

Bill of Materials

Reference	Qty	Part Number	Description	Package	Manufacturer
U1	1	RT6190GQW	Buck-Boost PWM Controller	WQFN-40L 5x5	Richtek
L1	1	7443551470	4.7μH/7mΩ/15A	12.8x12.8x6.2mm	WÜRTH ELEKTRONIK
L2	1	--	NC	--	--
Q1, Q4	2	SM4037NHKP	N-MOSFET for High-Side (40V/80A)	DFN5x6A-8_EP	Sinopower
Q2, Q3	2	SM4035NHKP	N-MOSFET for Low-Side (40V/100A)	DFN5x6A-8_EP	Sinopower
Q5, Q8	2	--	NC	--	--
Q6, Q7	2	--	NC	--	--
QC1, QC2, QA1, QA2	4	SM3430NHQA	N-MOSFET for USBC/A Power Path (40V/36A)	DFN3.3x3.3A-8_EP	Sinopower
D1, D2, D3, D4	4	1N4148WT-7	Diode (100V/0.25W) (1) External BOOT Voltage for SW1 and SW2 (2) Discharge QC1, QC2, QA1, QA2	SOD-523	Diodes
EC1, EC2	2	--	NC	--	--
EC3, EC4	2	350ARHA101M08X8	100μF/35V	8x3.5mm	APAQ
C1, C2, C32, C33, C36, C38, C39, C40, C41, C42	10	--	NC	--	--
C3, C4, C34, C35, C37	5	0603B104K500CT	0.1μF/50V/X7R/0603	C-0603	WALSIN
C5, C6, C14, C16, C17, C18, C20, C21, C26, C31	10	GRM188R61H105KAALD	1μF/50V/X5R/0603	C-0603	MURATA
C7, C8	2	GRM188R61E475KE11D	4.7μF/25V/X5R/0603	C-0603	MURATA
C9	1	0603N1R0C500CT	1pF/50V/NPO/0603	C-0603	WALSIN
C10	1	0603B332K500CT	3.3nF/50V/X7R/0603	C-0603	WALSIN
C11	1	0603N221J500CT	220pF/50V/NPO/0603	C-0603	WALSIN
C12	1	0603B103K500CT	10nF/50V/X7R/0603	C-0603	WALSIN
C13	1	0603B333K500CT	33nF/50V/X7R/0603	C-0603	WALSIN
C15, C19	2	0603B152K500CT	1.5nF/50V/X7R/0603	C-0603	WALSIN

Reference	Qty	Part Number	Description	Package	Manufacturer
C22, C23, C24, C25, C27, C28, C29, C30	8	1206X106K500CT	10 μ F/50V/X5R/1206	C-1206	WALSIN
R1, R2, R3, R4, R7, R8, R33, R34, R35, R43, R44, R45	12	WR06X000PTL	0/0603	R-0603	WALSIN
R9, R10, R11, R12	4	WR06X10R0FTL	10/0603/1%	R-0603	WALSIN
R13	1	WR12X2200FTL	220/1206/1%	R-0603	WALSIN
R14, R18, R32	3	WR06X1003FTL	100k/0603/1%	R-0603	WALSIN
R15	1	WR06W1R00FTL	1/0603/1%	R-0603	WALSIN
R16, R36	2	WR06X1002FTL	10k/0603/1%	R-0603	WALSIN
R17, R31, R37, R38, R39, R40, R41, R42	6	--	NC	--	--
R19	1	WR06X4702FTL	47k/0603/1%	R-0603	WALSIN
R20	1	WR06X5101FTL	5.1k/0603/1%	R-0603	WALSIN
R21, R22, R24, R25	4	WR06X1001FTL	1k/0603/1%	R-0603	WALSIN
R23, R26	2	WR06W2R00FTL	2/0603/1%	R-0603	WALSIN
R29, R30	2	RLM-1632-6F-R010-FNH	10m Ω /1%/1206 for input/output current sense	R-1206	Cyntec
R46	1	--	NC	--	--
RT1	1	--	NC	--	--

More Information

For more information, please find the related datasheet or application notes from Richtek website <http://www.richtek.com>.

Important Notice for Richtek Evaluation Board

THIS DOCUMENT IS FOR REFERENCE ONLY, NOTHING CONTAINED IN THIS DOCUMENT SHALL BE CONSTRUED AS RICHTEK'S WARRANTY, EXPRESS OR IMPLIED, UNDER CONTRACT, TORT OR STATUTORY, WITH RESPECT TO THE PRESENTATION HEREIN. IN NO EVENT SHALL RICHTEK BE LIABLE TO BUYER OR USER FOR ANY AND ALL DAMAGES INCLUDING WITHOUT LIMITATION TO DIRECT, INDIRECT, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES.