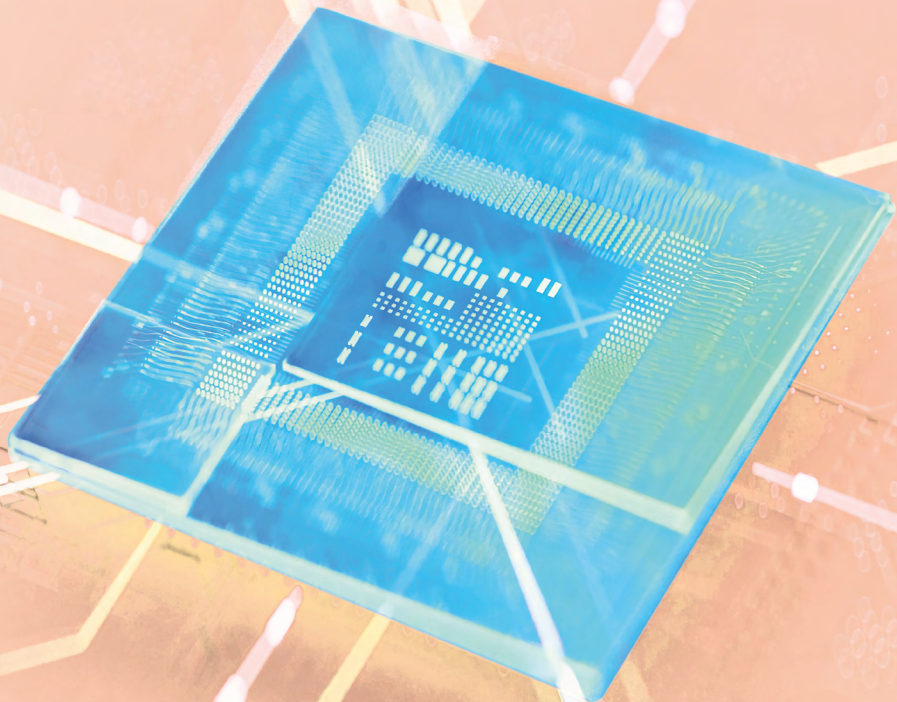


# PRODUCT SELECTION GUIDE 2025



**RICHTEK**  
your power partner.

# your power partner.



## ABOUT RICHTEK

Founded in 1998, Richtek is one of the leading global analog chip design companies, specializing in the design and development of comprehensive power solutions that range from DC/DC regulators to power management multi-channel ICs. Since 2015, Richtek has been a subsidiary of MediaTek, allowing us to leverage MediaTek's expertise to expand our product portfolio through consolidation and collaboration.

Richtek aims to accelerate your design with a variety of design support resources, such as [Richtek Designer™](#), application notes, technical documents, and more. Additionally, you can sign up for ['My Richtek'](#) to access free samples, exclusive product information and the latest [product newsletters](#).

Richtek has established an innovative and dynamic quality management system. As a result of this system, we have attained and continued to maintain [ISO 90001](#), [ISO 14001](#), [ISO 45001](#) and [ISO 26262](#) certifications. Richtek is committed to protecting the environment and conforming to the regulation requirements with the declaration of RoHS, the declaration of REACH and more green product files for product file. All related green documents are available for [download](#) on the Richtek website.

## GET RICHTEK PRODUCTS ONLINE

Richtek works with both [DigiKey](#) and [Mouser Electronics](#), our [global distributors](#), to offer a broad variety of products including ICs, EVBs and design tools to make your designing easier.



## 01• AUTOMOTIVE & E-MOBILITY

With AEC-Q100 certification, Richtek's innovative automotive products are primed for present and future automotive system requirements. We have received ISO 26262 Functional Safety Standard certification to ensure safety requirements of automotive product designs. Our automotive products with high performance and reliability have successfully been selected by automotive manufacturers across the globe.

## 02• COMMUNICATION & ENTERPRISE

Richtek offers a wide-ranging portfolio, delivering dependable, high-performance solutions for point-to-point communication systems, network equipment, power and energy applications, telecom infrastructure, and beyond.



# RICHTEK



## 03• INDUSTRIAL

Richtek's industrial system reference designs empower engineers to create robust, efficient, and secure environments for diverse industrial applications. Our solutions feature a wide input range, catering to varying power requirements while meeting harsh environmental standards.

## 04• COMPUTING & CONSUMER ELECTRONICS

Richtek provides discrete and integrated PMIC solutions tailored for computing, fully compliant with AMD, Intel, and Nvidia voltage regulation specifications, as well as for consumer electronics. Designed for compact PCBs and battery-powered devices, our solutions reduce component counts, optimize power efficiency, and include reference designs to streamline development.

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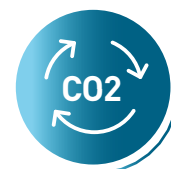
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## SOCIAL RESPONSIBILITY AND ENVIRONMENTAL COMMITMENT

At Richtek, we are deeply committed to socially responsible and environmentally sustainable operations. We leverage our core strengths, technology, and a passionate team, in collaboration with global partners, to make a meaningful impact. We firmly believe that our collective efforts will pave the way for a sustainable future.



### MEETING GREENHOUSE GAS SPECIFICATION

Starting in 2015, we adopted the Greenhouse Gas Specification and successfully transitioned to ISO 14064-1:2018 by 2022. This signifies that Richtek has implemented greenhouse gas emission management and remains committed to reducing its environmental impact.



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### IMPROVING ENERGY CONVERSION EFFICIENCY

We formulate business strategies centered on energy conservation and extend our expertise to a global scale. Since Richtek's involvement in power management chips, our primary focus has been enhancing product efficiency.



### DELIVERING GREEN PRODUCTS

At Richtek, our focus extends beyond anticipating our customers' present and future needs; we are equally committed to ensuring a clean and sustainable future for the next generation.

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**BUILDING  
STRONG  
SUSTAINABILITY  
THROUGH**



# USB TYPE-C & POWER DELIVERY SOLUTIONS

As a member of the USB Implementers Forum (USB-IF), Richtek has been developing innovative USB type-C and PD-compliant products to meet the latest USB PD specification, as well as China's UFCS fast charging standard, for a wide range of applications, including travel adapters, car chargers, portable devices and more.

## USB TYPE-C & PD CONTROLLERS

We offer a broad range of USB type-C & PD controllers for both source and sink USB applications.

Product Number	Policy Management*	Alternate Mode	USB Protocols	Power Role*	VCONN Support	Dead Battery Support	Description	Package(s)
RT1711H	TCPC	Y	PD2.0	DRP	Y	Y	Programmable USB Type-C PD Controller	WL-CSP1.38x1.34-9(BSC)
RT1715	TCPC	Y	PD3.0	DRP	Y	Y	Programmable USB Type-C PD Controller	WL-CSP1.38x1.34-9(BSC)
RT1716	TCPC	Y	PD3.0	DRP	Y	Y	Programmable USB Type-C PD Controller	WL-CSP1.38x1.34-8(BSC)
RT1718S	TCPC	Y	PD3.1	DRP	-	Y	USB Type-C TCPC controller	WQFN4x4-32
RT1719	Port Controller	-	PD3.0	Consumer	-	Y	Sink Only USB Type-C PD Controller	WQFN-20L 3.5x3.5(W-Type)
*RT7202KNL	Integrated	-	PD3.1; PPS	Provider	-	-	Highly Integrated USB Type-C Power Delivery Controller with Built-In N-MOSFET Driver	SOP-10
RT7202KT	Integrated	-	PD3.0; PPS	Provider	-	-	Highly Integrated USB Type-C PD Controller for SMPS	WQFN4x4-16
RT7202KLA	Integrated	-	PD3.0; PPS	Provider	Y	-	USB Type-C PD Programmable Controller	WQFN4x4-24
RT7203BT	Integrated	-	Proprietary Protocols	Provider	-	-	Fast Charge Protocols Controller with Internal Feedback Compensation	SOP-8
*RT7204E	Integrated	-	PD3.1; PPS	Provider	-	-	High-Integration USB Multi-Protocol Controller with Rectification Detection	WQFN4x4-24
RT7206KN	Integrated	-	PD3.1	Provider	Y	-	USB Type-C PD Controller with Built-In Blocking N-MOSFET	SOP-8
RT7206KNC	Integrated	-	PD3.1; PPS	Provider	Y	-	USB Type-C PD Controller with Built-In Blocking N-MOSFET	SOP-8
RT7207KB	Integrated	-	PD3.0	Provider	-	-	USB Type-C PD Controller	WQFN4x4-24

1. Policy management: it coordinates information from USB-related connectors, USB PD controllers, and more. Integration implies that this function is consolidated by the MCU within the IC. The policy management of TCPC is controlled by the system's MCU.

2. Power Role: DRP stands for Dual Role Power, which can function as either a power source or a power sink. Provider operates as a power source.

[\*] Product numbers marked with stars are the new/featured products.



# USB TYPE-C CHARGING PORT AND INTEGRATED BUCK CONVERTERS

Our USB type-C charging port controllers combine Buck converters for automotive car chargers.

Product Number	BUCK Converter			Supported Cable Type	USB Charging Port Controller							
	Vin (V)	Iout (A)	Freq (MHz)		SDP	CDP	DCP	CC1/CC2	VCONN	DFP	Features	Package(s)
RTQ2115A-QA	3 to 36	3	0.3 to 2.2	<ul style="list-style-type: none"> <li>Type-A to Micro-B</li> <li>Type-A to Lightning</li> </ul>	Y	Y	Y	-	-	-	AEC-Q100	WET-WQFN5x5-32
RTQ2115C-QA	3 to 36	3.5	0.3 to 2.2	<ul style="list-style-type: none"> <li>Type-C to Type-C</li> <li>Type-C to Micro-B</li> <li>Type-C to Lightning</li> </ul>	Y	Y	Y	Y	Y	-	AEC-Q100	WET-WQFN6x6-40
RTQ2116A-QA	3 to 36	3	0.3 to 2.2	<ul style="list-style-type: none"> <li>Type-A to Micro-B</li> <li>Type-A to Lightning</li> </ul>	-	-	Y	-	-	-	AEC-Q100	WET-WQFN5x5-32
RTQ2116C-QA	3 to 36	3.5	0.3 to 2.2	<ul style="list-style-type: none"> <li>Type-C to Type-C</li> <li>Type-C to Micro-B</li> <li>Type-C to Lightning</li> </ul>	-	-	Y	Y	Y	-	AEC-Q100	WET-WQFN6x6-40
RTQ2117A-QA	3 to 36	3	0.3 to 2.2	<ul style="list-style-type: none"> <li>Type-A to Micro-B</li> <li>Type-A to Lightning</li> </ul>	Y	Y	Y	-	-	-	AEC-Q100	WETD-VQFN5x5-32
RTQ2117C-QA	3 to 36	3.5	0.3 to 2.2	<ul style="list-style-type: none"> <li>Type-C to Type-C</li> <li>Type-C to Micro-B</li> <li>Type-C to Lightning</li> </ul>	Y	Y	Y	Y	Y	Y	AEC-Q100	WETD-VQFN6x6-40
RTQ2118A-QA	3 to 36	3	0.3 to 2.2	<ul style="list-style-type: none"> <li>Type-A to Micro-B</li> <li>Type-A to Lightning</li> </ul>	-	-	Y	-	-	-	AEC-Q100	WETD-VQFN5x5-32
RTQ2118C-QA	3 to 36	3.5	0.3 to 2.2	<ul style="list-style-type: none"> <li>Type-C to Type-C</li> <li>Type-C to Micro-B</li> <li>Type-C to Lightning</li> </ul>	-	-	Y	Y	Y	Y	AEC-Q100	WETD-VQFN6x6-40

# USB TYPE-C PD AND PWM CONTROLLERS

Our highly integrated USB Type-C PD and PWM controllers, offering various topologies to choose from, are ideal for automotive USB PD chargers, monitors, power banks, and more.

Product Number	Built-in PWM Controller	Vin(V)	Policy Management*	Alternate Mode	USB Protocols	Power Role	Features	Package(s)
*RTQ7860-QT	Buck-Boost	4.5 to 30	Integrated	-	PD3.1; PPS	Provider	AEC-Q100; Adj. Freq. Adj. Soft-Start; I <sup>2</sup> C; AnyPower™; PD Safe®	WQFN6x6-48
RTQ7880-QT	Buck-Boost	4 to 36	Integrated	Y	PD3.0; PPS	Provider	AEC-Q100; Adj. Current Limit; Adj. Freq.; Adj. Soft-Start; I <sup>2</sup> C; AnyPower™; PD Safe®	WET-WQFN6x6-48
RTQ7880A-QT	Buck-Boost	4 to 36	Integrated	Y	PD3.0; PPS	Provider	AEC-Q100; Adj. Current Limit; Adj. Freq.; Adj. Soft-Start; I <sup>2</sup> C; AnyPower™; PD Safe®	WQFN6x6-48
RTQ7882-QT	Buck-Boost	4.5 to 30	Integrated	Y	PD3.1; PPS	Provider	AEC-Q100; Adj. Current Limit; Adj. Freq.; Adj. Soft-Start; I <sup>2</sup> C; AnyPower™; PD Safe®	WET-WQFN6x6-48; WQFN6x6-48
*RTQ7883B-QT	Buck Converter	4.5 to 30; 4.5 to 36 (<0.4s)	Integrated	-	PD3.1; PPS	Provider	AEC-Q100; Adj. Current Limit; Adj. Freq. Adj. Soft-Start; I <sup>2</sup> C; AnyPower™; PD Safe®	WQFN6x6-42
*RT7860	Buck-Boost	4.5 to 30	Integrated	-	PD3.1; PPS	Provider	Adj. Freq. Adj. Soft-Start; I <sup>2</sup> C; AnyPower™; PD Safe®	WQFN6x6-48
RT7880	Buck-Boost	4 to 36	Integrated	Y	PD3.0; PPS	Provider	Adj. Current Limit; Adj. Freq.; Adj. Soft-Start; I <sup>2</sup> C; AnyPower™; PD Safe®	WQFN5x5-40
RT7880F	Buck-Boost	4 to 36	Integrated	Y	PD3.0; PPS	Provider	Adj. Current Limit; Adj. Freq.; Adj. Soft-Start; I <sup>2</sup> C; AnyPower™; PD Safe®	WQFN5x5-40
RT7880T	Buck-Boost	4 to 36	TCPC	Y	PD3.0; PPS	Provider	Adj. Current Limit; Adj. Freq.; Adj. Soft-Start; I <sup>2</sup> C; AnyPower™; PD Safe®	WQFN5x5-40
RT7885V	Buck-Boost	3 to 22	Integrated	-	PD3.0; PPS	DRP	Adj. Current Limit; Adj. Freq.; Adj. Soft-Start; I <sup>2</sup> C	WQFN7x7-60

Product Number	PWM Controller	Vin(V)	Vout(V)	Bi-directional	Power Path Control	2 <sup>nd</sup> OCP	Vout Control	Features	Package(s)
*RT6179	Buck-Boost	4.5 to 36	3 to 36	-	-	-	I <sup>2</sup> C	AnyPower™; Power Support in PD: PD3.0 SPR & PD3.1 EPR; Latched-off Protection	WQFN5x5-40
*RT6179H	Buck-Boost	4.5 to 36	3 to 36	-	-	-	I <sup>2</sup> C	AnyPower™; Power Support in PD: PD3.0 SPR & PD3.1 EPR; Hiccup Protection	WQFN5x5-40
RT6190	Buck-Boost	4.5 to 36	3 to 36	Y	Y	Y	I <sup>2</sup> C	AnyPower™; Power Support in PD: PD3.0 SPR & PD3.1 EPR; Latched-off Protection	WQFN5x5-40
*RT6190G	Buck-Boost	4.5 to 36	3 to 36	-	Y	Y	FB Pin	AnyPower™; General Purpose as System Power	WQFN5x5-40
RT6191A	Buck	4.5 to 36	3 to 36	-	Y	Y	I <sup>2</sup> C	AnyPower™; Power Support in PD: PD3.0 SPR & 28V of PD3.1 EPR; Bypass Mode; Latched-off Protection	WQFN5x5-40
RT6191AH	Buck	4.5 to 36	3 to 36	-	Y	Y	I <sup>2</sup> C	AnyPower™; Power Support in PD: PD3.0 SPR & 28V of PD3.1 EPR; Bypass Mode; Hiccup Protection	WQFN5x5-40

Policy management: it coordinates information from USB-related connectors, USB PD controllers, and more. Integration implies that this function is consolidated by the MCU within the IC. The policy management of TCPC is controlled by the system's MCU.

[\*] Product numbers marked with stars are the new/featured products.



# USB TYPE-C OVER VOLTAGE PROTECTION

Protecting the high voltage shorted to VBUS.

Product Number	VBUS Sourcing	I <sub>q</sub> typ (μA)	Power Role	Description	Features	Package(s)
* RT1735	3.3 to 28	20	Consumer Dual Role	Type-C 28V EPR Protector with CC and SBU Short to VBUS Overvoltage and IEC ESD Protection	IEC61000-4-2 Contact Discharge Protection; Dead Battery Support; 100ns Ultra-Fast OVP Response Time of CC/SBU	WQFN3x3-20
* RT1737	3.3 to 28	350	Consumer Dual Role	Type-C Protection Solutions for Signal Path, CC OVP Switch, VCONN Switch, SBU OVP 1:2 Switch and USB2.0 Switch with BC12 and Charging Port Configuration	IEC61000-4-2 Contact Discharge Protection; Dead Battery Support; 60ns Ultra-Fast OVP Response Time of DP/DM/CC/SBU	WQFN5x5-32
RT1738A	3.3 to 21	40	Consumer Dual Role	Type-C CC and SBU Short to VBUS Over-Voltage and IEC ESD Protection Switch	IEC61000-4-2 Contact Discharge Protection; Dead Battery Support; 60ns Ultra-Fast OVP Response Time of CC/SBU	WQFN3x3-20
RT1738C	3.3 to 21	40	Consumer Dual Role	Type-C CC and SBU Short to VBUS Over-Voltage and IEC ESD Protection Switch	IEC61000-4-2 Contact Discharge Protection; Dead Battery Support; 60/80ns Ultra-Fast OVP Response Time of CC/SBU	WL-CSP1.62x1.62-16(BSC)

[\*] Product numbers marked with stars are the new/featured products.

## E-MARKER SOLUTIONS

Cables that support SuperSpeed USB 3.1 data transfer or cables capable of carrying currents higher than 3A must be electronically marked to inform the host about cable characteristics, such as current capability and the presence of a re-driver for signal conditioning, among other factors. The presence of an e-marked cable is detected by the CC logic, which then connects VCONN power to the cable electronics.

Product Number	V <sub>in</sub>		BMC Signaling Bit Rate	BMC Receiver Normative Cable Termination RA	BIST Mode Supply Current	VCONN1/VCONN2/CCIN Absolute Maximum Ratings	Features	Package(s)
	typ (Kbps)	typ (Ω)	typ (Kbps)	typ (Ω)	typ (mA)	max (V)		
RT1731	3	5.5	300	1000	9.5	22	SOP <sup>1</sup> & SOP <sup>2</sup> Communication; PD 3.0 Compliant; Embedded MTP, RA Resistor & ISO Diode	WDFN2x2-8; WL-CSP0.96x1.64-8(BSC)
RT1731A	3	5.5	300	1000	9.5	22	Support USB4 Type-C Passive Cable; SOP <sup>1</sup> & SOP <sup>2</sup> Communication; PD 3.1 Compliant; Embedded MTP, RA Resistor & ISO Diode	WDFN2x2-8; WL-CSP0.96x1.64-8(BSC)

# POWER MANAGEMENT MULTI-CHANNEL ICS

Richtek's PMICs are developed for various applications, including automotive applications, industrial SoC power, Vcore power, portable devices, SSD, TV SoC power and general power management.

## MULTI-PHASE CONTROLLERS

Buck controllers step down the input voltage to a lower output voltage using external switches. The output current is limited by external MOSFETs, providing designers with flexibility to optimize performance.

Product Number	Vin		Freq	VCC	VID Table Support	Numbers of Phases	Numbers of MOSFET Drivers	Features	Package(s)
	min (V)	max (V)	typ (kHz)	(V)					
*RT8692	2.5	26	300	5	-	2	2	Adj. OCP; Adj. Freq.; Adj. Soft-Start; Enable Input; Power Good; OVP; SCP	WQFN3x3-20
RT8810D	4.5	13.2	200	12	GPU Core Power	2	2	Adj. OCP; Adj. Freq.; Adj. Soft-Start; Built-in Bootstrap Switch; Enable Input; SCP	WQFN4x4-24
RT8816A	2.5	26	300	5	CPU/GPU Core Power	2	2	With PWM-VID Reference; Adj. OCP; Adj. Freq.; Adj. Soft-Start; Enable Input; Power Good; OVP; SCP	WQFN3x3-20
RT8816B	2.5	26	300	5	CPU/GPU Core Power	2	2	With PWM-VID Reference; Adj. OCP; Adj. Freq.; Adj. Soft-Start; Enable Input; Power Good; OVP; SCP	WQFN3x3-20
*RT8816D	2.5	26	300	5	CPU/GPU Core Power	2	2	With PWM-VID Reference; Adj. OCP; Adj. Freq.; Adj. Soft-Start; Enable Input; Power Good; OVP; SCP	WQFN3x3-20
RT8820A	2.5	26	300	5	CPU/GPU Core Power	2	2	With PWM-VID Reference; Adj. OCP; Adj. Freq.; Adj. Soft-Start; Enable Input; Power Good; OVP; SCP	WQFN3x3-20
RTQ8825	4.5	17	400	5	Networking System	3; 2	0	Adj. Freq.; Adj. Soft-Start; Droop Control; Enable Input; Fast Transient Response; G-NAVP Control; I <sup>2</sup> C; OCP; OVP; Power Good; SCP	WQFN7x7-48
RT8880C	4.5	24	300	5	AMD SVI2 Mobile CPU	3; 2	2; 1	Adj. Freq.; DCR Current Sense; Diode Emulation Mode; Droop Control; Enable Input; Fast Transient Response; G-NAVP Control; OCP; OVP; Power Good; SCP; UVP	WQFN6x6x-52
RT8843B	2.7	25	300	5	GPU Core Power for OVR3i+ Spec	3	0	With PWM-VID Reference; Adj. OCP; Adj. Freq.; Adj. Soft-Start; Enable Input; Power Good; OVP; UVP	WQFN3x3-20
*RT8843C	2.7	25	300	5	GPU Core Power for OVR3i+ Spec	3	0	With PWM-VID Reference; Adj. OCP; Adj. Freq.; Adj. Soft-Start; Enable Input; Power Good; OVP; UVP	WQFN3x3-20
RTQ8826	4.5	17	400	5	Networking System	6	0	Adj. Freq.; Adj. Soft-Start; Droop Control; Enable Input; Fast Transient Response; G-NAVP Control; I <sup>2</sup> C; OCP; OVP; Power Good; SCP	WQFN7x7-48
RT8848A	2.8	24	300	5	GPU Core Power for OVR4i+ Spec	8	0	DCR Current Sense; Diode Emulation Mode; Droop Control; Enable Input; I <sup>2</sup> C Control; G-NAVP Control; OCP; OVP; Power Good; SCP; UVP	WDFN5x5-40
RT8848C	2.8	24	300	5	GPU Core Power for OVR4i+ Spec	8	0	DCR Current Sense; Diode Emulation Mode; Droop Control; Enable Input; I <sup>2</sup> C Control; G-NAVP Control; OCP; OVP; Power Good; SCP; UVP	WDFN5x5-40

[\*] Product numbers marked with stars are the new/featured products.



## PRE-GATE DRIVERS

Our MOSFET gate drivers are specifically designed to drive external power MOSFETS.

Product Number	Ugate				Lgate				Vcc	Disable pin	Built-in Bootstrap Switch	Iq	Features	Package(s)
	rise time (ns)	fall time (ns)	source (n)	sink (n)	rise time (ns)	fall time (ns)	source (n)	sink (n)	typ (V)			typ (mA)		
RT9610C	8	8	1	1	8	4	1	0.5	5	Y	Y	0.08	Tri-state Input	WDFN2x2-8
RT9611C	25	12	-	1.4	24	10	-	1.1	12	Y	Y	1.2	Tri-state Input; Short Dead Time	WDFN3x3-8
RT9612B	25	12	-	1.4	24	10	-	1.1	12	-	Y	1.2	Tri-state Input	WDFN3x3-8E; SOP-8
RT9614C	25	12	1.7	1.4	24	10	1.6	1.1	12	Y	Y	0.12	Tri-state Input; Pre-OVP Protection	WDFN2x2-8S
RT9624C	25	12	1.7	1.4	24	10	1.6	1.1	12	Y	Y	0.12	Tri-state Input	WDFN2x2-8S
RT9624F	25	12	1.7	1.4	24	10	1.6	1.1	12	-	Y	0.12	Tri-state Input	WDFN3x3-8

## PORTABLE DEVICES

Develop designs for portable devices by choosing from a variety of our PMICs.

Product Number	Vin Range (V)	Regulator Blocks	Interface	Description	Features	Package(s)
RT4801T	2.5 to 5.5	1x 1.3A Boost + LDO for Positive Vout; Inverting Charge Pump for Negative Vout	I <sup>2</sup> C	Dual Output LCD Bias for Smartphones and Tablets	Positive & Negative Vout from ±4V to ±6V in 100mV steps; Enable Input; Int. Comp.; OCP; OVP; SCP	WL-CSP1.31x2.07-15(BSC)
RT4831A	2.7 to 5	1x 1.8A Boost + 4-channel LED Current Source; 1x 1A Boost + LDO for Positive Vout; Inverting Charge Pump for Negative Vout	I <sup>2</sup> C	4-Channel LCD Backlight Driver with Integrated LCD Dual Bias Power	150mA Output Current Capability; Adj. Current Limit; Adj. Freq.; Positive & Negative Vout from ±4V to ±6.5V in 50mV Steps	WL-CSP1.84x2.68-24(BSC)
RT5024	1.8 to 5.5	2x 1A Boost; 2x 1.3A, 1x 0.6A Buck; 1x LED Driver; 3x 0.3A LDO	I <sup>2</sup> C	I <sup>2</sup> C Programmable Multi-Channel PMU with Battery Charger for CMOS DSC/DV	Auto Power Path Management (APPM); No External MOSFETs Required; Six Preset Power On/Off Sequences	WQFN5x5-40
RT5035C	2.6 to 5.5	1x 3.5A Boost; 1x 3A Buck-Boost; 1x 3A, 3x 1.5A Buck; 1x 0.8A LED Boost; 1x 0.3A, 1x 0.2A, 1x 0.05A LDO; 1x VNEG Charge-Pump	I <sup>2</sup> C	10-Regulator PMIC with LED Driver and RTC for Li-ion Battery Powered Applications i.e., Digital Camera	Dimmable LED Driver; Keep Alive Low Iq LDO	WQFN5x5-40
RT5133	2.8 to 5	1x 0.3A LDO for IO(VIO); 1x 0.3A LDO for VAF; 4x 0.3A LDO for AVDD; 2x 0.6A, 1A LDO for DVDD	I <sup>2</sup> C	8-Channel LDOs & 3 GPOs for Camera Module Application	Enable Input; High PSRR; Low Dropout; OCP	WL-CSP1.84x1.84-25(BSC)
RT5133A	2.8 to 5	1x 0.3A LDO for IO(VIO); 1x 0.3A LDO for VAF; 4x 0.3A LDO for AVDD; 2x 0.6A, 1A LDO for DVDD	I <sup>2</sup> C	8-Channel LDOs & 3 GPOs for Camera Module Application	Enable Input; High PSRR; Low Dropout; OCP	WL-CSP1.84x1.84-25(BSC)
RT9953	2.7 to 5.5	2x 1.5A Buck; 2x 3A Boost; 1x 0.5A LDO	-	4+1 Channel PMIC for Digital Still Cameras	100% Duty Cycle; Enable Input; High PSRR; Internal Comp.; Selectable Buck/Boost	WQFN4x4-24
RT9992	2.7 to 5.5	2x 1.5A Buck; 2x 3A Boost; 2x 0.1A LDO; 1x LED Driver	-	5+2 Channel PMIC for DV	100% Duty Cycle; Enable Input; Internal Comp.; Selectable Buck/Boost	WQFN4x4-32

# SSD

We provide various power solutions specifically for SSD applications.

Product Number	Vin Range (V)	Regulator Blocks	Interface	Description	Features	Package(s)
RT5091C	2.8 to 5.5	1x 4A, 2x 2A Buck; 1x 0.3A LDO	I <sup>2</sup> C	3-Regulator PMIC for SSD	Inrush Control with External MOSFET Drive; Power Sequence; PS3.5 & PS4 Power State Control; Power Good	WQFN4x4-32
RT5091D	2.8 to 5.5	1x 4A, 2x 2A Buck or 1x 2A Buck; 1x 4A Power Switch; 1x 0.3A LDO	I <sup>2</sup> C	3-Regulator PMIC for SSD	One Buck with Bypass Mode; Power Sequence; PS3.5 & PS4 Power State Control; Power Good	WQFN4x4-32
RT5142	2.7 to 3.7	2x 4A; 2x 2A Buck; 2x 0.4A LDO	I <sup>2</sup> C	Power Management Unit Total Power Solution for SSD	Input OV/UV Indication; Outputs OV/UV/OC Fault Protection; Non-Volatile Register Configurability; Supporting Buck3 DVS @Sleep Mode; Meeting PCIe Gen4 Sleep Sequence	WL-CSP2.66x2.70-36(BSC)
* RT5147	2.7 to 3.7	2x 4A; 2x 2A Buck; 2x 0.4A LDO	I <sup>2</sup> C	Power Management Unit Total Power Solution for SSD	Input OV/UV Indication; Outputs OV/UV/OC Fault Protection; Non-Volatile Register Configurability; Supporting Buck2 & Buck3 DVS @Sleep Mode; Meeting PCIe Gen5 Sleep Sequence	WL-CSP2.66x2.70-36(BSC)

# TV AND HOME ENTERTAINMENT

Create designs for TVs and home entertainment systems by selecting from our wide range of PMICs.

Product Number	Vin Range (V)	Regulator Blocks	Interface	Description	Features	Package(s)
RT4841	8.6 to 15.9	1x 5A Boost; Isolation Switch Controller	-	5A Synchronous Boost Converter with Output Isolation MOS for TFT LCDs	OCP; OVP; SCP; UVP	WQFN4x4-20
RT5047B	8 to 16	0.55A LNB Output	-	Single Output LNB Supply and Control Voltage Regulator	Low Noise LNB Output Voltage; ±3% High Accuracy for 0mA to 500mA; Push-Pull Output Stage; External 22kHz Tone Input; Meet DiSEqC™1.x Protocol	PSOP-8
RT5047BF	8 to 16	0.55A LNB Output	-	Single Output LNB Supply and Control Voltage Regulator	Low Noise LNB Output Voltage; ±3% High Accuracy for 0mA to 500mA; Push-Pull Output Stage; External 22kHz Tone Input; Meet DiSEqC™1.x Protocol	PSOP-8
RT5090C	8 to 27 & 4.5 to 5.5	1x Buck Controller; 1x 6A, 2x 3A Buck; 1x 0.6A LDO	I <sup>2</sup> C	5-Regulator PMIC for 12 to 24V TV System	12 to 24V Input Systems or 12 to 24V Input + 3.3V Systems; Power-up SOC Reset	WQFN5x5-40
RT5090F	8 to 27	1x Buck Controller; 1 x 3.5A, 1x 6A, 1x 3A Buck; 1 x 0.6A LDO	I <sup>2</sup> C	TV System Power Management Solution	Supporting Mute, AC OFF Depop Sound and Quick Setting Storage while Input Power Remove; OVP; UVP	WQFN5x5-40
RT5190C	8 to 27	1x Buck controller; 3x Buck; 1x LDO	I <sup>2</sup> C	System Power Management Solution for TV and Wi-Fi System	UVP: Latch /Hiccup; OVP: Only Latch; Power Up SOC Reset	WQFN5x5-40
RT7273	4.5 to 18	1x 3.5A, 2x 2.5A Buck	-	3-Channel Buck Converter	Current Mode; Adj. Freq.; Adj. Soft-Start; Adj. Power Sequence; Adj. Current Limit; Global Hiccup Mode	WQFN6x6-40
RT8935	2.6 to 5.5	12x Level Shifter Outputs	-	12-CH Level Shifter for GOA TFT-LCD Panel	Power Good; UVP; OTP; -15V to 40V Output	WQFN4x4-32

[\*] Product numbers marked with stars are the new/featured products.



# AUTOMOTIVE

We provide various AEC-Q100 qualified power solutions for automotive applications, including ADAS, connected vehicles, digital cockpits and more.

Product Number	Vin Range (V)	Regulator Blocks	Interface	Description	Features	Package(s)
RT2070	4.5 to 15	1x 2A HV Buck; 2x 1A LV Buck; 1x 0.5A LDO; 1x 0.5A Power Switch	I <sup>2</sup> C	4-Regulator PMIC for Automotive Digital Camera Module	AEC-Q100; POC Step-Down & Secondary Regulators; High PSRR LDO for Analog Supply; Power Sequence Programming	WQFN4x4-24
RTQ2071A-QA	4 to 18.5	1x 2A HV Buck; 1x 1.5A LV Buck; 1x 0.75A LV Buck; 1x 0.3A LDO	-	4-Regulator PMIC for Power over Coax Automotive Digital Camera Module	AEC-Q100; FMEA Compliant; 10 Adj. Output Settings; 10 Flexible Power Sequence; Power Good; Sequence Output; Sequence Control for External Power IC via SEQOUT	WETD-VQFN3x3-16
RTQ2071B-QA	4 to 18.5	1x 2A HV Buck; 1x 1.5A LV Buck; 1x 0.75A LV Buck; 1x 0.3A LDO	-	4-Regulator PMIC for Power over Coax Automotive Digital Camera Module	AEC-Q100; FMEA Compliant; 10 Adj. Output Settings; 10 Flexible Power Sequence; Power Good; Power Status Indication via PG	WETD-VQFN3x3-16
RTQ2076-QT	4 to 18.5	1x 2A HV Buck; 1x 1.5A, 1x 0.75A LV Buck; 1x 0.3A LDO	-	CIS/CCM PMIC for Ultra Compact Camera and High Image Quality System	AEC-Q100; FMEA Compliant; 10 Flexible Power Sequence Settings via SEQ Pin	WETD-VQFN3x3-16
RTQ2077S-QT	4.5 to 15	1x 0.4A HV Buck; 1x 0.2A LDO	-	4-Regulator PMIC for Automotive/Industrial Applications	AEC-Q100; POC Step-Down; High PSRR LDO for Analog Supply	WQFN3x3-16
* RTQ2078-QF	4 to 24	1x 1.5A HV Buck; 2x 1.5A LV Buck; 1x 0.3A LDO	I <sup>2</sup> C	Functional Safety PMIC for Automotive Camera Sensor/Module	AEC-Q100; ISO 26262 ASIL B; 36V Load Dump	WET-UQFN3x3-16(FC)
* RTQ2080-QF	4 to 24	1x 1.5A HV Buck; 2x 1.5A LV Buck; 1x 0.3A LDO; 1x 0.4A LDO	I <sup>2</sup> C	Functional Safety PMIC with Built-In WDT Function for Automotive Radar Modules	AEC-Q100; ISO 26262 ASIL B; 36V Load Dump	WET-WQFN4x4-24A
* RTQ2081-QF	4 to 24	1x 1.5A HV Buck; 2x 1.5A LV Buck; 1x 0.3A LDO; 1x 0.4A LDO	I <sup>2</sup> C	Functional Safety PMIC with Built-In WDT Function for Automotive Radar Modules	AEC-Q100; ISO 26262 ASIL B; 36V Load Dump	WET-WQFN4x4-24A
* RTQ2082BA-QT	4 to 24	1x 1.5A HV Buck; 1x 1.5A LV Buck; 1x 0.75A LV Buck; 1x 0.3A LDO	-	Automotive CIS/CCM PMIC for Ultra Compact Camera and High Image Quality System	AEC-Q100; FMEA Compliant; 10 Flexible Power Sequence Settings via SEQ Pin	WETD-VQFN3x3-16
RTQ2117C-QA	3 to 36	1x Charging Port Controller; 1x 3.5A HV Buck 1x USB2.0 Data Switch	-	USB Type-C DFP with Charging Port Controller & Buck Converter for Car Chargers and USB Type-C Power Chargers	AEC-Q100; Selectable Spread-Spectrum Frequency Modulation; Supports USB BC1.2 SDP, DCP, CDP & YD/T 1591-2009 Standard	WETD-VQFN6x6-40
RTQ2134-QA	3 to 6	2+2 Phase: 10A + 10A; 2+1+1 Phase: 10A + 5A + 5A	I <sup>2</sup> C	4-Phase, 2-Channel, or 3-Channel High Current Buck for MediaTek <a href="#">MT2712</a> Car Infotainment Chipset	AEC-Q100; ACOT; Remote sense; DVS with Programmable Slew-rate Control; Watch-dog Timer; PSM/ Forced PWM	WQFN4.5x5-30(FC)
RTQ5115-QA	3.15 to 5.5	1x 2.4A, 2x 2A, 1x 1.6A LV Buck; 8x 0.3A LDO	I <sup>2</sup> C	12-Regulator PMIC with MTP Non-Volatile Memory for MediaTek <a href="#">MT2712</a> Car Infotainment Chipset	AEC-Q100; MTP Memory for Parameter Pre-set; Power Sequence Programming	WQFN7x7-56
RTQ6513-QT	2.9 to 18	16x Gamma Correction; 1x VCOM Op Amp; 1x Rail-to-Rail HAVDD Buffer	I <sup>2</sup> C	10-Bit Programmable Gamma Reference for TFT-LCD Panel	AEC-Q100; OCP; OVP; SCP	WQFN5x5-32
RTQ6749-QT-A2	2.5 to 5.5	1x 0.2A, 1x 0.06A Boost for PAVDD and VGH; 1x 0.2A Buck-Boost for NAVDD; 1x 0.06A VGL Charge Pump; 1x VCOM; 1x RESET Voltage Detector	I <sup>2</sup> C	TFT LCD Integrated Power Module for Automotive Infotainment Applications	AEC-Q100; Outputs Power-off Discharge Function; Programmable Voltage Detector	WDFN5x5-32
RTQ6752-QT	2.5 to 5.5	1x 0.2A Boost for PAVDD; 1x 0.2A NAVDD Buck-Boost; 1x 8-bit Calibrator; 1x RESET Voltage Detector	I <sup>2</sup> C	TFT LCD Integrated Power Module for Automotive Infotainment Applications	AEC-Q100; Outputs Power-off Discharge Function; Programmable Voltage Detector	WET-WQFN5x5-20

[\*] Product numbers marked with stars are the new/featured products.

# MEMORY POWER SOLUTIONS

DDR memory terminator LDOs provide both source and sink functionality and require precise output voltage regulation. These products are compatible with various DDR memory types, ranging from DDR1 to DDR5, including Low Power (LP) DDR3/4. The low Vin LDOs necessitate an external low-power bias voltage. When selecting a suitable product for your application, consider factors such as DDR type, current rating, and features like output voltage sensing, REFOUT, and different power state settings via S3/S5 pins.

## DDR5 PMIC SOLUTIONS

DDR 5 power solutions for DDR5 LR-/RDIMM, and NVDIMM, as well as DDR5 SO-DIMM/UDIMM.

Product Number	Description	Vin range (V)	Regulator blocks	Interface	Features	Package(s)
RTQ5132	DDR5 Client VR on DIMM PMIC	4.25 to 5.5	1x Configurable Dual/Single-phase Buck; 1x Single phase Buck; 2x LDOs	I <sup>2</sup> C, I <sup>3</sup> C	for DDR5 SO-DIMM/UDIMM	WQFN3x4-28(FC)
RTQ5136	DDR5 Client VR on DIMM PMIC	4.25 to 5.5	3x Single-phase Bucks; 2x LDOs	I <sup>2</sup> C, I <sup>3</sup> C	for DDR5 SO-DIMM/UDIMM	WQFN3x4-28(FC)
*RTQ5150	DDR5 Server VR on DIMM PMIC	4.25 to 15	1x Configurable Dual/Single-phase Buck; 2x Single-phase Buck; 2x LDOs	I <sup>2</sup> C, I <sup>3</sup> C	for DDR5 RDIMM	WQFN5x5-35(FC)
*RTQ5152	DDR5 Server VR on DIMM PMIC	4.25 to 15	1x Configurable Dual/Single-phase Buck; 2x Single-phase Buck; 2x LDOs	I <sup>2</sup> C, I <sup>3</sup> C	for DDR5 RDIMM/MR-DIMM	WQFN5x5-35(FC)
*RT6300A	Complete LPDDR5/5X Memory Power Solution	4.5 to 23	1x Load Switch; 1x HV Buck; 1x LV Buck; 1x LDO	-	for LPDDR5 & LPDDR5X memory	WQFN3x3-19(FC)
*RT6301A	Complete LPDDR5/5X Memory Power Solution	4.5 to 23	1x Load Switch; 1x HV Buck; 1x LV Buck	-	for LPDDR5 & LPDDR5X memory	WQFN3x3-19(FC)

## DDR1/2/3/4 POWER SOLUTIONS

DDR power solutions are available for various types of DDR memory, ranging from DDR1 to DDR4, as well as Low Power (LP) DDR3/4.

Product Number	Supported DDR type	Vin	Vout	Vcntl	VTT Output Tolerance	I <sub>source/Isink</sub>	Standby Current	Current Limit	Features	Package(s)
		max (V)	min (V)	(V)	max (+/- mV)	max (A)	typ (mA)	typ (A)		
RTQ2536-QA	DDR1/2/3/4; LP3/4	1	3.5	2.9 to 5.5	30	±2	0.5	2	AEC-Q100; S3; S5; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable	WDFN3x3-10S
RTQ2508	DDR1/2/3/4	1.1	3.5	2.9 to 5.5	25	±3	0.7	4.5	Industrial Grade; S3; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable	WDFN3x3-10
RT2568	DDR1/2/3; LP3/4	1.1	3.5	2.9 to 5.5	25	±2	0.7	4.5	Industrial Grade; S3; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable	WDFN3x3-10
RT2568A	DDR1/2/3; LP3/4	1.1	3.5	2.9 to 5.5	25	±2	0.7	4.5	S3; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable	WDFN3x3-10
RT9026	DDR1/2/3; LP3/4	1.2	3.3	-	40	±3	0.3	4	S3; S5; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable	MSOP-10(PP); PSOP-8; WDFN3x3-10
RT9040	DDR1/2/3; LP3/4	1.1	3.5	2.375 to 5.5	10	±5	0.02	5	S3; REFOUT; VTT Sense; MLCC Stable	WDFN3x3-10
RT9089A	DDR1/2/3; LP3/4	1.1	3.5	2.9 to 5.5	25	±2	0.7	2	S3; S5; VDDQ Sense; REFOUT; VTT Sense; MLCC Stable	WDFN2x2-10

# BATTERY MANAGEMENT

Richtek's battery management products and supporting tools expedite the design of highly efficient and high-performance battery-powered applications. This includes a wide range of chargers, battery gauges, and protection.

## SINGLE CELL LI-ION LINEAR BATTERY CHARGERS

Single-cell Li-ion battery charger ICs are used to provide the correct charge current and voltage in battery-powered applications. These chargers measure both battery charge current and voltage, and they control the pass MOSFET to ensure that the charge current follows the required battery charging operation modes: pre-conditioning, constant current, constant voltage, and current cut-off. Most linear chargers for single-cell Li-ion batteries operate on a 5V supply and are typically suitable for charge currents up to 1.2A.

Product Number	Vin		Battery Charge Voltage	Battery Charge Current	Power Good	Charger Status	Input Source	Features	Package(s)
	min (V)	max (V)	(V)	max (A)					
RT9527	4.4	6	4.2	0.6	Y	Y	AC Adapter; USB	Low Power; Adj. I-Charge; NTC Input; Safety Timer; OVP	WDFN2x2-8
RT9527A	4.4	6	4.4	0.6	Y	Y	AC Adapter; USB	Adj. Charging Current; Programmable Safe Charge Timer; NTC Input; OVP; UVP	WDFN2x2-8
RT9527J	4.4	6	4.2	0.6	Y	Y	AC Adapter; USB	Adj. Charging Current; Programmable Safe Charge Timer; NTC Input; OVP; UVP	WDFN2x2-8
RT9527JA	4.4	6	4.4	0.6	Y	Y	AC Adapter; USB	Adj. Charging Current; Programmable Safe Charge Timer; NTC Input; OVP; UVP	WDFN2x2-8
RT9527JH	4.4	6	4.35	0.6	Y	Y	AC Adapter; USB	Adj. Charging Current; Programmable Safe Charge Timer; NTC Input; OVP; UVP	WDFN2x2-8
RT9526A	4.5	6	4.2	1	Y	Y	AC Adapter; USB	Programmed Charging Current; Input OVP; UVP	SOT-23-6; WDFN2x3-8
RT9532	4.3	6.2	4.2	1	Y	Y	AC Adapter; USB	Adj. I-Charge & I-End-of-Charge; Iset/USB500/USB100 Modes; 4.2V Factory Mode; 4.9V LDO; OVP; UVP	WDFN3x2-10
*RT9532S	4.3	5.5	4.2;4.35	1.2	-	Y	AC Adapter; USB	Adj. Charging Current; 4.2V/4.35 Factory Mode; 4.9V LDO; OVP; UVP	WDFN3x2-10
RT9525	4.2	6	4.2	1.2	Y	Y	AC Adapter; USB	Auto Power Path; Adj. I-Charge; NTC Input; Safety Timer; 1.5A/USB500/USB100 Modes; System Disconnect; OVP	WQFN3x3-16
RT9505	4.5	6	4.2	1.2	Y	Y	AC Adapter	Automatic Recharge; Battery Temp. Monitoring	WDFN3x3-10
RT9519B	4.4	6	4.2	1.2	Y	Y	AC Adapter	Auto Power Path; Selectable OCP; OVP; UVP	WQFN3x3-20
RT9528	4.35	6	4.2	1.2	Y	Y	AC Adapter; USB	I <sup>2</sup> C; Auto Power Path; USB/Audio/Video Switches; Integrated 3.3V LDO; OVP; UVP	WQFN4x4-28

[\*] Product numbers marked with stars are the new/featured products.



# SINGLE CELL LI-ION SWITCHING CHARGERS

Single-cell battery switching chargers offer higher charge currents for high-capacity batteries in portable devices. They are I<sup>2</sup>C-controlled and include features such as input detection, Boost (OTG) functionality, and multiple protection functions.

Product Number	Vin		Battery CV Charge		OTG Boost		Switch Freq (MHz)	Power Good Signal	Charge Status Signal	Interface	Features	Package(s)
	min (V)	max (V)	Voltage (V)	Current (A)	Voltage (V)	Current (A)						
RT9465	3.9	14	3.8 to 5.06	0.6 to 3	-	-	0.75; 1.5	-	-	I <sup>2</sup> C	Adj. OCP; OCP; UVP; OVP	WQFN3x3-16
RT9467	4	14	3.9 to 4.71	0.1 to 5	4.425 to 5.825	0.5 to 2.4	0.75; 1.5	-	Y	I <sup>2</sup> C	OTG; USB Device Detection; 2-Charge Reporting; IR Compensation; Shipping Mode; NTC Input	WQFN4x4-24
RT9470	3.9	13.5	3.9 to 4.7	0 to 3.15	4.85 to 5.3	0.5; 1.2	1.5	Y	Y	I <sup>2</sup> C	OTG; USB Device Detection; Shipping Mode; NTC Input with JEITA Settings; Supporting PG & PSEL Pins; I <sup>2</sup> C Slave Address:53	WL-CSP2.1x 2.5-30(BSC)
RT9470D	3.9	13.5	3.9 to 4.7	0 to 3.15	4.85 to 5.3	0.5; 1.2	1.5	Y	Y	I <sup>2</sup> C	OTG; USB Device Detection; Shipping Mode; NTC Input with JEITA Settings; Supporting D+/D-; I <sup>2</sup> C Slave Address:53	WL-CSP2.1x 2.5-30(BSC)
* RT9470G	3.9	13.5	3.9 to 4.7	0 to 3.2	4.85 to 5.3	0.5; 1.2	1.5	Y	Y	I <sup>2</sup> C	OTG; USB Device Detection; Shipping Mode; NTC Input with JEITA Settings; Supporting PG & PSEL Pins; I <sup>2</sup> C Slave Address:5B	WL-CSP2.1x2.5-30(BSC)
RT9471	3.9	13.5	3.9 to 4.7	0 to 3.15	4.85 to 5.3	0.5; 1.2	1.5	Y	Y	I <sup>2</sup> C	OTG; USB Device Detection; Shipping Mode; NTC Input with JEITA Settings; Supporting PG & PSEL Pins; I <sup>2</sup> C Slave Address:53	WQFN4x4-24
RT9471D	3.9	13.5	3.9 to 4.7	0 to 3.15	4.85 to 5.3	0.5; 1.2	1.5	Y	Y	I <sup>2</sup> C	OTG; USB Device Detection; Shipping Mode; NTC Input with JEITA Settings; Supporting D+/D-; I <sup>2</sup> C Slave Address:53	WQFN4x4-24
RT9472	3.9	13.5	3.9 to 4.7	0 to 3.15	4.85 to 5.3	0.5; 1.2	1.5	Y	Y	I <sup>2</sup> C	OTG; Adj. Current Limit; AC adapter & USB input; Supporting PG & PSEL Pins; I <sup>2</sup> C Slave Address:53; VBUS OVP 14V	WQFN4x4-24
RT9472D	3.9	13.5	3.9 to 4.7	0 to 3.15	4.85 to 5.3	0.5; 1.2	1.5	-	Y	I <sup>2</sup> C	OTG; Adj. Current Limit; AC adapter & USB input; Supporting D+/D-; I <sup>2</sup> C Slave Address:53; VBUS OVP 14V	WQFN4x4-24

[\*] Product numbers marked with stars are the new/featured products.

# CAPACITIVE DIVIDER CHARGERS

Our smart chargers integrate cap divider topology (DIV2 mode). The cap divider topology relies on a smart wall adapter to control the input voltage and current during the charging process.

Product Number	Vin		Battery Charge		Charge		Switch Freq (MHz)	Charge Status Indicator	Interface	Features	Package(s)
	min (V)	max (V)	Voltage max (V)	Current max (A)	Type	Input Source					
RT9756	2.8	17	5	7	Switching	USB	0.1 to 1	Y	I <sup>2</sup> C	Smart Cap Divider Topology; External OVP Control; Input Reverse Blocking NFET; 2-way Regulation; Dual-phase Charge Pump Core; 9-System Alert	WL-CSP2.8x2.8-36(BSC)
* RT9756A	2.8	17	5	8	Switching	USB	0.1 to 1	Y	I <sup>2</sup> C	Smart Cap Divider Topology; External OVP Control; Input Reverse Blocking NFET; Dual-phase Charge Pump Core; 11-way Protection; 9-way System Alert	WL-CSP2.8x2.8-36(BSC)
* RT9757	2.8	17	5	7	Switching	USB	0.1 to 1	Y	I <sup>2</sup> C	Smart Cap Divider Topology; External OVP Control; Input Reverse Blocking NFET; Dual-phase Charge Pump Core; 11-way Protection; 9-way System Alert; Supporting UFCS Protocol	WL-CSP2.8x2.8-36(BSC)

Product Number	Vin		Battery Charge		Charge		Switch Freq	Charge Status Indicator	Interface	Features	Package(s)
	min (V)	max (V)	Voltage max (V)	Current max (A)	Type	Input Source	(MHz)				
*RT9757A	2.8	17	5	8	Switching	USB	0.1 to 1	Y	I <sup>2</sup> C	Smart Cap Divider Topology; External OVP Control; Input Reverse Blocking NFET; Dual-phase Charge Pump Core; 11-way Protection; 9-way System Alert; Supporting UFCS Protocol	WL-CSP2.8x2.8-36(BSC)
RT9758	4	21	10.5	5	Switching	AC Adapter; USB	0.3 to 1.5	-	I <sup>2</sup> C	DIV2 Mode, Direct Charge Topology (Bypass Mode); Input Reverse Blocking NFET; Dual-Phase Charge Pump Core; 6-way Protection	WL-CSP2.74x2.84-36(BSC)
*RT9758D	7.4	21	10.5	6	Switching	AC Adapter; USB	0.3 to 1.5	-	I <sup>2</sup> C	DIV2 Mode, Direct Charge Topology (Bypass Mode); Input Reverse Blocking NFET; 3-Error Charge Pump Core; 6-way Protection	WL-CSP2.74x2.84-36(BSC)

[\*] Product numbers marked with stars are the new/featured products.

## MULTI-CELL LI-ION SWITCHING BATTERY CHARGERS

Supporting devices with rechargeable up to 4-cell batteries, our multi-cell Li-ion switching battery chargers have low impedance power path, optimizing switch-mode operation efficiency.

Product Number	Vin		Battery Charge		OTG Boost		Switch Freq	Power Good Signal	Charge Status Signal	Interface	Features	Package(s)
	min (V)	max (V)	VBAT (V)	IBAT (A)	Voltage (V)	Current (A)	(MHz)					
RT9490	3.6	24	5 to 18.8	5	2.8 to 22	0.12 to 3.32	0.75/1/1.5	Y	Y	I <sup>2</sup> C	2-4Cell; Supports USB OTG; Dual Input Selection; BC1.2, Host Mode and FRS/Seamless; Full Protection	WL-CSP2.93x3.46-56(BSC)
*RT9490S	3.6	24	3 to 9.99	5	2.8 to 22	0.12 to 3.32	0.75/1/1.5	Y	Y	I <sup>2</sup> C	1-2Cell; Supports USB OTG; Dual Input Selection; BC1.2, Host Mode and FRS/Seamless; Full Protection	WL-CSP2.93x3.46-56(BSC)
RT9492	3.6	24	5 to 18.8	5	2.8 to 22	0.12 to 3.32	0.75/1/1.5	-	Y	I <sup>2</sup> C	2-4Cell; Supports USB OTG; Dual Input Selection; BC1.2, Host Mode and FRS/Seamless; Full Protection	VQFN4x4-29T(FC)

[\*] Product numbers marked with stars are the new/featured products.

## BATTERY FUEL GAUGES

Richtek's battery gauges employ Voltaic Gauge with current sensing (VGCS) to determine the State of Charge, State of Health, Full Charge Capacity, Time to Empty, and Cycle Count of Li-Ion cells. They utilize an internal algorithm to calculate these parameters and communicate them to the host microcontroller via I<sup>2</sup>C.

Product Number	Vin		Voltage Error	Current Error	Active Current	Sleep Current	Shut-Down Current	Application	Features	Package(s)
	min (V)	max (V)	(mV)	(%)	( $\mu$ A)	( $\mu$ A)	( $\mu$ A)			
RT9422	2.5	5.5	$\pm$ 7.5	$\pm$ 1	14	5	0.5	Battery Pack Side	SOC via Voltaic Gauge with Current Sensing; SOC, SOH, FCC, TTE & Cycle Count Report; Alert for Voltage, Temperature; NVM for Lifetime, Battery Characterize, Manufacturer Info.	WDFN2.5x4-12
RT9422A	2.5	5.5	$\pm$ 7.5	$\pm$ 1	14	5	0.5	Battery Pack Side	SOC via Voltaic Gauge with Current Sensing; SOC, SOH, FCC, TTE & Cycle Count Report; Alert for Voltage, Temperature; NVM for Lifetime, Battery Characterize, Manufacturer Info.	WDFN2.5x4-12
RT9426	2.5	5.5	$\pm$ 7.5	$\pm$ 1	14	5	0.5	System Side	SOC via Voltaic Gauge with Current Sensing; SOC, SOH, FCC, TTE & Cycle Count Report; Alert for Voltage, Current, Temperature; Battery Presence	WDFN2.5x4-12; WL-CSP2.29x1.74-9(BSC)
RT9426A	2.5	5.5	$\pm$ 7.5	$\pm$ 1	14	5	0.5	System Side	SOC via Voltaic Gauge with Current Sensing; SOC, SOH, FCC, TTE & Cycle Count Report; Alert for Voltage, Current, Temperature; Battery Presence	WL-CSP2.29x1.74-9(BSC); WDFN2.5x4-12; WL-CSP2.29x1.74-9(BSC)
RT9427	2.5	5.5	$\pm$ 5	$\pm$ 0.5	14	5	1	System Side	SOC via Voltaic Gauge with Current Sensing; SOC, SOH, FCC, TTE & Cycle Count Report; 5 $\mu$ A Ultra Low Power Consumption	WDFN2.5x2-10(FC); WL-CSP1.68x1.81-9(BSC)
*RT9427R	2.5	5.5	$\pm$ 5	$\pm$ 1	12	-	1	System Side	SOC via Voltaic Gauge with Current Sensing; SOC, SOH, FCC, TTE & Cycle Count Report; 5 $\mu$ A Ultra Low Power Consumption	WL-CSP1.68x1.81-9(BSC)
*RT9440	2.8	26	$\pm$ 3	$\pm$ 0.5	240	70 to 125	1.6	Battery Pack Side	2-to-5-series-cell; SOC via Voltaic Gauge with Current Sensing; Support up to 1MHz SMBus Interface	VQFN4x4-32

[\*] Product numbers marked with stars are the new/featured products.

## MONITORING & PROTECTION

We provide a wide range of power monitoring, and protection ICs to monitor system conditions and ensure normal operation.

Product Number	Vin		Vin_ovp	Delay Time	Iocp	Ron	Protection	Features	Package(s)
	min (V)	max (V)	typ (V)	max (us)	typ (A)	typ (mOhm)			
RT9746	3	6.7	6.8	0.25	4.5	35	VBUS Over Voltage Protection with a PTVS Diode	Int. Fixer or Ext. Adj. Input OVP; OCP	WL-CSP1.92x1.27-12(BSC)
RT9746H	3	6.7	6.8	0.25	-	35	VBUS Over Voltage Protection with a PTVS Diode	Int. Fixer or Ext. Adj. Input OVP	WL-CSP1.92x1.27-12(BSC)

Product Number	Vin		Amplifier Ratio	Vcc Operating Current	Vcc Shutdown Current	Protection	Features	Package(s)
	min (V)	max (V)	-	( $\mu$ A)	( $\mu$ A)			
RT9553B	5	24	100	200	10	Current/Voltage Sense Protection	Programmable current limit; Enable Input	WDFN3x3-10
RT9554A	5	24	200	200	5	Current Sense Protection	Programmable current limit; Enable Input	WDFN2x2-8

Product Number	Vin		Vin OVP	Delay Time	I <sub>sd</sub>	Protection	Features	Package(s)
	min (V)	max (V)	typ (V)	max ( $\mu$ s)	typ ( $\mu$ A)			
RT9718B	4	6.9	5.85	1	65	Over Voltage Protection	Enable Input; OCP	WDFN2x2-8
RT9718C	4	6.9	6.25	1	65	Over Voltage Protection	Enable Input; OCP	WDFN2x2-8

# AUDIO

We offer a diverse portfolio of audio amplifiers for portable devices, including high-performance class-D audio power solutions at various power levels, audio switches, as well as design tools, GUI, and customized software to deliver the optimal audio experience.

## CLASS-D AUDIO POWER AMPLIFIERS

The audio amplifiers feature either analog or digital input systems with advanced EQ and frequency DRC control.

Product Number	Output Channels	Vin		Output Power	SNR (dB)	Signal Input	Description	Features	Package(s)
		min (V)	max (V)						
RT9101	1	2.5	5.5	2.65W & 2.08W	95	I <sup>2</sup> S	PWM Class-D Power Amplifier	Filter-less; Anti-Pop	WDFN3x3-8
RT9101C	1	2.5	5.5	2.65W & 2.08W	95	I <sup>2</sup> S	PWM Class-D Power Amplifier	Filter-less; Anti-Pop	WL-CSP1.45x1.45-9B (BSC)
* RT9123	1	2.5	5.5	3.2W	120	I <sup>2</sup> S	Mono PWM Class-D Power Amplifier	Clipping Reduce Gain Control	WDFN3x3-12
RT5509	1	2.7	5.5	5.4W & 4.3W	100	I <sup>2</sup> S	Speaker Amplifier with Speaker Protection	Left-justified, Right-justified	WL-CSP3.04x2.99-48 (BSC)
RT5512B	1	3	5.5	7W & 1.7W	117	I <sup>2</sup> S	Audio Amplifier with IV Sense	Left-justified, Right-justified, and TDM Format	WL-CSP2.57x2.57-36B (BSC)
RT9118	2	8	17	10W (2x) & 15W (2x)	95	Analog	Class-D Amplifier with Headphone Amplifier	Filter-less; Power Limit Setting; Gain Setting; 4Ω and 8Ω	WQFN4x5-28
RT9114B	2	8	26.4	9W (2x) & 20W (2x)	100	I <sup>2</sup> S	Digital Audio Amplifier System with EQ and DRC Control	Filter-less; >24 Bi-quads EQ; 3-Band DRC; Anti-Pop	VQFN4x5-28
RT9114C	2	8	26.4	9W (2x) & 20W (2x)	100	I <sup>2</sup> S	Digital Audio System with EQ and Frequency DRC Control	Filter-less; >24 Bi-quads EQ; 3-Band DRC; Anti-Pop	VQFN4x5-28
RT9119	2	8	26.4	9W (2x) & 20W (2x)	100	I <sup>2</sup> S	Digital Audio System with EQ and Frequency DRC Control	Filter-less; >36 Bi-quads EQ; 3-Band DRC; Anti-Pop	VQFN4x5-28
RT9120	2	4.5	26.4	9W (2x) & 20W (2x)	106	I <sup>2</sup> S	Inductor-Less, Closed-Loop Class-D Digital Audio Amplifier with DRC Control	Filter-less; Supports Left-justified, Right-justified; 1-Band DRC; Anti-Pop	VQFN5x5-32
RT9120M	2	4.5	26.4	9W (2x) & 20W (2x)	106	I <sup>2</sup> S	Inductor- Closed-Loop General-Purpose Class-D Digital Audio Amplifier with DRC Control	Filter-less; Supports Left-justified, Right-justified, TDM formats; 1-Band DRC; Anti-Pop	VQFN5x5-32
RT9120S	2	4	26.4	30W (2x) & 53W (1x)	113	I <sup>2</sup> S	Inductor-Less, Closed-Loop Class-D Digital Audio Amplifier with DRC Control	Filter-less; Supports Left-justified, Right-justified, TDM formats; 1-Band DRC; Anti-Pop	VQFN5x5-32
RT9121	2	4	26.4	30W (2x)	113	I <sup>2</sup> S	Stereo, Inductor-Less Digital Audio, Closed-Loop System with 192-KHz Extended Audio Processing	Filter-less; Hifi-3 DSP Process, 160kB SRAM; Build in programmable DSP	VQFN6x6-48
* RTQ9128DL-QA	4	4.5	27	22W(4x) & 27W (4x) & 45W (4x)	115	I <sup>2</sup> S	Ultra-Low Noise, High-Efficiency, Digital Input 4-Channel Automotive Audio Amplifier with I <sup>2</sup> C Diagnostics	AEC-Q100; Built-In Anti-Pop; Built-In Thermal Fold-Back & Clip Detection	RLQFP10x10-64(PP)

[\*] Product numbers marked with stars are the new/featured products.



## AUDIO SWITCHES

Our audio switches process analog audio signals with low noise, minimal distortion, and high THD+N performance.

Product Number	Vcc		High Absolute Maximum Ratings	USB Switch Ron	AUD Switch Ron	Negative Rail Capability	Description	Features	Package(s)
	min (V)	max (V)							
RT8980H	2.7	5.5	24 (SBU1/2 & GSBU1/2); 20V (DPR/DNL)	3	1	-3 to 3	USB Type-C Analog Audio and USB Switch	USB Type-C Port to Pass USB2.0 Data Signal (DP, DN), Sideband Use Signal, Analog Audio R L Signal, and Analog Microphone Signal	WL-CSP2.21x2.25-25(BSC)

## AMPLIFIERS

We offer amplifiers for TFT LCD display applications, as well as accurate current sensing solutions for various applications.

### HIGH SPEED OPERATIONAL AMPLIFIERS

Specifically designed for TFT LCD Gamma and Vcom buffer, with high slew-rate, high current and rail-to-rail swing.

Product Number	Vs		Number of Outputs	Voffset	Iout	Ipeak	Slew Rate	-3dB Band Width	Features	Package(s)
	min (V)	max (V)								
RT9133A	4.5	15	1	2	35	120	12	12	Rail-to-Rail Swing	SOT-23-5; WDFN2x2-6
RT9134	4.5	15	4	2	35	120	12	12	Rail-to-Rail Swing	VQFN4x4-16; TSSOP-14
RT9136	4.5	16.5	4	2	35	120	12	12	Rail-to-Rail Swing	MSOP-10
RTQ9148-QT	6	20	1	2	50	350	35	-	AEC-Q100; Rail-to-Rail Swing; High Speed; High Peak Current	WDFN3x3-6
RT9148	6	20	1	2	50	350	35	16	Rail-to-Rail Swing; High Speed; High Peak Current	TSOT-23-5; UDFN2x2-6; WDFN2x2-6
RT9146	6	20	1	2	80	1000	35	16	Rail-to-Rail Swing; High Speed; High Peak Current	WDFN3x3-8; WDFN3x3-8S; WQFN4x4-16
RT9147	6	20	2	2	80	1000	35	16	Rail-to-Rail Swing; High Speed; High Peak Current	WDFN3x3-8; WDFN3x3-8S; WQFN4x4-16

# CURRENT SENSE AMPLIFIERS

Designed to offer high accurate current sensing for a wide range of common mode voltages and temperatures.

Product Number	Common-mode Voltage		Gain Error (max) (%)	CMRR (typ)	Description	Features	Package(s)
	min (V)	max (V)					
RT6050	2	80	1	100	High-Side Measurement Current Shunt Monitor with Comparator	Internal Open-Drain Comparator; Latching Capability on Comparator; Voltage Gain=20V/V	MSOP-8
RTQ6050	2	80	1	100	High-Side Measurement Current Shunt Monitor with Comparator	Internal Open-Drain Comparator; Latching Capability on Comparator; Voltage Gain=20V/V <b>Industrial Grade</b>	MSOP-8
RT6052	2	80	1	100	High-Side Measurement Current Shunt Monitor with Comparator	Internal Open-Drain Comparator; Latching Capability on Comparator; Voltage Gain=100V/V	MSOP-8
RTQ6052	2	80	1	100	High-Side Measurement Current Shunt Monitor with Comparator	Internal Open-Drain Comparator; Latching Capability on Comparator; Voltage Gain=100V/V <b>Industrial Grade</b>	MSOP-8
RT6053	0	36	0.3	140	High/Low-Side Measurement, Bi-Directional Current and Power Monitor with 16-Bit ADC	Low Offset Voltage: Max 25 $\mu$ V; Current, Bus Voltage and System Power Reporting; OC, OV and Over-Power Alert; I <sup>2</sup> C & SMBus Interface	VQFN3x3-16
RTQ6053	0	36	0.3	140	High/Low-Side Measurement, Bi-Directional Current and Power Monitor with 16-Bit ADC	Low Offset Voltage: Max 25 $\mu$ V; Current, Bus Voltage and System Power Reporting; OC, OV and Over-Power Alert; I <sup>2</sup> C & SMBus Interface <b>Industrial Grade</b>	VQFN3x3-16
RT6056	0	36	0.12	140	High/Low-Side Measurement, Bi-Directional Current & Power Monitor with 16-Bit ADC Op Amp/Alert	Low Offset Voltage: Max 10 $\mu$ V; Current, Bus Voltage and System Power Reporting; OC, OV and Over-Power Alert; I <sup>2</sup> C & SMBus Interface	MSOP-10
RTQ6056	0	36	0.12	140	High/Low-Side Measurement, Bi-Directional Current & Power Monitor with 16-Bit ADC Op Amp/Alert	Low Offset Voltage: Max 10 $\mu$ V; Current, Bus Voltage and System Power Reporting; OC, OV and Over-Power Alert; I <sup>2</sup> C & SMBus Interface <b>Industrial Grade</b>	MSOP-10
*RTQ6059	0	32	0.2	140	High/Low-Side Measurement, Bi-Directional Current and Power Monitor with I <sup>2</sup> C Interface	Programmable Gain; High Accuracy; Max 0.5% Over Temperature; I <sup>2</sup> C & SMBus Interface <b>Industrial Grade</b>	TSOT-28(COL)

[\*] Product numbers marked with stars are the new/featured products.

# LCD AND OLED DISPLAY POWER

Richtek offers an extensive portfolio of display power solutions, including LCD bias and OLED power drivers, designed for use in portable, wearable and automotive applications. These driver products feature unique topologies to optimize power efficiency for displays of various sizes while ensuring high responsiveness for the best picture quality. Richtek has further expanded its offerings to support next-generation applications with higher current loads.

## WHITE LED DRIVERS FOR DISPLAY BACKLIGHTING

Single-string or multi-string LED drivers are suitable for small battery-powered devices or large LCD panel backlighting, offering precise dimming control.

Product Number	Vin		Vout	Iswitch	LED Channels	Topology	SW Freq	LEDs per String	Iout per Channel	Rdson	Dimming Control	Features	Package(s)
	min (V)	max (V)	max (V)	min (A)			(kHz)	max (pcs)	max (mA)	( $\Omega$ )			
RT4526	2.5	5.5	37	1	1	Boost	1000	10	20	0.7	PWM	OVP; OCP	TSOT-23-6
RT4533	2.5	5.5	36.5	1	1	Boost	1100	10	30	0.4	PWM	OVP; OCP	TSOT-23-6
RT8463	6	50	50	2	1	Boost; Buck; Buck-Boost	470	-	210	0.3	Analog; PWM; PWM to Analog	Adj. Soft-Start; Enable Input; OCP; OVP	TSSOP-14(PP); WDFN3x3-12
RT8511B	2.7	24	43	1.66	1	Boost	500	10	-	0.4	PWM	Adj. OVP; Ext. Dim Filter; OCP	WDFN2x2-8
RT8547	2.8	5.5	6.5	2.16	1	Boost & Current Source	2000	1	1600	0.3	Pulse	Flash LED Driver; OVP; UVP	WDFN3x2-14
RT9284A	2.7	5.5	20	0.75	1	Boost	1200	5	100	0.75	PWM	OVP; OCP	TSOT-23-5; TSOT-23-6
RT4531	2.5	5.5	36	1.15	2	Boost & Current Source	1000	10	20	0.27	PWM; Pulse	OVP; OCP	WL-CSP1.35x1.35-9(BSC)
RT9285B	2.7	5.5	20	-	3	Boost	1000	5	-	0.75	PWM	OVP; OCP	TSOT-23-6; WDFN2x2-8
RT9302	2.8	5.5	-	-	3	Current Source	-	1	20	0.4	Pulse; PWM	100% Duty Cycle; Enable Input	TSOT-23-8
RT9361A	2.8	5	5; 4.5	-	3	Charge Pump	1000	1	150	-	-	Enable Input; OCP; SCP	(T)SOT-23-6; WDFN2x2-6
RT9394	2.8	5	5	-	3	Charge Pump	1000	1	110	-	Analog	OCP; SCP	WDFN2x2-6S
RT8510	4.2	24	43	2	4	Boost	1000	48	40	0.25	PWM	Adj. Freq.; OCP; OVP	WQFN3x3-16
RT8549L	4.2	24	60	2.8	4	Boost & Current Source	400	15	180	0.18	Analog; PWM	Adj. Freq.; Soft-Start; OCP; OVP	WDFN5x5-16
RT8560	7	40	60	1.2	4	Boost	1000	15	30	-	Analog; Digital	Soft-Start; OCP; OVP	WQFN4x4-20
RT8575	4.2	24	60	2.8	4	Boost	150 to 500	18	150	0.15	PWM	Adj. Freq.; Adj. String Current; OCP; Adj. OVP	WDFN5x5-16
RT8577	9	28	-	-	4	Boost	100 to 1000	13	200	-	PWM	Adj. Freq.; OCP; OVP	WQFN5x5-20
RT8577A	5.5	40	45	1.6	4	Boost	200 to 2100	-	120	-	PWM	AECQ-100; Adj. Freq.; OCP; OVP	WQFN5x5-20
RT9300A	2.5	5.5	-	-	4	Current Source	-	1	15	-	PWM	Enable Input; UVP	SOT-23-6
RT9365	2.8	5	3.5	-	5	Charge Pump	250	1	20	-	Pulse	Enable Input; OVP	WQFN3x3-16

Product Number	Vin		Vout	Iswitch	LED Channels	Topology	SW Freq	LEDs per String	Iout per channel	Rdson	Dimming Control	Features	Package(s)
	min (V)	max (V)	max (V)	min (V)			(kHz)	max (pcs)	max (mA)	( $\Omega$ )			
RT4537	2.7	24	36	2	6	Boost & Current Source	100 to 1600	11	25	-	PWM	Adj. Freq.; OCP; OVP; SCP; I <sup>2</sup> C Control: ILED, Dimming, & Freq.	WQFN3x3-24
RT4540	2.7	24	36	2	6	Boost & Current Source	100 to 1600	11	25	-	PWM; Analog	Adj. Freq.; OCP; OVP; SCP; I <sup>2</sup> C Control: ILED, Dimming, & Freq.	WQFN3x3-24
RT4527A	2.7	24	36	2	6	Boost & Current Source	100 to 1600	11	25	-	PWM	Adj. Freq.; OCP; OVP; SCP; I <sup>2</sup> C Control: ILED, Dimming, & Freq.	WQFN3.5x3.5-20
RT4539	2.7	24	40	2	6	Boost & Current Source	300 to 1600	-	35	0.25	PWM; PWM to Analog	Adj. Freq.; Adj. OCP; OVP; I <sup>2</sup> C Control: ILED, Dimming, & Freq.	WL-CSP1.71x2.371-20B(BSC)
RT4539A	2.7	24	40	2	6	Boost & Current Source	300 to 1600	-	35	0.25	PWM	Adj. Freq.; Adj. OCP; OVP; I <sup>2</sup> C Control: ILED, Dimming, & Freq.	WL-CSP1.71x2.371-20B (BSC); WQFN4x4-24
RT8532	2.5	24	43	2.2	6	Boost & Current Source	300 to 1500	10	50	0.2	PWM; PWM to Analog, Mix mode	Adj. Freq.; Adj. String Current; OCP; Adj. OVP	WQFN3x3-20
RT8532A	2.5	24	43	2.2	6	Boost & Current Source	300 to 1500	10	50	0.2	PWM; PWM to Analog, Mix mode	Adj. String Current; OCP; Adj. OVP	WQFN3x3-20
RT8543	2.5	24	43	2.2	6	Boost & Current Source	600	13	50	0.2	PWM	Adj. Freq.; OCP; OVP	UQFN4x4-20; WQFN4x4-20
RT8555	2.7	24	36	2	6	Boost & Current Source	900	11	35	0.1	PWM; PWM to Analog	Adj. Freq.; Adj. Soft-Start; OCP; OVP	WL-CSP1.65x2.05-20(BSC)
RT8568A	4.2	24	43	1.6	6	Boost	500 to 2000	12	40	0.25	PWM	Adj. Freq.; OCP; OVP	WQFN4x4-20
RT8569	4.2	24	43	1.6	6	Boost	500; 1000; 2000	12	40	0.2	PWM	Adj. Freq.; OCP; OVP	WQFN4x4-20
RT8561A	6	24	40	2.5	8	Boost	1000	10	30	0.3	Analog; Digital	Adj. Soft-Start; Enable Input; OCP; OVP	WQFN4x4-24
RT8566	9	28	45	2.5	8	Boost	100 to 1000	-	120	-	PWM	Adj. Freq.; Soft-Start; OCP; OVP	TSSOP-28(PP)
RT8306	4.5	5	24	-	48	Current Source	-	-	60	-	Analog; PWM; SPI	Power Good; SCP	WQFN8x8-72

## AMOLED DISPLAY DRIVERS

Fully integrated AMOLED drivers with small footprint are ideal for wearable AMOLED panels with symmetrical or asymmetrical drive voltage.

Product Number	Vin		Vout		Iout		AVDD		Interface	Features	Package(s)
	min (V)	max (V)	pos (V)	neg (V)	pos (V)	neg (V)	supply (V)	current (A)			
RT4706	2.5	5	4.6 to 5	-0.8 to -6	0.7	0.7	5.5 to 7.9	0.15	S-Wire	Boost for AVDD & Positive Voltage; Inverter for Negative Voltage	WL-CSP2.469x2.469-36B (BSC)
RT4722C	2.9	4.5	4.6	-1.4 to -5.4	0.3	0.3	5.8 to 7.9	0.055	S-Wire	Boost for AVDD & Positive Voltage; Inverter for Negative Voltage	WQFN3x3-16
RT4723	2.5	4.6	4.6	-0.6 to -2.4	0.055	0.055	-	-	S-Wire	Boost for Positive Voltage; -0.33/-0.5x Charge Pump for Negative Voltage	WL-CSP1.39x2.07-15(BSC)
RT4730	2.9	5.2	2.8 to 4	-0.6 to -4	0.05	0.05	3.3	0.15	S-Wire	Buck-boost for AVDD & Positive Voltage; 1x Charge Pump for Negative Voltage	WL-CSP2.34x2.34-16(BSC)



# AUTOMOTIVE

TOP  
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Designed for automotive display LED backlight applications.

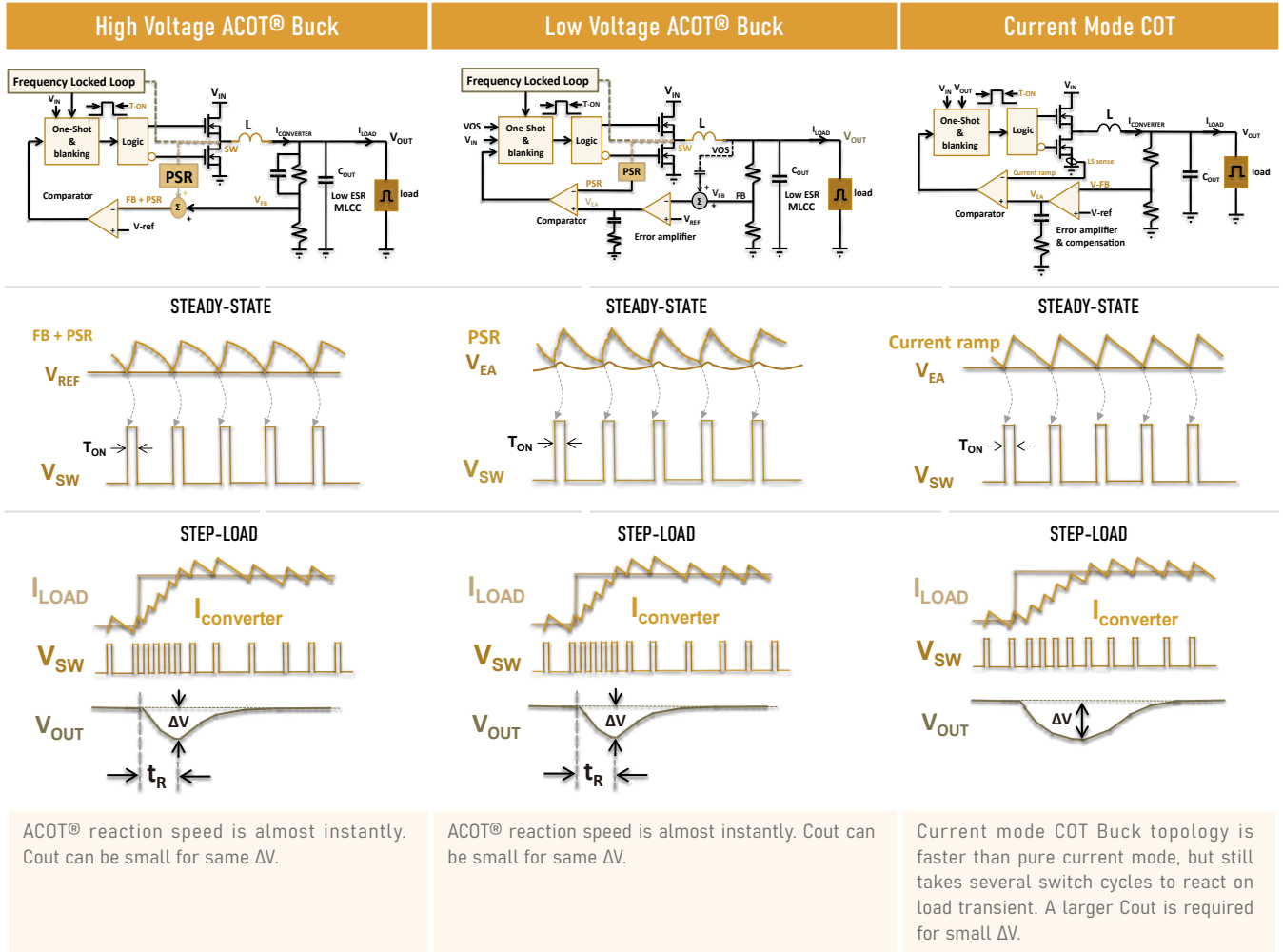
Product Number	Vin Range		Vout Range		LED Channels	ILED/CH (mA)	Ext. Sync.	Dimming Resolution		LED Configurations	Features	Package(s)
	(V)	(V)	(V)	(V)				I <sup>2</sup> C/PWM	Analog			
* RTQ4544-QB	5 to 40	Boost: 20 to 45 SEPIC: 6 to 24	4	30 to 170	-	16-bit	12-bit	3 LED Strings: 2 to 4 Separate Strings	AEC-Q100; ISO 26262 ASIL-B Compliance; Automatic Output Voltage Discharge; Phase Shift PWM/Direct PWM/DC/Mixed Dimming	WQFN4x4-24S		
* RTQ4546-QB	5 to 40	Boost: 20 to 45 SEPIC: 6 to 24	6	30 to 200	-	16-bit	12-bit	8 LED Strings: 2 to 6 Separate Strings / group of 2 / group of 3 / all connected	AEC-Q100; ISO 26262 ASIL-B Compliance; Automatic Output Voltage Discharge; Phase Shift PWM/Direct PWM/DC/Mixed Dimming	WQFN4x4-24S		
* RTQ4547-QB	5 to 40	Boost: 20 to 45 SEPIC: 6 to 24	6	30 to 200	Y	16-bit	12-bit	8 LED Strings: 2 to 6 Separate Strings / group of 2 / group of 3 / all connected	AEC-Q100; ISO 26262 ASIL-B Compliance; Automatic Output Voltage Discharge; Phase Shift PWM/Direct PWM/DC/Mixed Dimming	WET-VDFN9.8x6.4 -38		
* RTQ4549-QT	5 to 40	Boost: 20 to 45 SEPIC: 6 to 24	6	30 to 200	-	16-bit	12-bit	8 LED Strings: 2 to 6 Separate Strings / group of 2 / group of 3 / all connected	AEC-Q100; Automatic Output Voltage Discharge; Phase Shift PWM/Direct PWM/DC/ Mixed Dimming	WQFN4x4-24S		
* RTQ4550-QT	5 to 40	Boost: 20 to 45 SEPIC: 6 to 24	6	30 to 200	Y	16-bit	12-bit	8 LED Strings: 2 to 6 Separate Strings / group of 2 / group of 3 / all connected	AEC-Q100; Automatic Output Voltage Discharge; Phase Shift PWM/Direct PWM/DC/ Mixed Dimming	WET-VDFN9.8x6.4 -38		
* RTQ4552-QT	5 to 40	Boost: 20 to 45 SEPIC: 6 to 24	6	30 to 170	-	16-bit	12-bit	3 LED Strings 2 to 4 Separate Strings	AEC-Q100; Automatic Output Voltage Discharge; Phase Shift PWM/Direct PWM/DC/ Mixed Dimming	WQFN4x4-24S		
* RTQ4554-QT	5 to 40	Boost: 20 to 45 SEPIC: 6 to 24	4	30 to 170	-	16-bit	12-bit	3 LED Strings: 2 to 4 Separate Strings	AEC-Q100; Automatic Output Voltage Discharge; Phase Shift PWM/Direct PWM/DC/ Mixed Dimming	WQFN4x4-24S		
* RTQ8306-QT	VDDA: 5 VDD:1.8	24	36	5 to 120	-	12-bit	8-bit	-	AEC-Q100; Integrated Dynamic Headroom Control; Support Dot Correlation Function; HDR Mode	WET-WQFN7x7-56		
* RTQ8310-QT	VDDA: 5 VDD:1.8	24	48	5 to 120	-	12-bit	8-bit	-	AEC-Q100; Integrated Dynamic Headroom Control; Support Dot Correlation Function; HDR Mode	WQFN8x8-72		

[\*] Product numbers marked with stars are the new/featured products.

# SWITCHING REGULATORS

## BUCK CONVERTERS

The control loop topology of a Buck converter has a significant impact on the converter's transient behavior, stability criteria, and switching frequency behavior. The following overview shows the different Buck converter control topologies in the Richtek portfolio, along with their advantages and disadvantages:

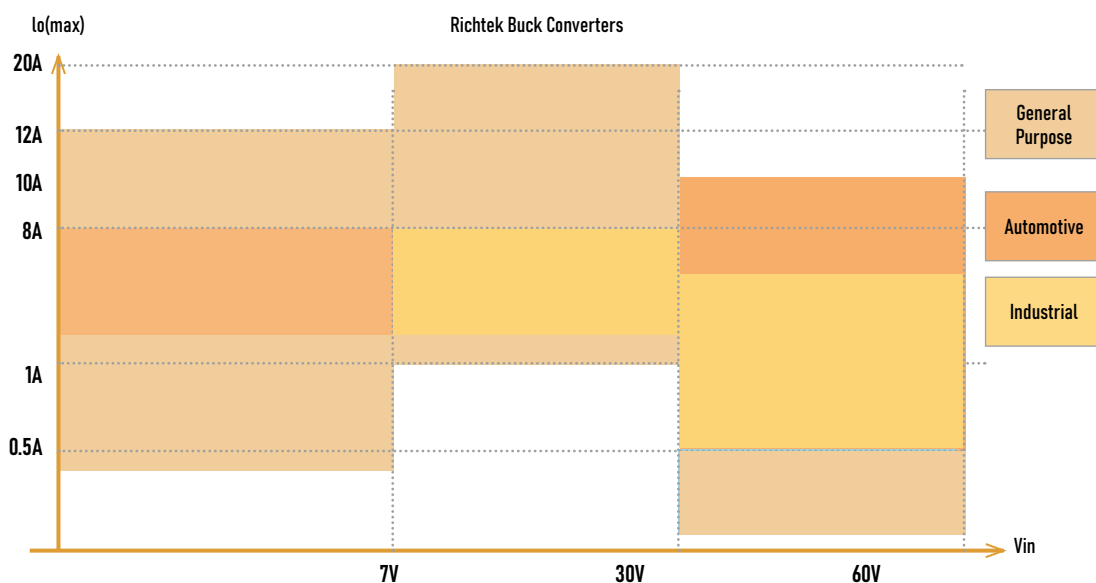


Topology	Switching Frequency	Transient Response	Stability	Pulse Skip Ripple	Duty-Cycle Range	Over-Current Protection	Ext. Sync. Possibility	Ext. Component Selection
Advanced-COT HV ACOT®	Variable	Excellent (Incl. PSM transition)	Simple	Medium	Very Low-Medium	Valley or Peak & Valley Current	No	Not Critical
Advanced-COT LV ACOT®	Variable	Excellent (Incl. PSM transition)	Medium	Medium	Low-High	Valley or Peak & Valley Current	No	Required
Current Mode-COT (CM-COT)	Variable	Good	Medium	Medium	Low-Medium	Valley Current	No	Required

The main difference between ACOT® and COT: For good stability COT must use higher ESR (Polymer) output capacitors, as they do not integrate the PSR ramp. ACOT® can work with both low ESR and high ESR output capacitors.

## GENERAL BUCK CONVERTER FEATURES AND FUNCTION DESCRIPTION:

- PSM parts will automatically skip pulses at light load thereby enhancing light load efficiency, at the expense of higher ripple and worse transient response in light load range.
- Forced PWM parts will maintain their nominal switching frequency also at light load, which gives lowest ripple and best transient response.
- 100% Duty-Cycle parts can maintain regulation even at extremely low  $V_{in}$ - $V_{out}$  difference, and the parts can operate in drop-out mode which can be useful in battery-powered applications.
- External Sync. Parts can have their internal switching frequency clock synchronized to an external clock, making it possible to run several Buck converters at the same frequency and controlling the frequency precisely to avoid noise in certain sensitive frequency bands.
- External Soft-Start makes it possible to adjust the converter rise time during start-up via an external capacitor, to reduce inrush currents when using large output capacitors.
- External Comp. allows users to tune the converter control-loop response. This adds extra flexibility in the choices of output capacitors in current mode converters.
- Power Good signal can be used to signal other devices that the voltage rail is within specification. It can also be used to drive the enable pin of another converter, thereby giving a specific power sequence during start-up.



**<7V LOW VIN**

Solutions for low-voltage requirements with our broad portfolio of Buck converters.

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (µA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT5707A	2.2	5.5	0.7	3.1	0.4	1200	350	250	0.46	PSM	HCOT†	-	-	Ultra-low Iq; 100% Duty Cycle;	WL-CSP0.9x1.6-8(BSC)
RT5713	2.2	5.5	0.525	4	0.4	1200	300	170	0.36	PSM	HCOT†	-	-	Ultra-low Iq; 100% Duty Cycle	WL-CSP1.415x0.885-6B(BSC), WDFN2x2-6
RT8024	2.5	5.5	0.6	5.5	0.4	1500	300	250	50	PSM	CM	-	-	100% Duty Cycle	(T)SOT-23-5
RT5707	2.2	5.5	1.2	3.3	0.6	1200	350	250	0.46	PSM	HCOT†	-	-	Ultra-low Iq; 100% Duty Cycle	WL-CSP0.9x1.6-8(BSC)
RT5714	2.2	5.5	0.525	4	0.6	1200	300	170	0.36	PSM	HCOT†	-	-	Ultra-low Iq; 100% Duty Cycle	WL-CSP1.415x0.885-6B(BSC), WDFN2x2-6
RT8008	2.5	5.5	0.6	5.5	0.6	1500	300	250	50	PSM	CM	-	-	100% Duty Cycle	(T)SOT-23-5
RT8009	2.5	5.5	0.5	5.5	0.6	1250	300	250	50	PSM	CM	-	-	100% Duty Cycle	(T)SOT-23-5
RT8099	2.7	5.5	0.7	5	0.6	1500	280	250	0.02	PSM	CM	-	-	100% Duty Cycle	UDFN1.6x1.6-6
RT8035	2.5	5.5	0.6	5.5	0.8	1250	250	260	70	Forced PWM	CM	-	-	Dual Buck; 100% Duty Cycle	WDFN3x3-10
RT5710A	2.5	6	0.6	3.4	1	1500	160	110	22	PSM	CMCOT	-	-	Hiccup UVP	WDFN2x2-6
RT5710B	2.5	6	0.6	3.4	1	1500	160	110	300	Forced PWM	CMCOT	-	-	Hiccup UVP	WDFN2x2-6
RT5710F	2.5	6	0.6	3.8	1	1000	160	110	22	PSM	CMCOT	-	Y	Hiccup UVP	WDFN2x2-6
*RT5716	1.8	5.5	0.4	3.3	1	4000	120	80	2.5	Forced PWM	RBCOT	-	-	100% Duty Cycle	TWL-CSP0.69x1.04-6;WDFN1.5x1.5-6(FC)
*RT5721A	2.5	5.5	0.3	1.3	1	2400	60	34	45	PSM	ACOT	-	Y	I <sup>2</sup> C Control	WL-CSP1.31x1.62-11(BSC)
RT5750A	2.5	6	0.6	6	1	1500	120	80	25	PSM	ACOT	-	Y	100% Duty Cycle	TSOT-23-5; TSOT-23-6
RT5750B	2.5	6	0.6	6	1	1500	120	80	300	Forced PWM	ACOT	-	Y	100% Duty Cycle	TSOT-23-5; TSOT-23-6
RT5751A	2.5	6	0.6	6	1	1500	120	80	25	PSM	ACOT	-	Y	100% Duty Cycle	WDFN2x2-6
RT5751B	2.5	6	0.6	6	1	1500	120	80	300	Forced PWM	ACOT	-	Y	100% Duty Cycle	WDFN2x2-6
RT5760A	2.5	6	0.6	6	1	2200	120	80	25	PSM	ACOT	-	Y	100% Duty Cycle	SOT-563 (FC)
RT5760B	2.5	6	0.6	6	1	2200	120	80	300	Forced PWM	ACOT	-	Y	100% Duty Cycle	SOT-563 (FC)
RT5760C	2.5	6	0.6	3.8	1	2200	120	80	25	PSM	ACOT	-	-	100% Duty Cycle	SOT-563(FC)
RT5760D	2.5	6	0.6	3.8	1	2200	120	80	300	Forced PWM	ACOT	-	-	100% Duty Cycle	SOT-563(FC)
RT5761A	2.5	6	0.6	6	1	2200	120	80	25	PSM	ACOT	-	Y	100% Duty Cycle	UDFN1.4x1-6(FC)
RT5761B	2.5	6	0.6	6	1	2200	120	80	300	Forced PWM	ACOT	-	Y	100% Duty Cycle	UDFN1.4x1-6(FC)

[†] HCOT control is a hysteretic control mode for ultra-low Iq parts.

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (µA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT8010	2.5	5.5	0.6	5.5	1	1500	280	250	50	PSM	CM	-	-	100% Duty Cycle	WDFN2x2-6
RT8010A	2.5	5.5	0.6	5.5	1	1500	280	250	50	Forced PWM	CM	-	-	100% Duty Cycle	WQFN3x3-16
RT8016	2.5	5.5	0.6	5.5	1	1200 to 1800	280	250	50	Forced PWM	CM	-	-	100% Duty Cycle	WQFN2x2-6
RT8020	2.5	5.5	0.6	5.5	1	1200 to 1800	280	250	50	Forced PWM	CM	-	-	Dual Buck; 100% Duty Cycle	WQFN3x3-12
RT8020C	2.5	5.5	0.6	5.5	1	1200 to 1800	280	250	50	PSM	CM	-	-	Dual Buck; 100% Duty Cycle	WQFN3x3-12
RT8057	2.7	5.5	0.6	5	1	2250	250	200	81	PSM	CM	-	-	100% Duty Cycle	WDFN2x2-6S
RT8059	2.8	5.5	0.6	5.5	1	1500	280	250	78	PSM	CM	-	-	100% Duty Cycle	TSOT-23-5
RT8075	2.5	5.5	0.6	5	1	1250	250	260	70	PSM	CM	-	-	Dual Buck; 100% Duty Cycle	WQFN3x3-10
RT8096A	2.5	6	0.6	3.4	1	1500	160	110	22	PSM	CMCOT	-	Y	Hiccup UVP	(T)SOT-23-5; (T)SOT-23-6
RT8096B	2.5	6	0.6	3.4	1	1500	160	110	300	Forced PWM	CMCOT	-	Y	Hiccup UVP	(T)SOT-23-5; (T)SOT-23-6
RT8096C	2.5	6	0.6	3.4	1	1500	160	110	22	PSM	CMCOT	-	Y	Hiccup UVP	TSOT-23-5; TSOT-23-6
RT8012A	2.6	5.5	0.8	5	1; 1.5	1200	180; 300	260; 90	830	Forced PWM	CM	-	Y	Dual Buck; 100% Duty Cycle	WQFN4x4-16
RTQ2102A-QA	3	6	0.45	3.3	1.5	2700	110	90	30	PSM	ACOT	-	Y	AEC-Q100; 100% Duty Cycle	WDFN3x3-8
RT5751C	2.8	6	0.6	3.3	1.5	1500	120	120	25	PSM	ACOT	-	Y	100% Duty Cycle	TSOT-25; TSOT-26; WDFN2x2-6
RT5751D	2.8	6	0.6	3.3	1.5	1500	120	120	25	Forced PWM	ACOT	-	Y	100% Duty Cycle	TSOT-25; TSOT-26; WDFN2x2-6
RT5796A	2.5	6	0.6	3.4	1.5	1000	160	110	22	PSM	CMCOT	-	Y	Hiccup UVP	(T)SOT-23-5; (T)SOT-23-6
RT5796C	2.5	6	0.6	3.4	1.5	1000	160	110	22	PSM	CMCOT	-	-	Hiccup UVP	TSOT-23-5; TSOT-23-6
RT2101B	2.95	6	0.827	3.6	1.5	700 to 2200	45	42	550	Forced PWM	CM	Y	Y	AEC-Q100; Ext. Comp. & Sync.	WQFN3x3-16
RTQ2103A-QA	3	6	0.45	3.3	2	2700	130	105	30	PSM	ACOT	-	Y	AEC-Q100; 100% Duty Cycle	PSOP-8
RT5715	2.5	5.5	0.45	3.3	2	2700	100	80	30	PSM	ACOT	-	Y	100% Duty Cycle	WDFN2x2-8S
RT5715A	2.5	2.5	0.45	5.5	2	2700	100	80	30	PSM	ACOT	-	Y	100% Duty Cycle	WDFN2x2-8S
*RT5742	2.5	2.5	0.3	1.3	2	2400	60	34	50	PSM	ACOT	-	Y	I <sup>2</sup> C Control	WL-CSP1.31x1.62- 11(BSC)
RT5752A	2.5	5.5	0.6	5.5	2	1200	100	70	23	PSM	ACOT	-	Y	100% Duty Cycle	TSOT-23-5; TSOT-23-6; WDFN2x2-6
RT5752B	2.5	5.5	0.6	5.5	2	1200	100	70	23	Forced PWM	ACOT	-	Y	100% Duty Cycle	TSOT-23-5; TSOT-23-6; WDFN2x2-6
RT5762A	2.5	5.5	0.6	5.5	2	1200	100	70	23	PSM	ACOT	-	Y	100% Duty Cycle	SOT-563(FC); UDFN1.4x1-6(FC)

[\*] Product numbers marked with stars are the new/featured products.



Product Number	Vin		Vout		Iout (A)	Freq (kHz)	Ron		Iq ( $\mu$ A)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (m $\Omega$ )	LS typ (m $\Omega$ )							
RT5762B	2.5	5.5	0.6	5.5	2	1200	100	70	23	Forced PWM	ACOT	-	Y	100% Duty Cycle	SOT-563(FC); UDFN1.4x1-6(FC)
RT5762C	2.5	5.5	0.6	5.5	2	1200	100	70	23	PSM	ACOT	-	-	100% Duty Cycle	SOT-563(FC)
RT5762D	2.5	5.5	0.6	5.5	2	1200	100	70	23	Forced PWM	ACOT	-	-	100% Duty Cycle	SOT-563(FC)
RT5784A	2.5	6	0.6	5	2	1500	100	60	25	PSM	ACOT	-	Y	100% Duty Cycle	WDFN2x1.5-8J(FC)
RT5784B	2.5	6	0.6	5	2	1500	100	60	600	PWM	ACOT	-	Y	100% Duty Cycle	WDFN2x1.5-8J(FC)
RT5785A	2.5	6	0.6	5	2	1500	100	60	25	PSM	ACOT	-	Y	100% Duty Cycle	TSOT-23-8(FC)
RT5785B	2.5	6	0.6	5	2	1500	100	60	600	PWM	ACOT	-	Y	100% Duty Cycle	TSOT-23-8(FC)
RT5795A	2.5	5.5	0.45	3.3	2	2700	100	80	30	PSM	ACOT	-	Y	100% Duty Cycle	WDFN2x2-8S
RT8011A	2.6	5.5	0.8	5	2	300 to 4000	110	110	460	Forced PWM	CM	-	Y	100% Duty Cycle	WDFN3x3-10; WDFN3x3-8E
RT8015	2.6	5.5	0.8	5	2	300 to 2000	110	110	460	Forced PWM	CM	-	-	100% Duty Cycle	PSOP-8
RT8058	2.6	5.5	0.6	5	2	1000	142	96	340	Forced PWM	CM	-	-	100% Duty Cycle	WQFN3x3-16
RT8058A	2.6	5.5	0.6	5	2	1200	142	96	340	Forced PWM	CM	-	Y	100% Duty Cycle	WDFN3x3-10
RT8064	2.7	5.5	0.8	5	2	200 to 2000	180	120	460	PSM	CM	Y	Y	100% Duty Cycle	WDFN3x3-8; PSOP-8
RT8077	2.6	5.5	0.8	5	2	300 to 2000	90	90	270	PSM	CM	-	-	100% Duty Cycle	WDFN2x2-8
RT8097A	2.7	6	0.6	3.4	2	1000	100	70	22	PSM	CMCOT	-	Y	Hiccup UVP	SOT-23-6; SOT-23-5
RT8097B	2.7	6	0.6	3.4	2	1000	100	70	300	Forced PWM	CMCOT	-	Y	Int. Comp.	SOT-23-6; SOT-23-5
RT8097C	2.7	6	0.6	3.4	2	1000	100	70	22	PSM	CMCOT	-	Y	Int. Comp.	SOT-23-5; SOT-23-6
RT8098D	2.7	6	0.6	3.4	2.5	1000	100	70	300	Forced PWM	CMCOT	-	Y	Hiccup UVP	SOT-23-6
RT2101A	2.95	6	0.827	3.6	3	700 to 2000	45	42	550	Forced PWM	CM	Y	Y	AEC-Q100; Ext. Comp. & Sync.	WQFN3x3-16
RT5753A	2.5	5.5	0.6	5.5	3	1200	100	70	35	PSM	ACOT	-	Y	100% Duty Cycle	WDFN2x2-8; WDFN2x2-8S
RT5753B	2.5	5.5	0.6	5.5	3	1200	100	70	35	Forced PWM	ACOT	-	Y	100% Duty Cycle	WDFN2x2-8; WDFN2x2-8S
RT5768A	2.7	5.5	0.6	5.5	3	1000	69	49	110	PSM	CM	-	Y	100% Duty Cycle	WDFN3x3-10
RT5797A	2.7	6	0.6	3.4	3	1000	100	70	22	PSM	CMCOT	-	Y	Int. Comp.	WDFN2x2-8; WDFN2x2-8S

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (µA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT5797B	2.7	6	0.6	3.4	3	1000	100	70	300	Forced PWM	CMCOT	-	Y	Int. Comp.	WDFN2x2-8
RT8015A	2.6	5.5	0.8	5	3	300 to 2000	110	110	460	Forced PWM	CM	-	-	100% Duty Cycle	WDFN3x3-10
RT8015B	2.6	5.5	0.8	5	3	300 to 2000	110	110	460	Forced PWM	CM	-	Y	100% Duty Cycle	WDFN3x3-10
RT8061A	2.7	5.5	0.6	5.5	3	1000	69	49	110	PSM	CM	-	Y	100% Duty Cycle	WDFN3x3-10
RT8055	2.6	5.5	0.8	5	3	300 to 2000	100	100	500	Forced PWM	CM	-	-	100% Duty Cycle	PSOP-8; WDFN3x3-10
RT8065	2.7	5.5	0.8	5	3	200 to 2000	120	80	460	PSM	CM	Y	Y	100% Duty Cycle	PSOP-8; WDFN3x3-8
RT8068A	2.7	5.5	0.6	5.5	3	1000	69	49	110	PSM	CM	-	Y	100% Duty Cycle	WDFN3x3-10; PSOP-8
RT8079	2.95	6	0.827	3.6	3	300 to 2000	45	42	550	PSM	CM	Y	Y	Ext. Comp. & Sync.	WQFN3x3-16
RT8079A	2.95	6	0.827	3.6	3	300 to 2000	45	42	550	Forced PWM	CM	Y	Y	Ext. Comp. & Sync.	WQFN3x3-16
RT8082	2.7	5.5	1	5	3	2000	75	55	570	Forced PWM	CM	-	-	100% Duty Cycle	WDFN3x3-12E
RT8088A	2.5	5.5	0.6	1.4	3	2700	48	22	75	PSM/ Forced PWM	CMCOT	-	-	I <sup>2</sup> C Control	WL-CSP1.31x2.11-15
RT5733	2.5	5.5	0.27	1.4	3.5	2400	30	30	17	PSM/ PWM	ACOT	-	Y	I <sup>2</sup> C Control	WL-CSP1.31x2.02- 15(BSC); WQFN3.5x3.5-20
RT8086B	2.8	5.5	0.6	3.3	3.5	1200	50	40	60	PSM	CMCOT	-	Y	Hiccup UVP	UQFN2x2-12(FC)
*RT5744A	2.5	5.5	0.27	1.4	4	2400	30	30	45	PSM/ PWM	ACOT	-	Y	I <sup>2</sup> C Control	WL-CSP1.31x2.02- 14(BSC)
*RT5744B	2.5	5.5	0.27	1.4	4	2400	30	30	45	PSM/ PWM	ACOT	-	Y	I <sup>2</sup> C Control	WL-CSP1.31x2.02- 14(BSC)
RT5788A	2.5	6	0.6	6	4	1500	22	20	35	PSM	ACOT	-	Y	100% Duty Cycle	TSOT-23-8(FC)
RT5788B	2.5	6	0.6	6	4	1500	22	20	600	Forced PWM	ACOT	-	Y	100% Duty Cycle	TSOT-23-8(FC)
RT8070	2.7	5.5	0.8	5	4	200 to 2000	110	70	460	PSM	CM	Y	Y	100% Duty Cycle	PSOP-8; WDFN3x3-8
RT8074	2.7	5.5	0.8	5	4	200 to 2000	110	70	460	PSM	CM	Y	-	100% Duty Cycle	PSOP-8
RT8078A	2.7	5.5	0.6	5.5	4	1000	69	49	110	PSM	CM	-	Y	100% Duty Cycle	WDFN3x3-10
RTQ2134-QA	3	6	0.3	1.85	5.5	2100	25	15	70	PSM/ PWM	ACOT	-	-	AEC-Q100; I <sup>2</sup> C Control	WET-WQFN4.5x5- 30(FC)
*RT5736A	2.5	5.5	0.27	1.4	5.5	2400	30	17	45	PSM/ PWM	ACOT	Y	Y	I <sup>2</sup> C Control; Power- Up 0.725V/0.725V	WQFN3.5x3.5-20
*RT5736B	2.5	5.5	0.27	1.4	5.5	2400	30	17	45	PSM/ PWM	ACOT	Y	Y	I <sup>2</sup> C Control; Pow- er-Up 1.1V/1.1V	WQFN3.5x3.5-20

[\*] Product numbers marked with stars are the new/featured products.

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (μA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
*RT5736C	2.5	2.5	0.27	1.4	5.5	2400	30	17	45	PSM/ PWM	ACOT	Y	Y	I <sup>2</sup> C Control; Pow- er-Up 1.1V/1.2V	WQFN3.5x3.5-20
*RT5736D	2.5	2.5	0.27	1.4	5.5	2400	30	17	45	PSM/ PWM	ACOT	Y	Y	I <sup>2</sup> C Control; Pow- er-Up 0.9V/1.05V	WQFN3.5x3.5-20
RT2659H	1	6	0.6	2	6	600; 1000	20	10	1100	PSM/ Forced PWM	CMCOT	-	Y	DDR Supply with Mode Selection	VQFN3.5x4-20
*RT5746A	2.5	5.5	0.27	1.4	6	2400	30	17	45	PSM/ PWM	ACOT	-	Y	I <sup>2</sup> C Control	WL-CSP1.31x2.02- 14(BSC)
RT5789A	2.5	6	0.6	6	6	1500	18	16	35	PSM	ACOT	-	Y	100% Duty Cycle	TSOT-23-8(FC); UDFN2.5x2-8(FC)
RT5789B	2.5	6	0.6	6	6	1500	18	16	600	Forced PWM	ACOT	-	Y	100% Duty Cycle	TSOT-23-8(FC); UDFN2.5x2-8(FC)
RT8073	2.9	5.5	0.8	4.84	6	300 to 2000	50	35	250	PSM	CM	Y	Y	Adj. Soft-Start	PSOP-8; WDFN3x3-12
*RT5757A	3	6.5	0.6	1.725	7	600; 800; 1000; 1500	12	8	100	PSM	ACOT	Y	Y	I <sup>2</sup> C Control	UQFN3x3-13(FC)
RTQ2158-QA	2.85	6.5	0.6	3.3	8	2100	15	10	500	Forced PWM	ACOT	Y	Y	AEC-Q100	WET-WQFN4x4-21(FC)
RTQ2158B-QA	2.85	6.5	0.6	3.3	8	460	15	10	500	Forced PWM	ACOT	Y	Y	AEC-Q100	WET-WQFN4x4-21(FC)
RTQ2159-QA	2.85	6.5	0.6	1.5	8	2100	15	10	500	Forced PWM	ACOT	Y	Y	AEC-Q100; I <sup>2</sup> C Control	WET-WQFN4x4-21(FC)
RT5758	3	6	0.6	3.3	9	1000	12	8	100	PSM	ACOT	Y	Y	Pre-bias Stat-up	UQFN3x3-13(FC)
RT5759	3	6.5	0.6	1.5	9	600 to 1500	12	8	100	PSM/ Forced PWM	ACOT	Y	Y	I <sup>2</sup> C Control	UQFN3x3-13(FC)
RT5759A	3	6.5	0.6	1.725	9	600 to 1500	12	8	100	PSM	ACOT	Y	Y	I <sup>2</sup> C Control	UQFN3x3-13(FC)
RTQ2134-QA	3	6	0.3	1.85	10	2100	25	15	70	PSM/ Forced PWM	ACOT	-	-	AEC-Q100; I <sup>2</sup> C Control	WQFN4.5x5-30(FC)
RTQ2158A-QA	2.85	6.5	0.6	3.3	12	460	15	10	500	Forced PWM	ACOT	Y	Y	AEC-Q100	WET-WQFN4x4-21(FC)

[\*] Product numbers marked with stars are the new/featured products.

## 7V TO 30V MID VIN

Solutions for mid-voltage requirements with our broad portfolio of Buck converters.

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT8258	4.5	24	0.8	15	1.2	700	300	300	0.55	Forced PWM	CM	-	-	Int. Comp.	(T)SOT-23-6
RT8259	4.5	24	0.8	15	1.2	1400	300	300	0.55	Forced PWM	CM	-	-	Int. Comp.	(T)SOT-23-6
RT7251A	4	17	0.8	12	1.5	340	145	140	0.6	PSM	CM	-	Y	Int. Comp.	WDFN2x2-8
RT7251B	4	17	0.8	12	1.5	800	145	140	0.6	PSM	CM	-	Y	Int. Comp.	WDFN2x2-8
RT7285C	4.3	18	0.6	8	1.5	500	230	130	0.5	Forced PWM	ACOT	-	-	Int. Comp.	(T)SOT-23-6
RT8297A	4	17	0.8	12	1.5	800	145	140	0.6	Forced PWM	CM	-	Y	Int. Comp.	WDFN2x2-8
RT8297B	4	17	0.8	12	1.5	340	145	140	0.6	Forced PWM	CM	-	Y	Int. Comp.	WDFN2x2-8
RT6212A	4.5	18	0.765; 0.8	6.5	2	500	163	86	0.5	PSM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT6212B	4.5	18	0.765; 0.8	6.5	2	500	163	86	0.5	Forced PWM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT6215A	4.5	24	0.791	5	2	500	100	85	0.17	PSM	ACOT	Y	Y	Valley & Peak OCP	TSOT-23-8(FC)
RT6215B	4.5	24	0.791	5	2	500	100	85	0.17	Forced PWM	ACOT	Y	Y	Valley & Peak OCP	TSOT-23-8(FC)
RT6215E	4.5	24	0.791	5	2	500	100	85	0.17	Forced PWM/ PSM	ACOT	-	-	Valley & Peak OCP	TSOT-23-8(FC)
RT6218A	4.5	18	0.765	6.5	2	650	120	65	0.5	PSM	ACOT	Y	Y	Valley & Peak OCP	TSOT-23-8(FC)
RT6218B	4.5	18	0.765	6.5	2	650	120	65	0.5	Forced PWM	ACOT	Y	Y	Valley & Peak OCP	TSOT-23-8(FC)
RT6222D	4.3	18	0.6	8	2	1400	150	90	0.5	Forced PWM	ACOT	-	-	Valley & peak OCP	TSOT-23-6(FC)
RT6252A	4.5	17	0.765; 0.807	7	2	580	140	84	0.28; 0.295	PSM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC); SOT-563(FC)
RT6252B	4.5	17	0.765; 0.807	7	2	580	140	84	0.28; 0.295	Forced PWM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC); SOT-563(FC)
RT6262A	4.5	17	0.765	7	2	650	125	56	180	PSM	ACOT	Y	Y	Valley & Peak OCP	TSOT-23-8(FC)
RT6262B	4.5	17	0.765	7	2	650	125	56	180	Forced PWM	ACOT	Y	Y	Valley & Peak OCP	TSOT-23-8(FC)
RT6272A	4.5	17	0.765	7	2	1400	140	84	280	PSM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT6272B	4.5	17	0.765	7	2	1400	140	84	280	Forced PWM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT6296A	4.5	17	0.807	5	2	500	100	40	0.8	PSM/ Forced PWM	CM	-	-	Int. Comp.; Ext. Sync.	TSOT-23-8(FC)

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT6296B	4.5	17	0.807	5	2	500	100	40	0.8	Forced PWM	CM	Y	-	Int. Comp.; Ext. Sync.	TSOT-23-8(FC)
RT6296C	4.5	17	0.807	5	2	1400	100	40	0.8	Forced PWM	CM	Y	-	Int. Comp.; Ext. Sync.	TSOT-23-8(FC)
RT6296D	4.5	17	0.807	5	2	800	100	40	0.8	PSM	CM	Y	-	Int. Comp.; Ext. Sync.	TSOT-23-8(FC)
RT6352A	4.5	17	0.6	7	2	580	140	84	0.28	PSM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC); SOT-563(FC)
RT6352B	4.5	17	0.6	7	2	580	140	84	0.28	Forced PWM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC); SOT-563(FC)
RT6372A	4.5	17	0.6	7	2	1400	140	84	0.28	PSM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT6372B	4.5	17	0.6	7	2	1400	140	84	0.28	Forced PWM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT7237A	4.5	18	0.8	15	2	340	150	130	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8
RT7237B	4.5	18	0.8	12	2	1200	150	130	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8
RT7237C	4.5	18	0.8	12	2	800	150	130	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8
RT7247A	4.5	18	0.8	15	2	340	150	130	0.8	Forced PWM	CM	Y	-	Ext. Comp.	PSOP-8
RT7247B	4.5	18	0.8	12	2	1200	150	130	0.8	Forced PWM	CM	Y	-	Ext. Comp.	PSOP-8
RT7247C	4.5	18	0.8	12	2	800	150	130	0.8	Forced PWM	CM	Y	-	Ext. Comp.	PSOP-8
RT7250B	4	17	0.8	12	2	800	155	150	0.6	Forced PWM	CM	-	Y	Int. Comp.	PSOP-8
RT7274	4.5	18	0.765	8	2	700	150	105	0.7	PSM	ACOT	Y	-	Int. Comp.	PSOP-8
RT7279	4.5	18	0.765	8	2	700	150	105	0.7	Forced PWM	ACOT	Y	Y	Int. Comp.	TSSOP-14(PP); WDFN3x3-10
RT7281	4.5	18	0.765	8	2	700	150	105	0.7	Forced PWM	ACOT	Y	-	Int. Comp.	PSOP-8
RT8267	4.75	22	1.222	16	2	400	180	10000	0.7	Forced PWM	CM	-	-	Enable Input	SOP-8
RT8268	4.75	24	0.92	16	2	400	180	10000	0.6	Forced PWM	CM	Y	-	Enable Input	MSOP-10(PP); SOP-8
RT8270	4.75	22	1.222	16	2	1200	180	10000	0.7	Forced PWM	CM	-	-	Enable Input	SOP-8
RT8284N	4.5	23	0.923	20	2	340	130	130	0.8	Forced PWM	CM	Y	-	Enable Input	(P)SOP-8
RT8286	4.5	21	0.808	15	2	500	150	60	0.7	Forced PWM	CM	-	-	Int. Comp.	PSOP-8
RT8292A	4.5	23	0.8	20	2	340	130	130	0.8	Forced PWM	CM	Y	-	Enable Input	PSOP-8



Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT8292B	4.5	23	0.8	15	2	1200	130	130	0.8	Forced PWM	CM	Y	-	Enable Input	PSOP-8
RT8294	4.5	23	0.923	20	2	340	130	130	0.8	Forced PWM	CM	Y	-	Enable Input	(P)SOP-8
RT8295B	4.5	23	0.8	15	2	1200	130	130	0.8	Forced PWM	CM	Y	-	Enable Input	PSOP-8
RT6222A	4.3	18	0.6	8	2.5	500	150	90	0.5	PSM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT6222B	4.3	18	0.6	8	2.5	500	150	90	0.5	Forced PWM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT7294C	4.3	18	0.6	8	2.5	500	150	90	0.5	Forced PWM	ACOT	-	-	Hiccup UVP	TSOT-23-6(FC)
RT2853B	4.5	18	0.765	7	3	650	110	30	1	Forced PWM	ACOT	Y	Y	Industrial Grade	WQFN3x3-16
RT2859A	4.5	18	0.765	7	3	650	70	70	1	PSM	ACOT	Y	Y	Latched/Hiccup mode	WDFN3x3-16
RT6213B	4.5	18	0.8	5	3	500	150	70	0.5	PWM	ACOT	-	-	Hiccup UVP	TSOT-23-6
RT6214A	4.5	18	0.765; 0.8	6.5	3	500; 650	100	50	0.5	PSM	ACOT	Y	Y	Hiccup UVP	TSOT-23-6(FC); TSOT-23-8(FC)
RT6214B	4.5	18	0.765; 0.8	6.5	3	500; 650	100	50	0.5	PWM	ACOT	Y	-	Hiccup UVP	TSOT-23-6; TSOT-23-8
RT6217A	4.5	24	0.791	6	3	500	85	40	0.15	PSM	ACOT	Y	Y	Valley & Peak OCP	TSOT-23-8(FC)
RT6217B	4.5	24	0.791	6	3	500	85	40	0.15	Forced PWM	ACOT	Y	Y	Valley & Peak OCP	TSOT-23-8(FC)
RT6217E	4.5	24	0.791	6	3	500	85	40	0.15	PSM/ Forced PWM	ACOT	-	-	Valley & Peak OCP	TSOT-23-8(FC)
RT6224A	4.3	18	0.6	5	3	500	90	45	0.5	PSM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT6224D	4.3	18	0.6	5	3	1400	90	45	0.5	Forced PWM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT6253A	4.5	17	0.765; 0.807	7	3	580	95	50	0.28	PSM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC); SOT-563(FC)
RT6253B	4.5	17	0.765; 0.807	7	3	580	95	50	0.28	Forced PWM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC); SOT-563(FC)
RT6263A	4.5	17	0.765	7	3	650	66	36	0.18	PSM	ACOT	Y	Y	Valley & Peak OCP	TSOT-23-8(FC)
RT6263B	4.5	17	0.765	7	3	650	66	36	0.18	Forced PWM	ACOT	Y	Y	Valley & Peak OCP	TSOT-23-8(FC)
RT6283B	4.5	30	0.8	24	3	500	150	80	0.9	PSM	CM	-	-	Adj. Current Limit	PSOP-8
RT6273A	4.5	17	0.765	7	3	1400	95	50	0.28	PSM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT6273B	4.5	17	0.765	7	3	1400	95	50	0.28	Forced PWM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT6353A	4.5	17	0.6	7	3	580	95	50	0.28	PSM	ACOT	-	-	Both FETs OCP	TSOT-26(FC); SOT-563(FC)
RT6353B	4.5	17	0.6	7	3	580	95	50	0.28	Forced PWM	ACOT	-	-	Both FETs OCP	TSOT-26(FC); SOT-563(FC)
RT6373A	4.5	17	0.6	7	3	1400	95	50	0.28	PSM	ACOT	-	-	Both FETs OCP	TSOT-26(FC)
RT6373B	4.5	17	0.6	7	3	1400	95	50	0.28	Forced PWM	ACOT	-	-	Both FETs OCP	TSOT-26(FC)
RT7257A	4.5	18	0.8	15	3	340	110	90	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8
RT7257B	4.5	18	0.8	12	3	1200	110	90	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8
RT7257C	4.5	18	0.8	15	3	340	110	90	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8
RT7257G	4.5	18	0.8	12	3	800	110	90	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8
RT7266	4.5	18	0.765	8	3	700	90	60	0.7	PSM	ACOT	Y	-	Adj. Soft-Stat	PSOP-8
RT7270H	4.5	18	0.925	15	3	340	110	90	0.8	Forced PWM	CM	Y	-	OCP; OTP	PSOP-8
RT7275	4.5	18	0.765	8	3	700	100; 90	60	0.7	Forced PWM	ACOT	Y	Y	Adj. Soft-Start	WDFN3x3-10
RT7276	4.5	18	0.765	8	3	700	100; 90	60	0.7	PSM	ACOT	Y	Y	Adj. Soft-Start	WDFN3x3-10
RT7277	4.5	18	0.765	8	3	700	90	60	0.7	Forced PWM	ACOT	Y	-	Adj. Soft-Start	PSOP-8
RT7278	4.5	18	0.765	8	3	700	90	60	0.7	PSM	ACOT	Y	-	Adj. Soft-Start	PSOP-8
RT7296A	4.5	17	0.807	5	3	500	80	30	0.8	PSM/ Forced PWM	CM	-	-	Int. Comp.; Ext. Sync.	TSOT-23-8(FC)
RT7296B	4.5	17	0.807	5	3	500	80	30	0.8	Forced PWM	CM	Y	-	Int. Comp.; Ext. Sync.	TSOT-23-8(FC)
RT7296C	4.5	17	0.807	5	3	1400	80	30	0.8	Forced PWM	CM	Y	-	Int. Comp.; Ext. Sync.	TSOT-23-8(FC)
RT7296F	4.5	17	0.807	5	3	500	80	30	0.8	PSM	CM	-	Y	Int. Comp.; Ext. Sync.	TSOT-23-8(FC)
RT7297A	4.5	18	0.8	15	3	340	110	90	0.8	Forced PWM	CM	Y	-	Adj. Soft-Stat	PSOP-8
RT7297C	4.5	18	0.8	12	3	800	110	90	0.8	Forced PWM	CM	Y	-	Adj. Soft-Stat	PSOP-8
RT8250	4.5	23	0.925	20	3	340	100	85	0.7	Forced PWM	CM	Y	-	Enable Input	PSOP-8
RT8265	4.75	24	0.8	15	3	1000	110	10000	0.8	Forced PWM	CM	Y	-	Enable Input	PSOP-8

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT8269	4.75	24	0.92	15	3	400	100	10000	0.8	Forced PWM	CM	Y	-	Enable Input	PSOP-8
RT8272	4.75	24	0.92	15	3	1200	100	10000	0.8	Forced PWM	CM	Y	-	Enable Input	PSOP-8
RT8287	4.5	21	0.808	15	3	500	120	40	0.7	Forced PWM	CM	Y	Y	Enable Input	WDFN4x3-14
RT8290	4.5	23	0.925	20	3	340	100	85	0.8	Forced PWM	CM	Y	-	Ext. Comp.	PSOP-8
RT8290A	4.5	23	0.925	20	3	340	100	85	0.8	PSM/ PWM	CM	Y	-	Ext. Comp.	PSOP-8
RT8293A	4.5	23	0.8	20	3	340	85	85	0.8	Forced PWM	CM	Y	-	Ext. Comp.	PSOP-8
RT8293B	4.5	23	0.8	15	3	1200	85	85	0.8	Forced PWM	CM	Y	-	Ext. Comp.	PSOP-8
RT8296A	4.5	23	0.8	20	3	340	85	85	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8
RT8296B	4.5	23	0.8	15	3	1200	85	85	0.8	PSM	CM	Y	-	Ext. Comp.	PSOP-8
RT8299	3	24	0.8	15	3	500	100	100	1	Forced PWM	CM	-	Y	Wide Input Range	PSOP-8; WDFN3x3-10
RT8299A	3	24	0.8	15	3	500	100	100	1	PSM	CM	-	Y	Wide Input Range	WDFN3x3-10; PSOP-8
RT6274C	4.5	18	0.765	7	3.5	1200	66	36	0.18	PSM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT6274D	4.5	18	0.765	7	3.5	1200	66	36	0.18	Forced PWM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT7295A	4.3	18	0.6	8	3.5	500	90	45	0.5	PSM	ACOT	-	-	Hiccup UVP	TSOT-23-6(FC)
RT7295C	4.3	18	0.6	8	3.5	500	90	45	0.5	Forced PWM	ACOT	-	-	Hiccup UVP	TSOT-23-6(FC)
RT6219A	5	23	0.6	5	4	500	67	41	0.1	PSM	ACOT	-	Y	w/o Ext. Comp.	WDFN3x3-10
RT6254A	4.5	18	0.6	5	4	500	48	25	0.115	PSM	ACOT	-	Y	Valley & Peak OCP	TSOT-23-6(FC); TSOT-23-8(FC)
RT6254B	4.5	18	0.6	5	4	500	48	25	0.115	Forced PWM	ACOT	-	Y	Valley & Peak OCP	TSOT-23-6(FC); TSOT-23-8(FC)
RT6264A	4.5	18	0.765	7	4	650	66	36	0.18	PSM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT6264B	4.5	18	0.765	7	4	650	66	36	0.18	Forced PWM	ACOT	-	-	Valley & Peak OCP	TSOT-23-6(FC)
RT7231	4.5	18	0.765	8	4	650	120	50	1	Forced PWM	ACOT	Y	Y	Adj. Soft-Start	TSSOP-14(PP); WDFN3x3-10
RT7233	4.5	18	0.765	8	4	650	120	50	1	Forced PWM	ACOT	Y	-	Adj. Soft-Start	PSOP-8
RT7234	4.5	18	0.765	8	4	650	120	50	1	PSM	ACOT	Y	-	Adj. Soft-Start	PSOP-8

Product Number	Vin		Vout		Iout (A)	Freq (kHz)	Ron		Iq (mA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT7264E	4.5	21	0.808	15	4	500	120	40	0.7	PSM	CM	Y	Y	Ext. Sync.	PSOP-8; WDFN4x3-14
RT8287A	4.5	21	0.808	15	4	500	120	40	0.7	Forced PWM	CM	Y	Y	Enable Input	WDFN4x3-14
RT8288A	4.5	21	0.808	15	4	500	120	40	0.7	Forced PWM	CM	-	-	Enable Input	PSOP-8
RT6203B	4.5	18	0.72	8	5	700	60	30	0.55	Forced PWM	ACOT	Y	Y	I°C Control	WQFN4x4-20
RT6255A	4.5	18	0.6	5	5	500	45	23	0.115	PSM	ACOT	-	Y	Valley & Peak OCP	TSOT-23-6(FC); TSOT-23-8(FC)
RT6255B	4.5	18	0.6	5	5	500	45	23	0.115	Forced PWM	ACOT	-	Y	Valley & Peak OCP	TSOT-23-6(FC); TSOT-23-8(FC)
RT6285	5.5	30	1.222	24	5	500	110	-	0.6	Forced PWM	CM	-	-	Async. Buck	PSOP-8
RT7235	4.5	18	0.765	8	5	650	120	35	1	Forced PWM	ACOT	Y	Y	Adj. Soft-Start	TSSOP-14(PP); WDFN3x3-10
RT7236	4.5	18	0.765	8	5	650	120	35	1	PSM	ACOT	Y	Y	Adj. Soft-Start	TSSOP-14(PP); WDFN3x3-10
RT7239	4.5	18	0.765	8	5	650	120	35	1	Forced PWM	ACOT	Y	-	Adj. Soft-Start	PSOP-8
RT7240	4.5	18	0.765	8	5	650	120	35	1	PSM	ACOT	Y	-	Adj. Soft-Start	PSOP-8
RT8251	4.75	24	0.8	15	5	570	70	15	0.8	Forced PWM	CM	Y	-	Enable Input	PSOP-8; WQFN3x3-16
RT8289	5.5	32	1.222	26	5	500	100	10000	0.8	Forced PWM	CM	-	-	Async. Buck	PSOP-8
RT6206A	4.5	18	0.765	7	5.5	650	80	35	1	Forced PWM	ACOT	Y	-	Adj. Soft-Start	PSOP-8; TSSOP-14; WDFN3x3-10
RT6206B	4.5	18	0.765	7	5.5	650	80	35	1	PSM	ACOT	Y	-	Adj. Soft-Start	PSOP-8; TSSOP-14; WDFN3x3-10
*RTQ2806A	2.7	17	0.6	5.5	6	60/1100 /2200	22.6	8.1	1.05	PSM/ PWM	CM	Y	Y	AEC-Q100	WQFN2x3-14T(FC)
*RTQ2807A	2.7	17	0.9	5.5	6	60/1100 /2200	22.6	8.1	1.05	PSM/ PWM	CM	Y	Y	AEC-Q100	WQFN2x3-14T(FC)
*RTQ2836A	4	18	0.5	7	6	500/750/1000 1500/2000	25	6.5	1.7	Forced PWM	CM	Y	Y	Industrial Grade	WQFN3x2.5-14(FC)
RT2856	4.5	18	0.8	16	6	200 to 1600	26	19	0.6	Forced PWM	CM	Y	Y	Ext. Comp.; Ext. Sync.	WQFN3.5x3.5-14A
RT2857B	4.5	18	0.6	15	6	200 to 1600	26	19	0.6	Forced PWM	CM	Y	Y	Ext. Sync.	WQFN3.5x3.5-14A
RT6203E	4.5	18	0.6	1.62	6	700	48	25	0.55	PSM	ACOT	-	-	I°C Control	PSOP-8
RT6203F	4.5	18	0.6	1.62	6	700	48	25	0.55	PSM	ACOT	-	-	I°C Control	PSOP-8
RT6220A	4.5	23	0.6	5	6	500	31	20	0.1	PSM	ACOT	-	Y	w/o Ext. Comp.	UQFN3x3-16(FC)
RT6220B	4.5	23	0.6	5	6	500	31	20	0.1	Forced PWM	ACOT	-	Y	w/o Ext. Comp.	UQFN3x3-16(FC)
RT6220DH	4.5	23	0.6	5	6	500	31	20	0.11	Forced PWM	ACOT	-	Y	w/o Ext. Comp.	UQFN3x3-16(FC)
RT6226A	4.5	23	0.6	5.1	6	500	30	15	0.1	PSM/ USM	ACOT	-	Y	with 3.3V/5V LDO Output	UQFN3x3-12H(FC)

[\*] Product numbers marked with stars are the new/featured products.

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT6230A	6	23	5	12	6	500	31	20	0.1	PSM	ACOT	-	Y	w/o Ext. Comp.	UQFN3x3-16(FC)
RT6230B	6	23	5	12	6	500	31	20	0.11	Forced PWM	ACOT	-	Y	w/o Ext. Comp.	UQFN3x3-16(FC)
RT6236A	4.5	18	0.7	8	6	650	51	18	0.8	PSM	ACOT	Y	Y	Adj. Soft-Start	UQFN2x3-13J(FC)
RT6236B	4.5	18	0.7	8	6	650	51	18	0.8	Forced PWM	ACOT	Y	Y	Adj. Soft-Start	UQFN2x3-13J(FC)
RT6256B	4.5	23	-	3.3	6	500	30	15	0.1	PSM/ USM	ACOT	-	Y	Fixed 3.3V & 3.3V LDO Output	UQFN3x3-12H(FC)
RT6256BH	4.5	23	-	3.3	6	500	30	15	0.1	PSM/ USM	ACOT	-	Y	Fixed 3.3V & 3.3V LDO Output; Hiccup UVP	UQFN3x3-12H(FC)
RT6256CH	5.1	23	-	5	6	750	30	15	0.1	PSM/ USM	ACOT	-	Y	Fixed 5.1V & 5V LDO Output; Hiccup UVP	UQFN3x3-12H(FC)
RT6256C	5.5	23	-	5	6	750	30	15	0.1	PSM/ USM	ACOT	-	Y	Fixed 5.1V & 5V LDO Output	UQFN3x3-12H(FC)
RT6257B	4.5	18	0.6	5	6	500	30	20	0.115	PSM	ACOT	-	-	w/o Ext. Comp.	TSOT-23-6(FC)
RT6276A	4.5	23	0.6	6	6	500	30	15	0.13	PSM / USM	ACOT	-	Y	Adj. Current Limit	UQFN3x3-12H(FC)
RT6276B	4.5	23	0.6	6	6	500	30	15	0.13	Forced PWM	ACOT	-	Y	Adj. Current Limit	UQFN3x3-12H(FC)
RT6316B	4.5	23	-	3.3	6	500	30	15	0.1	PSM / USM	ACOT	-	Y	Fixed 3.3V & 3.3V LDO Output	UQFN3x3-12H(FC)
RT7243	4.5	18	0.8	16	6	200 to 1600	26	19	0.6	Forced PWM	CM	Y	Y	Ext. Comp.; Ext. Sync.	WQFN3.5x3.5-14A
RT7298B	4.5	18	0.6	5	6	200 to 1600	26	19	0.6	Forced PWM	CM	Y	Y	Ext. Comp.; Ext. Sync.	WQFN3.5x3.5-14A
RT7298A	4.5	18	0.6	5	6	200 to 1600	26	19	0.6	PSM	CM	Y	Y	Ext. Comp.; Ext. Sync.	WQFN3.5x3.5-14A
RTQ2816	4.5	18	0.8	15	6	200 to 1600	26	19	0.6	Forced PWM	CM	Y	Y	Industrial Grade	WQFN3.5x3.5-14A
*RTQ2838A	4	18	0.5	7	8	500/750/1000 1500/2000	25	6.5	1.7	Forced PWM	CM	Y	Y	Industrial Grade	WQFN3x2.5-14(FC)
RT6228A	4.5	23	0.6	5.1	8	500	20	10	0.1	PSM	ACOT	-	Y	Adj. Vout	UQFN3x3-12H(FC)
RT6228C	5.1	23	-	5.1	8	750	20	10	0.1	PSM	ACOT	-	Y	Fixed 5.1V & 3.3V LDO Output	UQFN3x3-12H(FC)
RT6238A	4.5	18	0.7	8	8	500	35	14	0.6	PSM	ACOT	Y	Y	Adj. Current Limit	UQFN2x3-14(FC)
RT6238B	4.5	18	0.7	8	8	500	35	14	0.6	Forced PWM	ACOT	Y	Y	Adj. Current Limit	UQFN2x3-14(FC)
RT6258B	4.5	23	-	3.3	8	500	20	10	0.1	PSM/ USM	ACOT	-	Y	Fixed 3.3V & 3.3V LDO Output	UQFN3x3-12H(FC)
RT6258BH	4.5	23	-	3.3	8	500	20	10	0.1	PSM/ USM	ACOT	-	Y	Fixed 3.3V & 3.3V LDO Output; Hiccup UVP	UQFN3x3-12H(FC)
RT6258C	5.1	23	-	5.1	8	750	20	10	0.1	PSM/ USM	ACOT	-	Y	Fixed 5.1V & 5V LDO Output	UQFN3x3-12H(FC)

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT6258CH	5.1	23	-	5.1	8	750	20	10	0.1	PSM/ USM	ACOT	-	Y	Fixed 5.1V & 5V LDO Output; Hiccup UVP	UQFN3x3-12H(FC)
RT6278A	4.5	23	0.6	6	8	500	24	12	0.13	PSM/ USM	ACOT	-	Y	Bypass Pin Option	UQFN3x3-12H(FC)
RT6278B	4.5	23	0.6	6	8	500	24	12	0.13	Forced PWM	ACOT	-	Y	Bypass Pin Option	UQFN3x3-12H(FC)
RT6308A	4.5	23	0.6	5.1	8	500	20	10	0.1	PSM/ USM	ACOT	-	Y	Adj. Current Limit	UQFN3x3-12H(FC)
RT6318C	5.1	23	-	5.1	8	750	20	10	0.1	PSM/ USM	ACOT	-	Y	Fixed 5.1V & 5V LDO Output	UQFN3x3-12H(FC)
*RT6323A	3	23	0.503	1.508	8	600	33	12	0.09	PSM	ACOT	-	Y	2-Bit VID Control; Latched UVP	VQFN2x3-13(FC)
*RT6323AH	3	23	0.503	1.508	8	600	33	12	0.09	PSM	ACOT	-	Y	2-Bit VID Control; Hiccup UVP	VQFN2x3-13(FC)
RT6338A	4.5	23	0.6	5.5	8	500	26	14	0.085	PSM/ USM	ACOT	-	Y	Adj. Current Limit	UQFN3x3-23(FC)
RT6338B	4.5	23	-	3.3	8	500	26	14	0.095	PSM/ USM	ACOT	-	Y	Fixed 3.3V & 3.3V LDO Output	UQFN3x3-23(FC)
RT6338C	5.2	23	-	5.1	8	500	26	14	0.095	PSM/ USM	ACOT	-	Y	Fixed 5.1V & 5V LDO Output	UQFN3x3-23(FC)
RT6338E	4.5	23	-	3.36	8	500	26	14	0.095	PSM	ACOT	-	Y	Fixed 3.3V LDO Output; Latched UVP/OVP/OTP	UQFN3x3-23(FC)
*RT6338EH	4.5	23	-	3.36	8	500	26	14	0.095	PSM	ACOT	-	Y	Fixed 3.3V LDO Output; Hiccup UVP/OVP/OTP	UQFN3x3-23(FC)
RT7258	4.5	24	0.8	15	8	600	45	-	0.9	Forced PWM	CM	-	Y	Ext. Low Side MOSFET	PSOP-8; WDFN4x3-14
RT7299B	4.5	18	1	5	8	200 to 1600	26	19	0.6	Forced PWM	CM	Y	Y	Ext. Comp.; Ext. Sync.	WQFN3.5x3.5-14A
RTQ2823A	4.5	17	0.6	5.5	8	400; 800; 1200	9.8	4.5	0.6	DCM/ Forced PWM	ACOT	Y	Y	EN Internal Pull High	VQFN3.5x3.5-18(FC)
RTQ2823B	4.5	17	0.6	5.5	8	400; 800; 1200	9.8	4.5	0.6	DCM/ Forced PWM	ACOT	Y	Y	EN Internal Pull Low	VQFN3.5x3.5-18(FC)
*RT6337A	4.5	23	0.6	5.5	9	500	26	14	85	PSM	ACOT	-	Y	Adj. OCP; Latched UVP/OVP	UQFN3x3-23(FC)
*RT6337AH	4.5	23	0.6	5.5	9	500	26	14	85	PSM	ACOT	-	Y	Adj. OCP; Hiccup UVP & Non-Latched OVP	UQFN3x3-23(FC)
*RT6337B	4.5	23	-	3.3	9	500	26	14	95	PSM	ACOT	-	Y	With 3.3V LDO; Latched UVP/OVP	UQFN3x3-23(FC)
*RT6337BH	4.5	23	-	3.3	9	500	26	14	95	PSM	ACOT	-	Y	With 3.3V LDO; Hiccup UVP & Non- Latched OVP	UQFN3x3-23(FC)
*RT6337C	5.2	23	-	5.1	9	500	26	14	85	PSM	ACOT	-	Y	With 5V LDO; Latched UVP/OVP	UQFN3x3-23(FC)
*RT6337CH	5.2	23	-	5.1	9	500	26	14	85	PSM	ACOT	-	Y	With 5V LDO; Hiccup UVP & Non-Latched OVP	UQFN3x3-23(FC)
RT2810B	4.5	18	0.7	8	10	300 to 700	12	5.4	0.8	Forced PWM	ACOT	Y	Y	Adj. Current Limit	UQFN3x3-16J(FC)

[\*] Product numbers marked with stars are the new/featured products.



Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT6250B	4.5	18	0.6	6	10	500	20	10	0.13	Forced PWM	ACOT	-	Y	Adj. Current Limit	UQFN3x3-12H(FC)
RT6260C	5.1	23	-	5	10	600	20	10	0.1	PSM/ USM	ACOT	-	Y	Fixed 5V & 5V LDO Output	UQFN3x3-12H(FC)
RT6280A	4.5	23	0.6	6	10	500	20	10	0.13	PSM	ACOT	-	Y	Adj. Current Limit	UQFN3x3-12H(FC)
RT6280B	4.5	23	0.6	6	10	500	20	10	0.13	Forced PWM	ACOT	-	Y	Adj. Current Limit	UQFN3x3-12H(FC)
RT6310A	4.5	23	0.6	5.5	10	500	16.5	6.3	0.085	PSM	ACOT	-	Y	Adj. Current Limit	UQFN3x3-23(FC)
RT6310B	4.5	23	-	3.3	10	500	16.5	6.3	0.095	PSM	ACOT	-	Y	Fixed 3.3V & 3.3V LDO Output	UQFN3x3-23(FC)
RT6310C	5.2	23	-	5	10	500	16.5	6.3	0.095	PSM	ACOT	-	Y	Fixed & 5V LDO Output	UQFN3x3-23(FC)
RT6310D	4.5	23	0.6	5.5	10	500	16.5	6.3	0.085	PSM	ACOT	-	Y	Adj. Current Limit	UQFN3x3-23(FC)
RT6310E	4.5	23	-	3.36	10	500	17	7.5	95	PSM	ACOT	-	-	With 3.3V LDO; Latched UVP/OVP	UQFN3x3-23(FC)
RT6310EH	4.5	23	-	3.36	10	500	17	7.5	95	PSM	ACOT	-	-	With 3.3V LDO; Hiccup UVP & Non- Latched OVP	UQFN3x3-23(FC)
*RT6339A	4.5	23	0.6	5.5	11	500	17	7.5	85	PSM	ACOT	-	Y	Latched UVP/OVP/ OTP	UQFN3x3-23(FC)
*RT6339AH	4.5	23	0.6	5.5	11	500	17	7.5	85	PSM	ACOT	-	Y	Hiccup UVP & Non- Latched OVP/OTP	UQFN3x3-23(FC)
*RT6339B	4.5	23	-	3.3	11	500	17	7.5	85	PSM	ACOT	-	Y	With 3.3V LDO; Latched UVP/OVP/ OTP	UQFN3x3-23(FC)
*RT6339BH	4.5	23	-	3.3	11	500	17	7.5	85	PSM	ACOT	-	Y	With 3.3V LDO; Hic- cup UVP & Non- Latched OVP/OTP	UQFN3x3-23(FC)
*RT6339C	4.5	23	-	5.1	11	500	17	7.5	85	PSM	ACOT	-	Y	With 5V LDO; Latched UVP/OVP/ OTP	UQFN3x3-23(FC)
*RT6339CH	4.5	23	-	5.1	11	500	17	7.5	85	PSM	ACOT	-	Y	With 5V LDO; Hiccup UVP & Non- Latched OVP/OTP	UQFN3x3-23(FC)
*RT6339D	4.5	23	0.6	5.5	11	500	17	7.5	85	PSM	ACOT	-	Y	Latched UVP/OVP/ OTP	UQFN3x3-23(FC)
*RT6339DH	4.5	23	0.6	5.5	11	500	17	7.5	85	PSM	ACOT	-	Y	Hiccup UVP & Non- Latched OVP/OTP	UQFN3x3-23(FC)
*RTQ2812A	2.7; 3.5	17	0.6	5.5	12	600/800 /1000	13.3	3.8	1150	PSM/ PWM	ACOT	Y	Y	Adj. Valley Current Limit	WQFN3x4-21T(FC)
*RT6320B	4.5	23	-	3.3	12	500	17	7.5	100	PSM	ACOT	-	-	With 3.3V LDO	UQFN4x3-26(FC)
*RT6320C	5.2	23	-	5.1	12	500	17	7.5	120	PSM	ACOT	-	-	With 5V LDO	UQFN4x3-26(FC)
*RT6321A	4.5	23	0.6	5.5	12	500	17	7.5	85	PSM	ACOT	-	Y	Adj. OCP	UQFN4x3-26(FC)
RT6242B	4.5	18	0.7	8	12	500	12	5.4	0.8	Forced PWM	ACOT	Y	Y	Adj. Current Limit	UQFN3x3-16J(FC)

[\*] Product numbers marked with stars are the new/featured products.

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (mA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT6243A	4.5	17	0.6	5.5	12	400; 800; 1200	9.8	4.5	0.6	PSM/ Forced PWM	ACOT	Y	Y	EN Internal Pull High	VQFN3.5x3.5-18(FC)
RT6243B	4.5	17	0.6	5.5	12	400; 800; 1200	9.8	4.5	0.6	PSM/ Forced PWM	ACOT	Y	Y	EN Internal Pull Low	VQFN3.5x3.5-18(FC)
RTQ2822A	4.5	17	0.6	5.5	12	400; 800; 1200	9.8	4.5	0.6	PSM/ Forced PWM	ACOT	Y	Y	EN Internal Pull High	VQFN3.5x3.5-18(FC)
RTQ2822B	4.5	17	0.6	5.5	12	400; 800; 1200	9.8	4.5	0.6	PSM/ PWM	ACOT	Y	Y	EN Internal Pull Low	VQFN3.5x3.5-18(FC)
RT6245A	4.5	17	0.4375	1.3875	14	400; 800; 1200	9.8	4.5	0.6	PSM	ACOT	Y	Y	I <sup>2</sup> C Control; DCM at Light Load	VQFN3.5x3.5-19(FC)
RT6245B	4.5	17	0.4375	1.3875	14	400; 800; 1200	9.8	4.5	0.6	Forced PWM	ACOT	Y	Y	I <sup>2</sup> C control; FCCM at Light Load	VQFN3.5x3.5-19(FC)
RTQ2822T	4.5	17	0.6	5.5	15	400; 800; 1200	9.8	4.5	0.6	PSM/ PWM	ACOT	Y	Y	Selectable Current Limit	VQFN3.5x3.5-18(FC)
*RTQ2820A	3.5	17	0.6	5.5	20	600/800 /1000	8.6	2.5	1150	PSM/ PWM	ACOT	Y	Y	Adj. Valley Current Limit	WQFN3x4-21T(FC)

[\*] Product numbers marked with stars are the new/featured products.

**>30V WIDE VIN**

Solutions for high-voltage requirements with our broad portfolio of Buck converters.

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (µA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RT6208	4.75	36	0.8	15	0.1	-	3000	1500	0.16	PSM	Hysteretic Mode	-	Y	Adj. Peak Current Limit	SOT-23-6; SOT-23-8
RTQ2940-QA	4	42	0.8	42	0.5	100 to 2500	170	-	0.09	PSM	CM	Y	Y	AEC-Q100; Async.	PSOP-8; WDFN3x3-10S
RTQ2960-QA	4	60	0.8	60	0.5	100 to 2500	170	-	0.09	PSM	CM	Y	Y	AEC-Q100; Async.	PSOP-8; WDFN3x3-10S
RT6204	5.2	60	0.8	50	0.5	350	660; 890	330	0.6	PSM	CM	Y	-	Enable Input	PSOP-8
RT6210	5.2	80	0.8	72	0.5	350	660	330	0.6	PSM	CM	Y	-	Wide input Range	PSOP-8
RT6340	4	42	0.8	42	0.5	100 to 2500	170	-	0.09	PSM	CM	Y	Y	Async.	PSOP-8; WDFN3x3-10S
RTQ6340	4	42	0.8	42	0.5	100 to 2500	170	-	0.09	PSM	CM	Y	Y	Industrial Grade; Async.	PSOP-8; WDFN3x3-10S
RT6360	4	60	0.8	60	0.5	100 to 2500	170	-	0.09	PSM	CM	Y	Y	Async.	PSOP-8; WDFN3x3-10S
RTQ6360	4	60	0.8	60	0.5	100 to 2500	170	-	0.09	PSM	CM	Y	Y	Industrial Grade; Async.	PSOP-8; WDFN3x3-10S
RT6200	4.5	36	0.8	15	0.6	1200	350	-	-	PWM	CM	-	-	Async.	SOT-23-6
RTQ2130B-QT	3	36	0.8	36	0.7	2100	200	160	1.1	Forced PWM	CM	-	-	AEC-Q100	WDFN2x3-8S
RTQ2131B-QA	3	36	0.8	36	1	2100	200	160	1.1	Forced PWM	CM	-	Y	AEC-Q100	WDFN3x3-10S
RTQ2132B-QT	3	36	0.8	36	1.2	2100	200	160	1.1	Forced PWM	CM	Y	Y	AEC-Q100	TSSOP-14(PP)
RTQ2941-QA	4	42	0.8	42	1.5	100 to 2500	160	-	0.09	PSM	CM	Y	Y	AEC-Q100; Async.	PSOP-8; WDFN3x3-10S
RTQ2961-QA	4	60	0.8	60	1.5	100 to 2500	160	-	0.09	PSM	CM	Y	Y	AEC-Q100; Async.	PSOP-8; WDFN3x3-10S
RTQ6341	4	42	0.8	42	1.5	100 to 2500	160	-	0.09	PSM	CM	Y	Y	Industrial Grade; Async.	PSOP-8; WDFN3x3-10S
RT6361	4	60	0.8	60	1.5	100 to 2500	160	-	0.09	PSM	CM	Y	Y	Async.	PSOP-8; WDFN3x3-10S
RTQ6361	4	60	0.8	60	1.5	100 to 2500	160	-	0.09	PSM	CM	Y	Y	Industrial Grade; Async.	PSOP-8; WDFN3x3-10S
RT6266	7.5	36	0.8	5.5	2.4	100	100	-	0.8	PSM	CM	-	-	Async.	PSOP-8
RTQ2942-QA	4	42	0.8	42	2.5	100 to 2500	150	-	0.09	PSM	CM	Y	Y	AEC-Q100; Async.	PSOP-8; WDFN3x3-10S
RTQ2962-QA	4	60	0.8	60	2.5	100 to 2500	150	-	0.09	PSM	CM	Y	Y	AEC-Q100; Async.	PSOP-8; WDFN3x3-10S
RT6342	4	42	0.8	42	2.5	100 to 2500	150	-	0.09	PSM	CM	Y	Y	Async.	PSOP-8; WDFN3x3-10S

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (μA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RTQ6342	4	42	0.8	42	2.5	100 to 2500	150	-	0.09	PSM	CM	Y	Y	Industrial Grade; Async.	PSOP-8; WDFN3x3-10S
RT6362	4	60	0.8	60	2.5	100 to 2500	150	-	0.09	PSM	CM	Y	Y	Async.	PSOP-8; WDFN3x3-10S
RTQ6362	4	60	0.8	60	2.5	100 to 2500	150	-	0.09	PSM	CM	Y	Y	Industrial Grade; Async.	PSOP-8; WDFN3x3-10S
RTQ2104-QA	3	36	0.8	36	3	2100	80	80	0.04	PSM	CM	-	Y	AEC-Q100	PSOP-8
RTQ2104B-QA	3	36	0.8	36	3	2100	80	80	1.2	Forced PWM	CM	-	Y	AEC-Q100	PSOP-8
*RTQ2104BP-QA	3	36	0.8	36	3	2100	80	80	1.2	Forced PWM	CM	-	Y	AEC-Q100	PSOP-8
RTQ2105-QA	3	36	0.8	36	3	300 to 2200	70	70	0.04	PSM/ Forced PWM	CM	Y	Y	AEC-Q100	WET-WQFN4x4-24S
RTQ2106-QA	3	36	0.8	36	3	300 to 2200	90	90	0.04	PSM/ Forced PWM	CM	Y	Y	AEC-Q100.	TSSOP-14(PP)
RT2872	4.5	36	0.8	30	3	300 to 1000	105	80	1	Forced PWM	CM	-	-	AEC-Q100	PSOP-8
RT2875BQ	4.5	36	0.6	24	3	300 to 2100	95	70	1.3	Forced PWM	CM	Y	Y	AEC-Q100; Hiccup UVP	TSSOP-14(PP)
RT2875AQ	4.5	36	0.6	24	3	300 to 2100	95	70	1.3	Forced PWM	CM	Y	Y	AEC-Q100; Latched UVP	TSSOP-14(PP)
RT2875DQ	4.5	36	0.6	24	3	300 to 2100	95	70	1.3	Forced PWM	CM	-	Y	AEC-Q100; Hiccup UVP	TSSOP-14(PP)
RTQ2949A-QA	4	42	0.8	42	3	100 to 2500	150	-	0.09	PSM	CM	-	-	AEC-Q100	PSOP-8
RT2862	4.5	36	0.8	30	3	300 to 1000	105	80	1	Forced PWM	CM	-	-	Ext. Comp.	PSOP-8
RT2862A	4.5	36	0.8	30	3	300 to 1000	105	80	1	PSM	CM	-	-	Ext. Comp.	PSOP-8
RT7272A	4.5	36	0.8	30	3	500	150	80	0.9	Forced PWM	CM	-	-	Adj. Current Limit	PSOP-8
RT7272B	4.5	36	0.8	30	3	500	150	80	0.9	PSM	CM	-	-	Adj. Current Limit	PSOP-8
RTQ2943-QA	4	42	0.8	42	3.5	100 to 2500	80	-	0.1	PSM	CM	Y	Y	AEC-Q100; Async.	PSOP-8; WDFN4x4-10
RTQ2963-QA	4	60	0.8	60	3.5	100 to 2500	80	-	0.1	PSM	CM	Y	Y	AEC-Q100; Async.	PSOP-8; WDFN4x4-10
RT6343	4	42	0.8	42	3.5	100 to 2500	80	-	0.1	PSM	CM	Y	Y	Async.	PSOP-8; WDFN4x4-10
RTQ6343	4	42	0.8	42	3.5	100 to 2500	80	-	0.1	PSM	CM	Y	Y	Industrial Grade; Async.	PSOP-8; WDFN4x4-10
RT6363	4	60	0.8	60	3.5	100 to 2500	80	-	0.1	PSM	CM	Y	Y	Async.	PSOP-8; WDFN4x4-10
RTQ6363	4	60	0.8	60	3.5	100 to 2500	80	-	0.1	PSM	CM	Y	Y	Industrial Grade; Async.	PSOP-8; WDFN4x4-10

[\*] Product numbers marked with stars are the new/featured products.

Product Number	Vin		Vout		Iout max (A)	Freq (kHz)	Ron		Iq typ (μA)	PSM / Forced PWM	Control Mode	Adj. Soft- Start	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)			HS typ (mΩ)	LS typ (mΩ)							
RTQ2945-QA	4	42	0.8	42	5	100 to 2500	70	-	0.1	PSM	CM	Y	Y	AEC-Q100; Async.	PSOP-8; WDFN4x4-10
RTQ2945A-QA	4	42	0.8	42	5	100 to 2500	70	-	0.1	PSM	CM	Y	-	AEC-Q100; Async.	PSOP-8
RTQ2965-QA	4	60	0.8	60	5	100 to 2500	70	-	0.1	PSM	CM	Y	Y	AEC-Q100; Async.	PSOP-8; WDFN4x4-10
RT6345	4	42	0.8	42	5	100 to 2500	70	-	0.1	PSM	CM	Y	Y	Async.	PSOP-8; WDFN4x4-10
RTQ6345	4	42	0.8	42	5	100 to 2500	70	-	0.1	PSM	CM	Y	Y	Industrial Grade; Async.	PSOP-8; WDFN4x4-10
RT6365	4	60	0.8	60	5	100 to 2500	70	-	0.1	PSM	CM	Y	Y	Async.	PSOP-8; WDFN4x4-10
RTQ6365	4	60	0.8	60	5	100 to 2500	70	-	0.1	PSM	CM	Y	Y	Industrial Grade; Async.	PSOP-8; WDFN4x4-10
RT8279	5.5	36	1.222	26	5	500	110	10000	0.6	Forced PWM	CM	-	-	Enable Input	PSOP-8

# BUCK CONTROLLERS

Buck controllers step down the input voltage to a lower output voltage using external switches. The output current is limited by external MOSFETs, providing designers with the flexibility to optimize performance.

Product Number	Vin		Vout		Freq	Gate Drive	Iq	Control Mode	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)	typ (kHz)	(V)	typ (mA)				
RT6541A	3	26	0.7	1.05	560	5	0.14	ACOT	Y	Fast Transient Response; Adj. OCP	WDFN3x2-14
RT6541E	3	26	0.78	0.95	560	5	0.14	COT	Y	Adj. OCP; Only for FP7	WDFN3x2-14
RT6542A	3	26	0.75	1.05	560	5	0.2	ACOT	Y	Fast Transient Response	WDFN3x2-14
RT6543A	3	24	1.1	1.8	400 to 800	5	0.3	COT	Y	DCR Current Sense; Droop Control; 2-bit VID with Slew Down Mode	WQFN3x3-20
RT6543B	3	24	1.1	1.8	400 to 800	5	0.3	COT	Y	DCR Current Sense; Droop Control; 2-bit VID with Decay Down Mode	WQFN3x3-20
RT6575E	5	25	2	5.5	300; 355	-	0.42	COT	Y	Dual Channels; 5V/3.3V LDOs Output	WQFN3x3-20
*RT6575K	5	25	2	5.5	400; 500	-	0.25	COT	Y	Single Channel; 5V LDO Output	VQFN3x3-16
RT6576D	5	25	2	5.5	300; 355	-	0.42	COT	Y	Dual Channels; 5V/3.3V LDOs Output	WQFN3x3-20
RT6585B	5	25	2	5.5	400; 475	5	0.12	CCRCOT†	Y	Dual Channels; 5V/3.3V LDOs; Diode-emulation Mode in Light Load	WQFN3x3-20
RT6585C	5	25	2	5.5	500; 600	5	0.12	CCRCOT†	Y	Dual Channels; 5V/3.3V LDOs; Diode-emulation Mode in Light Load	WQFN3x3-20
RT8125H	1.5	24	0.3	3.3	300	5; 12	0.5	COT	Y	100ns "instant-on" Response to Load Transients	WDFN3x3-10
*RT8125P	1.5	24	0.3	3.3	300	5; 12	0.5	COT	Y	100ns "instant-on" Response to Load Transients	WDFN3x3-10
RT8129A	2.5	25	0.8	3.3	300	5; 12	-	COT	Y	Adj. Latch OCP; Latch OVP; Ultrasonic PSM Mode	WDFN3x3-10
RT8207P	4.5	26	0.75	3.3	200 to 600	12	0.47	COT	Y	for DDR2/3/Low-Power & DDR3/4 Memory Systems	WQFN3x3-20
RT8231A	4.5	26	0.675	3.3	260 to 1500	5	0.135	COT	Y	Tracing Mode; for DDR2/DDR3/DDR3L/LPDDR3/DDR4/LPDDR4 Memory Systems	WQFN3x3-20
RT8231B	4.5	26	0.675	3.3	260 to 1500	5	0.135	COT	Y	Non-Tracing Mode; for DDR2/DDR3/DDR3L/LPDDR3/DDR4/LPDDR4 Memory Systems	WQFN3x3-20
RT8231C	4.5	26	0.675	3.3	260 to 1500	5	0.135	COT	Y	for DDR2/DDR3/DDR3L/LPDDR3/DDR4/LPDDR4 Memory Systems	WQFN3x3-20
RT8237K	4.5	26	0.7	3.3	435; 510; 570; 645	5	0.5	COT	Y	Adj. OCP.; Soft-Start; OVP	VQFN3x3-16
*RT8237L	4.5	26	0.7	3.3	435; 510; 570; 645	5	0.5	COT	Y	Adj. OCP.; Soft-Start	VQFN3x3-16

[†] CCRCOT is the Constant Current Ripple Constant-On-Time topology.

[\*] Product numbers marked with stars are the new/featured products.



Product Number	Vin		Vout		Freq	Gate Drive	Iq	Control Mode	Power Good	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)	typ (kHz)	(V)	typ (mA)				
RT8237H	4.5	26	0.7	3.3	290; 340; 380; 430	5	0.5	COT	Y	Adj. Freq.; Adj. OCP; OVP	WDFN3x3-10
*RT8237M	4.5	26	0.7	3.3	435; 510; 570; 645	5	0.5	COT	Y	Adj. Freq.; Adj. OCP; OVP	WDFN3x3-10
RT8243A	5.5	25	2	5.5	200 to 466	19	1	COT	Y	Adj. Freq.; Adj. OCP; Selectable Operation Mode with Switching Enable Control	WQFN3x3-20

[\*] Product numbers marked with stars are the new/featured products.

## BOOST CONVERTERS

Boost converters step up the input voltage to a higher output voltage. This process involves charging an inductor through an internal MOSFET switch and discharging the inductor to the load through a rectifier when the MOSFET switch is off. The maximum load current is determined by the current rating of the MOSFET switch and the step-up ratio, while the maximum output voltage capability is determined by the MOSFET voltage rating. In some boost converters, a MOSFET is integrated as a rectifier to enable synchronous rectification.

Product Number	Vin		Vout		SW Current Limit	Iq	Freq	Switch Ron	Rectifier Ron	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)	typ (A)	typ (mA)	typ (kHz)	typ (Ohm)	typ (Ohm)		
RT9261B	1	7	1.5	5	0.16	0.036	190	-	-	VFM Boost; Only 3 ext. components; Enable Input	SOT-23-5; SOT-89
RT9266B	2	6.5	2.6	6	0.5	0.15	550	0.35	-	1V Low Start-Up Input; Enable Input	SOT-23-6
RT9277C	2.5	5.5	3	16	1.6	2	640; 1200	0.2	-	Adj. Soft-Start; Enable Input	MSOP-8; WDFN3x3-8
RT9266	2	6	2.6	6	2	0.55	450	0.3	-	1V Low Start-Up Input; Enable Input	SOT-23-5; SOT-89-5
RT9276	1.2	5	3.3	5	2	0.1	1200	0.24	-	With Voltage Detector; Enable Input	WDFN3x3-10
RT9278	1.5	5.5	2.4	5.5	2	0.2	650	0.24	-	High Power WLED Driver	WDFN3x3-10
RT4812	1.8	5.5	1.8	5.5	3.5	0.09	500	0.03	0.045	Synchronous; Selectable Current Limit; Load Disconnect; I <sup>2</sup> C Control	TSOT-23-8(FC)
RT8509	2.8	14	3.5	24	3.5	1	1200	0.1	-	Adj. Soft-Start; Enable Input	WDFN3x3-10
RT4823N	1.8	5.5	3.15	5.5	3.6	0.004	3500	80	-	I <sup>2</sup> C Control	WL-CSP1.3x1.2-9B(BSC)
RTQ9297-QT	2.6	5.5	2.6	24	3.8	0.5	640; 1200	0.125	-	AEC-Q100; Adj. Soft-Start; Enable Input	WDFN3x3-10S
RT9297	2.6	5.5	2.6	24	3.8	0.5	640; 1200	0.125	-	Adj. Soft-Start; Enable Input	WDFN3x3-10
RT4803A	1.8	5.0	2.85	4.4	4	0.055	2500	0.06	0.04	Synchronous; I <sup>2</sup> C Control; Adj. Current Limit	WL-CSP-16B 1.67x1.67 (BSC)
*RT4803B	1.8	5.0	2.85	4.4	4	0.056	2500	0.06	0.04	Adj. Digital Output Control	WL-CSP-16B 1.67x1.67 (BSC)
RT8509A	2.8	14	3.5	24	5	5	1200	0.1	-	Adj. Soft-Start; Enable Input	WDFN5x5-12
RT4803	1.8	5.0	2.85	4.4	5	0.065	2500	0.06	0.04	Synchronous; I <sup>2</sup> C Control; Adj. Current Limit; Power Good; Low Iq Forced-Bypass	WL-CSP1.67x1.67-16(BSC)
RT4841	8.6	15.9	8.6	15.9	5.5	5	500	0.08	-	Asynchronous; Isolation Switch Controller; Ext. Comp.	WQFN4x4-20
RT4813A	1.8	5.5	1.8	5.5	6	0.12	500	0.026	0.043	Synchronous; Adj. Current Limit; Load Disconnect	UQFN2x2-9(FC)

[\*] Product numbers marked with stars are the new/featured products.

## BOOST CONTROLLERS

Boost controllers step up the input voltage to a higher output voltage using external switches. The output current is limited by external MOSFETs, providing designers with the flexibility to optimize performance. Boost controllers enable designers to achieve higher levels of output power and operating temperature ranges that may not be achievable with boost converters.

Product Number	Vin		Iq	VFB	Freq	Gate Drive		Duty	Features	Package(s)
	min (V)	max (V)	typ (mA)	typ (V)	typ (kHz)	sink Ron (Ω)	source Ron (Ω)	max (%)		
RT8525	4.5	29	1.3	1.25	200	1	1.5	90	Adj. Current Limit; Adj. Freq.; Adj. Soft-Start; Power Good	SOP-14
RT8525D	4.5	25	1.3	1.25	200	1	1.5	90	High Power Boost or SEPIC; Adj. Current Limit; Adj. Freq.; Adj. Soft-Start; Adj. OVP; FAULT Output	WDFN3x3-12

## BUCK-BOOST CONVERTERS

Buck-Boost converters find use in applications where the input voltage can vary, either falling below or rising above the output voltage. These converters automatically configure their four internal MOSFET switches to operate in Buck mode when Vin exceeds Vout and switch to Boost operation when Vin falls below Vout. This versatility makes Buck-Boost converters ideal for battery-powered applications, extending battery life when the battery voltage drops below the regulated output voltage.

Product Number	Vin		Vout		Iout	Current Limit	Freq	Ron		Iq	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)	max (A)	min (A)	typ (kHz)	HS typ (mΩhm)	LS typ (mΩhm)	typ (μA)		
RT6150A	1.8	5.5	2.5	5.5	0.8	1.6	1000	150	150	60	PSM/Forced PWM Mode Switch; Load Disconnect	WDFN3x3-10
RT6150B	1.8	5.5	2.5	5.5	0.8	1.6	1000	150	150	60	PSM/Forced PWM Mode Switch; Load Disconnect	WDFN2.5x2.5-10
RT4823	1.8	5.5	5	5	1.5	2.15	3500	80	80	4	Bypass/Forced PWM Mode	WL-CSP1.3x1.2-9B(BSC)
RT4823M	1.8	5.5	5	5	1.5	3.6	3500	80	80	4	Bypass/Forced PWM Mode	WL-CSP1.3x1.2-9B(BSC)
RT6158A	2.5	5	2.1	5.2	2	4.3	2000	20	20	8	Low Iq; PSM/Forced PWM Mode Switch; Load Disconnect; Ext. Sync.	WL-CSP2.07x2.33-25(BSC)
RT1741A	1.8	5.5	1.8	5.5	3	4.5	2400	50	50	20	PSM/Forced PWM Mode Switch; Load Disconnect; Ext. Sync.	WDFN4x3-14A
RTQ1741A	1.8	5.5	1.8	5.5	3	4.5	2400	50	50	20	Industrial Grade; PSM/Forced PWM Mode Switch; Load Disconnect; Ext. Sync.	WDFN4x3-14A
RT6160A	2.2	5.5	2.025	5.2	3	5	2200	25	38	2	I <sup>2</sup> C control; ACOT; Low Iq; PFM/ Forced PWM Mode; Ultra-Sonic Mode; Default VOUT 3.45V at VSEL = H	WL-CSP1.4x2.3-15(BSC)
RT6160B	2.2	5.5	2.025	5.2	3	5	2200	25	38	2	I <sup>2</sup> C control; ACOT; Low Iq; PFM/ Forced PWM Mode; Ultra-Sonic Mode; Default VOUT 3.85V at VSEL = H	WL-CSP1.4x2.3-15(BSC)
RT6160C	2.2	5.5	2.025	5.2	3	5	2200	25	38	2	Auto PFM/ Forced PWM Mode; I <sup>2</sup> C Control; VOUT 3.2V at VSEL = L	WL-CSP1.4x2.3-15B(BSC)

Product Number	Vin		Vout		Iout	Current Limit	Freq	Ron		Iq	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)	max (A)	min (A)	typ (kHz)	HS typ (mΩ)	LS typ (mΩ)	typ (μA)		
RT6160D	2.2	5.5	2.025	5.2	3	5	2200	25	38	2	Auto PFM/Forced PWM Mode; I <sup>2</sup> C Control; VOUT 3.85V at VSEL = L	WL-CSP1.4x2.3-15B(BSC)
RT6158H	2.5	5.5	2.1	5.2	3	6.5	2000	20	20	8	Low Iq; PSM/Forced PWM Mode Switch; Load Disconnect; Ext. Sync.	WL-CSP2.07x2.33-25(BSC)
RT6154A	1.8	5.5	1.8	5.5	4	2.6(2.1Vin); 5(3.6Vin)	2400	50	50	20	PSM/Forced PWM Mode Switch; Load Disconnect; Ext. Sync.	WDFN4x3-14A

## BUCK-BOOST CONTROLLERS

Boost controllers will step up or step down an input voltage to a desired output voltage using external switches. The output current is limited by external MOSFETs, which makes them versatile for various applications, such as battery-powered devices.

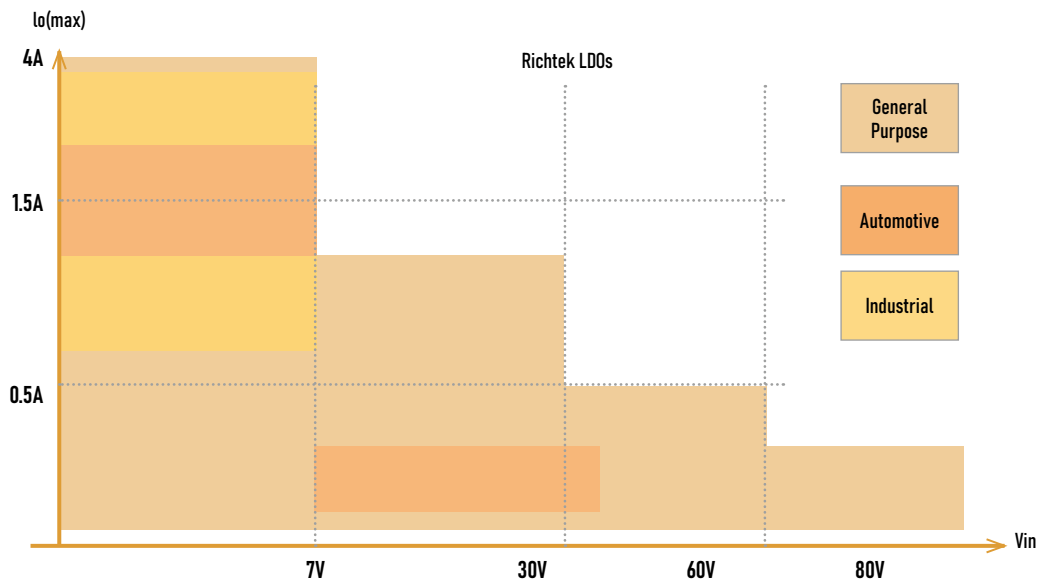
Product Number	Vin		Vout		Iout	Current Limit	Freq	Iq	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)	max (A)	min (A)	typ (kHz)	typ (mA)		
*RT6179	4.5	36	3	36	5	6.5	250 to 1000	3	Support USB-PD 3.0 SPR Mode and 28V of 3.1 EPR Mode; AnyPower™ for Constant Voltage & Constant Current Output Settings; Latch Mode Protection	WQFN5x5-40
*RT6179H	4.5	36	3	36	5	6.5	250 to 1000	3	Support USB-PD 3.0 SPR Mode and 28V of 3.1 EPR Mode; AnyPower™ for Constant Voltage & Constant Current Output Settings; Hiccup Mode Protection	WQFN5x5-40
RT6190	4.5	36	3	36	5	6.5	250 to 1000	3	Support USB-PD 3.0 SPR Mode and 28V of 3.1 EPR Mode; AnyPower™ for Constant Voltage & Constant Current Output Settings; Bi-directional; I <sup>2</sup> C Control Vout	WQFN5x5-40
*RT6190G	4.5	36	3	36	5	6.5	250 to 1000	3	General Purpose as System Power; AnyPower™ for Constant Current Output Settings; FB Pin Control Vout	WQFN5x5-40

[\*] Product numbers marked with stars are the new/featured products.

# LINEAR REGULATORS

Low dropout linear regulators (LDOs) can be used in applications that require the conversion of a higher input voltage to a lower output voltage at relatively moderate power levels. Richtek has developed a broad portfolio of LDOs featuring high power supply ripple rejection (PSRR) to ensure the output voltage remains free of noise and ripple, low quiescent current ( $I_q$ ) to extend battery life, and various packaging options for different power dissipation requirements. Our wide input-voltage LDOs are well-suited for industrial applications, while the high-performance AEC-Q100 qualified LDOs are ideal for automotive applications.

Richtek LDOs are categorized based on various features, including fixed/adjustable  $V_{out}$ , biased voltage requirements, low  $I_q$ , low noise/high PSRR, and different applications such as general purpose, automotive, and industrial.



## <7V LOW VIN

Solutions for low-voltage requirements with our broad range of LDOs.

Product Number	$V_{in}$		$V_{out}$		$I_{out}$ max (mA)	$I_q$ typ ( $\mu$ A)	$V_{dropout}@$ Rated Current typ (mV)	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)					
RT9169	2	6	1.2	5	100	4	450@0.1A	Fixed $V_{out}$ ; Enable Input (Low)	SOT-23-3; SOT-23-5; SOT-89; TO-92
RT9169H	2	6	1.2	5	100	4	450@0.1A	Fixed $V_{out}$ ; Enable Input (High)	SOT-23-5
RT9030	1.65	5.5	1	3.3	150	25	100@0.15A	Fixed $V_{out}$ ; Enable Input	SC-70-5; WDFN1.6x1.6-6L
RT9073A	1.2	5.5	0.9	3.3	250	1	450@0.25A	Low $I_q$ ; Fixed $V_{out}$ ; Enable Input	ZQFN1x1-4; SC-82
RT9083	1.2	5.5	0.9	3.3	250	30	450@0.25A	Fixed $V_{out}$ ; Enable Input	TSOT-23-5
RT9086	2.2	5.5	1.2	4.5	250	16	120@0.25A	Low Noise & High PSRR; Fixed $V_{out}$ ; Enable Input	WL-CSP0.67x0.67-4(BSC); SOT-25; ZQFN1x1-4
RT9092	2.2	5.5	1.2	4.5	250	16	120@0.25A	Low Noise & High PSRR; Adj. $V_{out}$ ; Enable Input	WL-CSP0.67x0.67-4B(BSC)
RT9013B	2.2	5.5	1.2	3.5	300	25	125@0.3A	Fixed $V_{out}$ ; Enable Input	WDFN1.6x1.6-6; SC-70-5
RT9078	1.2	5.5	0.8	3.45	300	2	150@0.3A	Low $I_q$ ; Fixed $V_{out}$ ; Enable Input	TSOT-23-5; ZQFN1x1-4
RT9166	2.8	5.5	1.2	4.5	300	220	230@0.3A	Fixed $V_{out}$ ; Various 3-lead Packages	SOT-223; SOT-23-3; SOT-89; TO-92; TO-252

Product Number	Vin		Vout		Iout	Iq	Vdropout@ Rated Current	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)	max (mA)	typ (μA)	typ (mV)		
RT9167	2.9	7	1.5	5	300	90	350@0.3A	Fixed Vout; Enable Input	SOP-8; SOT-23-5
RT9179	3	5.5	1.175	4.5	300	150	300@0.3A	Adj. Vout; Enable Input	SOT-23-5
RT9193	2.5	5.5	1.5	5	300	90	220@0.3A	Fixed Vout; Enable Input	MSOP-8; (T)SOT-23-5; WDFN2x2-6; SC-70-5
RT9198	2.5	5.5	1.5	5	300	90	220@0.3A	Fixed Vout; Enable Input	SOT-23-3; (T)SOT-23-5; SC-70-5; WDFN2x2-6L; MSOP-8; SC-82
RT9043	2.2	5.5	1.2	5	400	35	230@0.4A	Adj. Vout; Enable Input	SOT-23-5
RT9053A	2.2	5.5	0.8	5	400	35	230@0.4A	Adj. Vout; Enable Input	SOT-23-5; WDFN2x2-6
RTQ2531A	1.7	5.5	0.6	5.3	500	160	150@0.5A	Industrial Grade; Low Noise & High PSRR; Adj. Vout; POK Output; Enable Input	WDFN2x2-8S
RTQ2531W	1.7	5.5	0.6	5.3	500	160	150@0.5A	Industrial Grade; Low Noise & High PSRR; Adj. Vout; reverse POK Output; Enable Input	WDFN2x2-8S
RT9013	2.2	5.5	1.2	3.3	500	25	250@0.5A	Fixed Vout; Enable Input	SC-70-5; SOT-25; WDFN2x2-6; SC-82
RT9020	2.2	5.5	1.2	3.3	500	25	250@0.5A	Fixed Vout; Adj. Soft-Start; Enable Input	SC-70-5; SOT-23-5
RT9065	2.2	5.5	0.8	4.5	500	90	370@0.5A	Adj. Vout; Enable Input	SOT-23-6
RT9081A	0.8	5.5	0.8	3.6	500	80	140@0.5A	Bias Voltage Required; Enable Input	ZADFN1.2x1.2-6
RT9167A	2.9	7	1.5	5	500	90	600@0.5A	Fixed Vout; Enable Input	SOP-8; SOT-23-5
RT9179A	3	5.5	1.175	4.5	500	150	400@0.5A	Adj. Vout; Enable Input	SOP-8
RT9186A	2.5	5.5	0.8	4.5	500	190	160@0.5A	Fixed Vout (Adj. Output for Option); Power Good; Enable Input	MSOP-8; VDFN3x3-8
RT9080	1.2	5.5	0.8	3.3	600	2	310@0.6A	Low Iq; Fixed Vout; Enable Input	ZQFN1x1-4; TSOT-23-5
RT9166A	2.8	5.5	1.2	4.5	600	220	580@0.6A	Fixed Vout; Various 3-lead Packages	SOT-223; SOT-23-3; SOT-89; TO-92; TO-252
RT9187B	2.5	5.5	0.8	4.5	600	380	100@0.5A	Adj. Vout; Ultra-Fast; Low Noise & High PSRR; Enable Input	SOT-23-5
RT9187C	2.5	5.5	0.8	4.5	600	300	100@0.5A	Adj. Vout; Ultra-Fast; Low Noise & High PSRR; Enable Input	SOT-23-5
RT9095	1.7	5.5	0.6	5.3	700	130	210@0.7A	Adj. Vout; Power Good; Low Noise & High PSRR; Enable Input	WDFN2x2-8S
RTQ2510-QA	2.2	6	0.8	5.5	1000	190	170@1A	AEC-Q100; Adj. Vout; Low noise & High PSRR; Enable Input	VDFN3x3-8
*RTQ2510A-QA	2.2	6	0.8	5.5	1000	190	170@1A	AEC-Q100; Adj. Vout; Low noise & High PSRR; Enable Input	VDFN3x3-8
*RTQ2551A-QA	0.8	5.5	0.8	3.6	1000	1000	50@1A	AEC-Q100; Adj. Vout; Power Good; Adj. Soft-Start; Enable Input	WDFN3x3-10
RT2517B	2.2	6	1.2	5	1000	700	200@1A	AEC-Q100; Adj. Vout; Enable Input	PSOP-8
RT2519	2.2	6	0.8	5.5	1000	190	170@1A	Industrial Grade; Adj. Vout; Adj. Soft-Start; High PSRR; Enable Input	VDFN3x3-8A
RT2519W	2.2	6	0.8	5.5	1000	190	170@1A	Industrial Grade; Low Noise & High PSRR; Enable Input	VDFN3x3-8A

[\*] Product numbers marked with stars are the new/featured products.

Product Number	Vin		Vout		Iout max (mA)	Iq typ (µA)	Vdropout@ Rated Current typ (mV)	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)					
*RTQ2551A	0.8	5.5	0.8	3.6	1000	1000	50@1A	Industrial Grade; Adj. Vout; Power Good; Adj. Soft-Start; Enable Input	WDFN3x3-10
RT9085A	0.8	5.5	0.5	3.9	1000	35	60@1A	Bias Voltage Required; Enable Input	WL-CSP0.8x1.2-6(BSC)
RT9187	2.5	5.5	0.8	4.5	1000	380	240@1A	Fixed Vout (Adj. Output for Options); Enable Input	VDFN3x3-8; PSOP-8
RTQ2521	1.1	6.5	0.8	5.5	1200	3700	75@1.2A	Industrial Grade; Low Noise & High PSRR; Power Good; Enable Input	WDFN3x3-8E
RT9048A	1.6	6	0.65	5.5	1500	700	180@1.5A	Industrial Grade; Adj. Vout; Enable Input	VDFN3x3-8
RTQ2521A	1.1	6.5	0.5	5.5	1500	3700	110@1.5A	Industrial Grade; Adj. Vout; Low Noise & High PSRR; Power Good; Adj. Soft-Start; Enable Input	WDFN3x3-8E
RTQ2516-QT	1.4	6	0.5	5.5	2000	700	240@2A	AEC-Q100; Adj. Vout; Enable Input	PSOP-8
*RTQ2552A	1.1	6.5	0.8	5.5	2000	2800	172@2A	Industrial Grade; Adj. Vout; Power Good; Adj. Soft-Start; Enable Input	WDFN2.5x2.5-10L(FC)
RT9048	1.4	6	0.5	5	2000	700	240@2A	Industrial Grade; Adj. Vout; Enable Input	PSOP-8
RT9094A	0.8	5.5	0.8	3.6	2000	-	100@2A	Adj. Vout; Adj. Soft-Start; Power Good; Enable Input	WDFN3x3-10
RTQ2520	1.1	6.5	0.5	5.5	2000	3700	125@2A	Industrial Grade; Adj. Vout; Power Good; Adj. Soft-Start; Enable Input	WDFN3x3-8E
RTQ2522A	0.8	5.5	0.8	3.6	2000	1000	135@2A	Industrial Grade; Adj. Vout; Adj. Soft-Start; Power Good; Enable Input	WDFN3x3-10
RTQ2522B	0.8	5.5	0.8	3.6	2000	1000	135@2A	Industrial Grade; Adj. Vout; Adj. Soft-Start; Power Good; Enable Input	WQFN5x5-20
*RTQ2527D	0.8	5.5	0.5	3.6	2000	700	100@2A	Adj. Vout; Enable Input; Adj. Soft-Start	WDFN3x3-10
*RTQ2532E	1.1	6.5	0.5	5.5	2000	4000	125@2A	Industrial Grade; Adj. Vout; Power Good; Adj. Soft-Start; Easy Vout (Set Vout by PCB); Low Noise & High PSRR; Enable Input	VQFN3.5x3.5-20; VQFN5x5-20
RTQ2532N	1.1	6.5	0.8	5.5	2000	3700	125@2A	Industrial Grade; Adj. Vout; Power Good; Adj. Soft-Start; Easy Vout (Set Vout by PCB); Low Noise & High PSRR; Enable Input	VQFN3.5x3.5-20; VQFN5x5-20
RTQ2532W	1.1	6.5	0.8	5.5	2000	3700	125@2A	Industrial Grade; Adj. Vout; Power Good; Adj. Soft-Start; Easy Vout (Set Vout by PCB); Low Noise & High PSRR; Enable Input	VQFN5x5-20
*RTQ2538H	1.1	6.5	0.8	5.5	2000	2800	34@2A	Industrial Grade; Adj. Vout; Power Good; Adj. Soft-Start; Low Noise & High PSRR; Enable Input	WQFN2.2x2.5-12(FC)
RTQ9091	1.4	6	0.5	5.5	2000	700	240@2A	Industrial Grade; Adj. Vout; Enable Input	PSOP-8
RT9059	1	5.5	0.8	4	3000	600	350@3A	Bias Voltage Required; Adj. Vout; Power Good; Enable Input	PSOP-8; WDFN3x3-10
RT9059A	1	5.5	0.8	4	3000	600	350@3A	Adj. Vout; Power Good; Enable Input	WDFN3x3-10
RT9059B	1	5.5	0.8	4	3000	600	350@3A	Bias Voltage Required; Power Good; Enable Input	WDFN3x3-10
RTQ2513T	1.1	6.5	0.5	5.5	3000	4200	110@3A	Industrial Grade; Adj. Vout; Power Good; Adj. Soft-Start; Easy Vout (Set Vout by PCB up to 3.65V); Low Noise & High PSRR; Enable Input	WQFN3.5x3.5-20
*RTQ2527D	0.8	5.5	0.5	3.6	3000	1000	120@3A	Adj. Vout; Enable Input; Adj. Soft-Start	WDFN3x3-10
*RTQ2533E	1.1	6.5	0.5	5.5	3000	4000	180@3A	Industrial Grade; Adj. Vout; Power Good; Adj. Soft-Start; Easy Vout (Set Vout by PCB up to 3.65V); Low Noise & High PSRR; Enable Input	VQFN3.5x3.5-20
RTQ2533W	1.1	6.5	0.8	5.5	3000	4300	110@3A	Industrial Grade; Adj. Vout; Power Good; Adj. Soft-Start; Easy Vout (Set Vout by PCB up to 3.95V); Low Noise & High PSRR; Enable Input	VQFN3.5x3.5-20

[\*] Product numbers marked with stars are the new/featured products.



Product Number	Vin		Vout		Iout max (mA)	Iq typ (µA)	Vdropout@ Rated Current typ (mV)	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)					
RTQ2539A	1.1	6.5	0.8	5.5	3000	4300	110@3A	Industrial Grade; Adj. Vout; Low Noise & High PSRR; Adj. Soft-Start; Enable Input	WQFN2.2x2.5-12(FC)
RTQ2537	1.1	6.5	0.8	5.5	4000	4300	110@4A	Industrial Grade; Adj. Vout; Power Good; Low Noise & High PSRR; Easy Vout (Set Vout by PCB up to 3.95V); Enable Input	VQFN3.5x3.5-20
*RTQ2537E	1.1	6.5	0.5	5.5	4000	3000	110@4A	Industrial Grade; Adj. Vout; Power Good; Low Noise & High PSRR; Easy Vout (Set Vout by PCB up to 3.95V); Enable Input	VQFN3.5x3.5-20
*RTQ2540H	1.1	6.5	0.8	5.5	4000	3000	70@2A	Industrial Grade; Adj. Vout; Power Good; Adj. Soft-Start; Low Noise & High PSRR; Enable Input	WQFN2.2x2.5-12(FC)

[\*] Product numbers marked with stars are the new/featured products.

## 7V TO 30V MID VIN

Solutions for mid-voltage requirements with our wide range of LDOs.

Product Number	Vin		Vout		Iout max (mA)	Iq typ (µA)	Vdropout@ Rated Current typ (mV)	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)					
RT9022	5	20	1.25	18	60	40	200@0.03A	Adj. Vout; Adj. Soft-Start; Enable Input	SOT-23-6; SC-70-6
RTQ2511-QA	3.5	14	2.5	9	200	2	400@0.1A	AEC-Q100; Low Iq; Fixed Vout; Enable Input	WDFN3x3-8
RT9077	3.5	14	2.5	9	200	70	400@0.1A	Fixed Vout; Enable Input	TSOT-23-5
RT9161	4.5	12	1.5	5	300	110	450@0.3A	Fixed Vout; Electrolytic Cout	SOT-223; SOT-23-3; SOT-89
RT9161A	4.5	12	1.5	5	500	110	750@0.5A	Fixed Vout; Electrolytic Cout	SOT-223; SOT-23-3; SOT-89
RT9194	4.5	13.5	0.8	12	1000	450	-	LDO Controller; Adj. Vout; Power Good; Electrolytic Cout	SOT-23-6
RT9008	4.5	13.5	0.8	-	-	300	-	LDO Controller; Adj. Vout; Adj. Soft-Start	SOT-23-6

## >30V WIDE VIN

LDOs with an input voltage higher than 30V can be applied in applications with a wider input voltage range, reaching up to 80V. It is important to note that LDO power dissipation is determined by the formula  $(V_{in} - V_{out}) \cdot I_{load}$ . Consequently, a significant drop in  $(V_{in} - V_{out})$  can rapidly result in high LDO dissipation, especially at moderate load currents.

Product Number	Vin		Vout		Iout max (mA)	Iq typ (µA)	Vdropout@ Rated Current typ (mV)	Features	Package(s)
	min (V)	max (V)	min (V)	max (V)					
RT9070B	4.5	70	1.25	60	20	23	180@0.02A	Adj. Vout; -70V Reverse-Battery Protection	SOT-23-5
RT9072B	4.5	80	1.25	60	20	23	180@0.02A	Adj. Vout; -80V Reverse-Battery Protection	SOT-23-5
RT9068	4.5	60	1.25	60	50	30	150@0.05A	Fixed Vout; -60V Reverse-Battery Protection	MSOP-8(PP); PSOP-8
RT2560Q	3.5	36	2.5	12	100	2	320@0.01A	AEC-Q100; Fixed Vout; low Iq	PSOP-8
RTQ2569-QA	3.5	36	2.5	12	100	2	200@0.01A	AEC-Q100; Fixed Vout; Low Iq; Enable Input	WDFN3x3-8
*RTQ2569R-QA	3.5	36	2.5	12	100	2	200@0.01A	AEC-Q100; Fixed Vout; Low Iq; Enable Input	WDFN3x3-8
RT9058	3.5	36	2.5	12	100	2	300@0.01A	Fixed Vout; Low Iq; Low Noise & High PSRR	SOT-23-3; SOT-89
RT9074	4.5	60	1.23	60	100	30	240@0.1A	Fixed Vout; -60V Reverse-Battery Protection	PSOP-8; SOT-223
RT9069	3.5	36	2.5	12	200	2	200@0.01A	Fixed Vout; Low Iq; Enable Input	PSOP-8; SOT-23-5; SOT-89-5; UDFN1.6x1.6-6

[\*] Product numbers marked with stars are the new/featured products.

# POWER SWITCHES

Richtek provides a diverse power switch portfolio including load switches, protection switches, ideal diode devices, hot swap controllers and eFuses. These products are used to enable or disable specific supply rails, often serving as system protection for data center bus rails or USB ports. These devices feature slew-rate controlled switch-on actions to limit inrush currents and include protection functions such as OVP, OTP, and reverse current protection.

## POWER SWITCHES

Power switches establish an electrical connection between a voltage source or ground and a load. Our extensive portfolio ranges from basic load switches to power switches with extra features.

Product Number	Number of Outputs	Vin		Current Limit	Ron	Iq	FLAG Indicator	Adj. Iocp	Safety	Features	Package(s)
		min (V)	max (V)	typ (A)	typ (mΩ)	typ (mA)					
RT2528A	1	2.5	5.5	0.5 to 2.5	74	0.12	Y	Y	-	AEC-Q100; Built-in PMOSFET; OCP; SCP; OTP	PSOP-8
RT9703	1	2	5.5	up to 3.5	80	0.03	Y	Y	-	Built-in NMOSFET; Enable Active High Input; OCP; SCP; OTP	SOP-8
RT9724	1	2.7	5.5	2	100	0.05	-	-	-	Load Switch; Built-in NMOSFET; Enable; Slew Rate Control	SOT-23-5; WDFN2x2-8
RT9728A	1	2.5	5.5	0.075 to 1.3	120	0.12	Y	Y	-	Built-in PMOSFET; Enable Active Low Input; OCP; SCP; OTP	SOT-23-6; WDFN2x2-6
RT9728B	1	2.5	5.5	0.075 to 1.8	120	0.12	Y	Y	-	Built-in PMOSFET; Enable Active High Input; OCP; SCP; OTP	SOT-23-6; WDFN2x2-6
RT9728C	1	2.5	5.5	0.075 to 1.3	120	0.12	Y	Y	-	Built-in PMOSFET; Enable Active High Input; OCP; SCP; OTP	SOT-23-6; WDFN2x2-6
RTQ9728W	1	2.5	6	0.1 to 2.5	74	0.12	Y	Y	-	Built-in PMOSFET; Adj. Current Limit; Enable Active Low Input; OCP	WDFN2x2-6S; SOT-23-6
RT9731A	2	2.5	5.5	0.56 to 2.8	44	0.13	Y	Y	Nemko; UL	High-Side MOSFETs; Common Enable Input; OCP; SCP; OTP	WDFN3x3-10
RT9740A	2	0.8	5.5	6	18	0.055; 0.075	-	-	-	Built-in NMOSFETs; 6A Current per Channel; Enable Input; Adj. Soft-Start; Low Dropout	WDFN3x2-14T
RTQ9740A	2	0.8	5.5	6	22	0.055; 0.075	-	-	-	Built-in NMOSFETs; 6A Current per Channel; Enable Input; Adj. Soft-Start; Low Dropout	WDFN3x2-14T
RT9742A	1	2.7	6	3.3	55	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5(FC)

Product Number	Number of Outputs	Vin		Current Limit	Ron	Iq	FLAG Indicator	Adj. Iocp	Safety	Features	Package(s)
		min (V)	max (V)	typ (A)	typ (mΩ)	typ (mA)					
RT9742B	1	2.7	6	3.3	55	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5(FC)
RT9742C	1	2.7	6	2.2	55; 70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5
RT9742D	1	2.7	6	2.2	55; 70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5(FC)/ TSOT-23-5
RT9742E	1	2.7	6	1.65	55; 70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5
RT9742F	1	2.7	6	1.65	55; 70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5(FC)/ TSOT-23-5
RT9742G	1	2.7	6	1.1	55; 70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5
RT9742H	1	2.7	6	1.1	55; 70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP; Soft-Start	TSOT-23-5(FC)/ TSOT-23-5
RT9742Q	1	2.7	6	0.7	70	0.03	Y	Y	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP	TSOT-23-5
RT9742S	1	2.7	6	0.7	70	0.03	Y	Y	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP; Soft-Start	SOT-23-3
RT9742U	1	2.7	6	1.65	70	0.03	Y	-	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP; Soft-Start	TSOT-23-5
RT9742V	1	2.7	6	2.2	70	0.03	Y	Y	Nemko; UL	Built-in NMOSFET; Enable Input; OCP; SCP; OTP; Soft-Start	TSOT-23-5

## IDEAL DIODE PROTECTION SWITCHES

The ideal diode protection switches provide an ideal diode reverse current blocking function with low forward voltage and an enable input for disconnection.

Product Number	Vin		Absolute Maximum Rating (V)	Continuous Current Rating (A)	Peak Current Rating (A)	Ron (mΩ)	Features	Package(s)
	min (V)	max (V)						
*RT1985	3.4	23	28	8	20	20	Compliance with IEC 61000-4-2 and IEC 61000-4-5; Adjustable Soft-Start	VDFN-12TL 3x3
*RT1986	3.4	23	28	5.5	15	20	Compliance with IEC 61000-4-2 and IEC 61000-4-5; Adjustable Soft-Start	VDFN-12TL 3x3
*RT1987	3.4	32	40	8	20	20	Compliance with IEC 61000-4-2 and IEC 61000-4-5; Adjustable Soft-Start and OVP	VDFN-12TTL 3x3
*RT1988	3.4	53	60	8	20	20	Integrated TVS, Compliance with IEC 61000-4-2 and IEC 61000-4-5; Adjustable Soft-Start and OVP	VDFN-20TL 5.2x4

[\*] Product numbers marked with stars are the new/featured products.

## HOT SWAP CONTROLLERS

Richtek hot swap controller products provide system protection and monitoring for hot swappable loads. In addition to accurately monitoring system performance, these devices also provide protection against failure mechanisms such as short-circuit, over-voltage and under-voltage.

Product Number	Vin	Vin	AMR	Overcurrent Response	Fault Response	Features	Package(s)
	min (V)	max (V)					
*RTQ1950	10	80	100	Current Limiting, Power Limiting and Circuit Breaker	Auto-retry, 8x retry, Latch-off	Adjustable UV and OV, PMBus with 12-bit V, I, P, T Telemetry	TSSOP-28

## USB TYPE-C CONTROLLER WITH POWER SWITCHES

We provide a selection of USB type-C controllers with power switches for USB chargers.

Product Number	Vin		Current Limit	Ron	Iq	Discharge Function	EN Function	Safety	Features	Package(s)
	min (V)	max (V)	typ (A)	typ (mΩ)	typ (mA)					
RT9752A	4.5	5.5	1.7, 3.4	34	0.24	Y	Active H	Nemko; UL	Reverse Voltage Protection with Ultra-Fast RVP Recovery, Programmable Current Limit	WQFN3x4-20T(FC)
RT9752AN	4.5	5.5	1.7, 3.4	34	0.24	-	Active H	Nemko; UL	Reverse Voltage Protection with Ultra-Fast RVP Recovery, Programmable Current Limit	WQFN3x4-20T(FC)
RT9752B	4.5	5.5	1.7, 3.4	34	0.24	Y	Active L	Nemko; UL	Reverse Voltage Protection with Ultra-Fast RVP Recovery, Programmable Current Limit	WQFN3x4-20T(FC)
RT9752BN	4.5	5.5	1.7, 3.4	34	0.24	-	Active L	Nemko; UL	Reverse Voltage Protection with Ultra-Fast RVP Recovery, Programmable Current Limit	WQFN3x4-20T(FC)

## USB ACCESSORY DETECTOR SWITCHES

Our USB port accessory detector utilizes the I<sup>2</sup>C bus for control and uses an internal method to identify the connected device.

Product Number	Number of Outputs	Vin		Ron	Iq	Features	Package(s)
		min (V)	max (V)	typ (mΩ)	typ (mA)		
RT8979	8	4	20	50	5	4:1 Micro USB Port Accessory Detector & Switch (USB1, USB2, UART & MHL); Factory Support; 28V Maximum Rating for DC Adapter; Battery Charger Detection 1.2	WL-CSP2.07x2.07-25(BSC)

# SUPERVISORS & RESET ICs

We provide a wide range of power monitoring, protection, and reset ICs designed to oversee system conditions and ensure normal operation. Our monitoring and protection ICs can detect over/under-voltage conditions on the supply rail, preventing any damage to downstream sensitive devices. The reset ICs monitor the supply voltage of microcontrollers and generate a reset signal when the supply drops below a specified limit. These devices integrate various features to ensure system health across all applications.

Product Number	Vin		Vin_ovp	Delay Time	Iocp	Ron	Protection	Features	Package(s)
	range (V)	max (V)	typ (V)	max (μs)	typ (A)	typ (mΩ)			
RT9746	3 to 6.7	28	6.8	0.25	4.5	35	VBUS Over Voltage Protection with a PTVS Diode	Int. Fixer or Ext. Adj. Input OVP; OCP	WL-CSP1.92x1.27-12(BSC)
RT9746H	3 to 6.7	28	6.8	0.25	-	35	VBUS Over Voltage Protection with a PTVS Diode	Int. Fixer or Ext. Adj. Input OVP	WL-CSP1.92x1.27-12(BSC)

Product Number	Vin		Amplifier Ratio	Vcc Operating Current	Vcc Shutdown Current	Protection	Features	Package(s)
	min (V)	max (V)	-	(μA)	(μA)			
RT9554A	5	24	200	200	5	Current Sense Protection	Programmable current limit; Enable Input	WDFN2x2-8
RT9553B	5	24	100	200	10	Current/Voltage Sense and Protection	Programmable current limit; Enable Input	WDFN3x3-10

Product Number	Vin		Vin OVP	Delay Time	I <sub>sd</sub>	Protection	Features	Package(s)
	min (V)	max (V)	typ (V)	max (μs)	typ (μA)			
RT9718B	4	6.9	5.85	1	65	Over Voltage Protection	Enable Input; OCP	WDFN2x2-8
RT9718C	4	6.9	6.25	1	65	Over Voltage Protection	Enable Input; OCP	WDFN2x2-8



Product Number	Vin		VTH		Accuracy	Reset Time-out Period	Reset Delay Time	Detection	Features	Package(s)
	range (V)	max (V)	min (V)	max (V)						
*RTQ2588-QB	1.7	5.5	0.455	5.45	0.25	0	0.05; 1; 5; 10	High-Accuracy and Low-Quiescent Automotive Reset IC	AEC-Q100; Built-In Self-Test (BIST) for OV/UV Monitors	WDFN1.5x1.5-6(COL)
RT9801A	0.9	6	2.5	5	3	200	0.02	User Programmable Micro-Power Voltage Detector	N-Channel, Open-Drain Output	SOT-23-6
RT9801B	0.9	6	1.5	4	3	200	0.02	User Programmable Micro-Power Voltage Detector	N-Channel, Open-Drain Output	SOT-23-6
RT9807	0.9	5.5	1.2	3.3	1.5	Adj.	27.4	Micro-Power Voltage Detector with Manual Reset	N-Channel, Open-Drain Output	SOT-23-5
RT9817C	0.9	6	1.2	5	1.5	220	0.02	Micro-Power Voltage Detector with Manual Reset	CMOS Push-Pull Output	SOT-143; SC-82
RT9817D	0.9	6	1.2	5	1.5	450	0.02	Micro-Power Voltage Detector with Manual Reset	CMOS Push-Pull Output	SOT-143; SC-82
RT9818A	0.9	6	1.2	5	1.5	0	0.02	Micro-Power Voltage Detector	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; SOT-23-5; SC-70-3; SC-82; SOT-89

[\*] Product numbers marked with stars are the new/featured products.

Product Number	Vin		VTH		Accuracy	Reset Time-out Period	Reset Delay Time	Detection	Features	Package(s)
	range (V)	max (V)	min (V)	max (V)	typ (±%)	typ (ms)	typ (ms)			
RT9818B	0.9	6	1.2	5	1.5	55	0.02	Micro-Power Voltage Detector	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; SOT-23-5; SC-70-3; SC-82; SOT-89
RT9818C	0.9	6	1.2	5	1.5	220	0.02	Micro-Power Voltage Detector	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; SOT-23-5; SC-70-3; SC-82; SOT-89
RT9818D	0.9	6	1.2	5	1.5	450	0.02	Micro-Power Voltage Detector	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; SOT-23-5; SC-70-3; SC-82; SOT-89
RT9818E	0.9	6	1.2	5	1.5	0	0.02	Micro-Power Voltage Detector	N-Channel, Open-Drain Output; Reset Active High	SOT-23-3; SOT-23-5; SC-70-3; SC-82; SOT-89
RT9818G	0.9	6	1.2	5	1.5	220	0.02	Micro-Power Voltage Detector	N-Channel, Open-Drain Output; Reset Active High	SOT-23-3; SOT-25; SC-70-3; SC-82; SOT-89
RT9819B	0.9	6	1.2	5	1.5	55	0.02	Micro-Power Voltage Detector	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; WDFN1.6x1.6-6; SC-70-3; SC-82
RT9819C	0.9	6	1.2	5	1.5	220	0.02	Micro-Power Voltage Detector	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; WDFN1.6x1.6-6; SC-70-3; SC-82
RT9819D	0.9	6	1.2	5	1.5	450	0.02	Micro-Power Voltage Detector	N-Channel, Open-Drain Output; Reset Active Low	SOT-23-3; WDFN1.6x1.6-6; SC-70-3; SC-82
RT9824C	2.97	5.94	1	4.32	2	60	0.02	Smart Multi-Voltage Detector	Open Drain Output Active Low	TSOT-23-8
RT9829	1.65	5.5	1.1	5.5	-	-	12500; 7500	Dual Push-Button Reset with Push-Button Controlled Output Delay	Dual Reset Outputs; Active Low; Open-Drain/ Active High, Push-Pull	WDFN-2x2-8(COL)

# AC/DC

We offer a comprehensive range of products for switching power supplies, encompassing AC-DC conversion. This includes multi-mode flyback controllers commonly employed in switching power supplies, synchronous rectifier controllers, and more. Designing with our products simplifies the design process by reducing the number of components and enhancing system reliability.

## MULTI-MODE FLYBACK CONTROLLERS

Easy-to-use flyback controllers with sophisticated power save modes for ultra-low standby power.

Product Number	Feedback Regulation Mode	Switching Freq. (kHz)	VDD OVP (V)	HV Start-up	Brown-in/out	Vout	Features	Package(s)
RT7740GA	SSR	65	28	-	Y	Fixed	LV Start (Pin<75mW @0A)	SOT-23-6
RT7740GH	SSR	100	28	-	Y	Fixed	LV Start (Pin<75mW @0A)	SOT-23-6
RT7740MAH	SSR	65	28	-	Y	Fixed	LV Start (Pin<75mW @0A)	SOT-23-6
RT7753GCV	SSR	84	46	-	Y	Variable	LV Start (Pin<75mW @0A); 12Vo PD PWM	SOT-23-6
RT7753GCS	SSR	84	46	-	Y	Variable	LV Start (Pin<75mW @0A); PD PWM	SOT-23-6
*RT7755GEF	SSR	130	67	-	Y	Variable	LV Start (Pin<75mW @0A); PD PWM	SOT-23-6
RT7757GEQ	SSR	130	67	-	Y	Variable	LV Start (Pin<75mW @0A); PD ZVS PWM	SOT-23-6
RT7755GEK	SSR	130	67	Y	Y	Variable	LV Start (Pin<75mW @0A); PD PWM	SOT-23-6
RT7755GES	SSR	82.5	67	-	Y	Variable	LV Start (Pin<75mW @0A); PD PWM	SOT-23-6
RT7786GE	SSR	85	34.5	Y	Y	Variable	HV Start (Pin<30mW @0A)	SOP-8
RT7789D	SSR	65	34.5	Y	Y	Fixed	HV Start (Pin<30mW @0A); General PWM	SOP-8

[\*] Product numbers marked with stars are the new/featured products.

## SYNCHRONOUS RECTIFIER CONTROLLERS

We provide a variety of high-performance synchronous rectifier controllers for flyback converters.

Product Number	Max. VD Voltage (V)	Output Voltage (V)	Max. Fs (KHz)	HV LDO (mA)	V6 Turn-off Delay Time (ns)	Package(s)
RT7220AHC	120	3 to 22	150	65	30	SOT-23-6
RT7220AMD	120	3 to 22	100	65	30	SOT-23-6
RT7220BMD	70	3.3 to 13	85	30	35	SOT-23-6
RT7220DHQ	160	3 to 21	120	65	50	WQFN3x3-16
*RT7220E	180	5 to 48	250	77	50	SOP-8

[\*] Product numbers marked with stars are the new/featured products.

# BLDC MOTOR DRIVERS

Richtek offers an extensive range of motor driver solutions that cater to the needs of various applications, including brushless DC motors for home appliances, PMSM/BLDC motors, water pumps, cooling fans, and more. With this comprehensive product lineup and our advanced sensor-less sinewave FOC control algorithm, Richtek aims to provide our customers with flexible, easy-to-implement, and reliable motor driver solutions. Furthermore, we offer firmware and hardware technical support throughout the product development and launch phases.

Product Number	Control Method	Category*	Drivers	Power Device	BST Diode/ Charge Pump	LDO	Buck Converter	ADC Filters	R-Shunt	Package(s)
RT7083	Sensor-less FOC	Driver	60V	-	Y	Y	60V/50mA	Y	1,3	QFN6x6-48
RT7081A	Sensor-less FOC	Driver	600V	-	Y	Y	-	Y	1,3	QFN7x7-37
RT7054A1M	Sensor-less FOC	sIPM®	600V	600V/1.7A FRMOS	Y	Y	-	Y	3	QFN10x17-34
RT7055	Sensor-less FOC	sIPM®	600V	600V/2A LIGBT	Y	Y	-	Y	3	QFN13x13-38
RT7056A	Sensor-less FOC	sIPM®	600V	600V/1.7A FRMOS	Y	Y	-	Y	3	SOP-23
RT7056B	Sensor-less FOC	sIPM®	600V	600V/5A FRMOS	Y	Y	-	Y	3	SOP-23
*RT7082A2M	Sensor-less FOC	Motor Controller with Pre- Driver	30V	-	Y	Y	-	Y	1	VQFN4x4-32
*RT7084C2M	Sensor-less FOC	Motor Controller with Pre- Driver	80V	-	Y	Y	60V/50mA	Y	1	VQFN4x4-32

sIPM® is the System Integrated Power Modules.

[\*] Product numbers marked with stars are the new/featured products.

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