

15V/1A ACDC Buck using UCC28C42

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
!PCB1	1		Printed Circuit Board		PMP10833	Any	-	-
C1	1	2200pF	CAP, CERM, 2200 pF, 50 V, +/- 5%, COG/NP0, 0603	0603	C1608COG1H222J	TDK		
C2	1	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 5%, X7R, 0603	0603	06033C104JAT2A	AVX		
C3	1	100uF	CAP, AL, 100uF, 25V, +/-20%, TH	6.3x11.2mm	EEU-EB1E101S	Panasonic		
C4	1	1uF	CAP, CERM, 1uF, 25V, +/-10%, X7R, 1206	1206	12063C105KAT2A	AVX		
C5	1	1uF	CAP, CERM, 1uF, 16V, +/-10%, X5R, 0805	0805	0805YD105KAT2A	AVX		
C6	1	100pF	CAP, CERM, 100pF, 25V, +/-10%, X7R, 0603	0603	06033C101KAT2A	AVX		
C7	1	220pF	CAP, CERM, 220pF, 100V, +/-10%, X7R, 0603	0603	06031C221KAT2A	AVX		
C8, C10	2	100uF	CAP, AL, 100 uF, 400 V, +/- 20%, TH	RCAP, 16x30mm	400KXW100MEFC16X30	Rubycon		
C9	1	470uF	CAP, AL, 470 uF, 25 V, +/- 20%, 0.053 ohm, TH	2-Pin Radial, Dia 10 mm, Height 12.5 mm, Pin Spacing 5 mm	25ZLJ470M10X12.5	Rubycon		
C11	1	22uF	CAP, CERM, 22 uF, 25 V, +/- 10%, X5R, 1210	1210	CL32A226KAJNNE	Samsung		
D1	1	100V	Diode, Ultrafast, 100V, 0.15A, SOD-123	SOD-123	1N4148W-7-F	Diodes Inc.		
D2	1	600V	DIODE FAST REC 600V 1A DO214AC	SMA	ES1J-TP	Diodes Inc.		
D3	1	100V	Diode, Switching, 100V, 0.2A, SOD-323	SOD-323	MMDL914-TP	Micro Commercial Component		
D4	1	1000V	Diode, Switching-Bridge, 1000 V, 1 A, DF-S	DF-S	DF10SA	Vishay-Semiconductor		
D5	1	800V	DIODE ULTRAFast 800V 4A SMC	SMC	MURS480ET3G	ON Semiconductor		
F1	1		Fuse, 0.5A, 250V, TH	8.35x7.7x4mm	RST 500	Bel Fuse		
J1	1	2x1	Conn Term Block, 2POS, 5.08mm, TH	PhoenixContact_1715721	1715721	Phoenix Contact		
L1	1	100uH	Inductor, 100 uH, 10.4 A, 0.08 ohm, TH	23.5mm x21.2mm	CL-1920-100LF	GCI Technologies		
Q1	1	900V	MOSFET N-CH 900V 8A D2PAK	DDPAK	STB9NK90Z	ST Microelectronics		None
R1, R15, R16	3	3.32k	RES, 3.32 k, 1%, 0.25 W, 1206	1206	CRCW12063K32FKEA	Vishay-Dale		
R2	1	150k	RES, 150 k, 1%, 0.1 W, 0603	0603	CRCW0603150KFKEA	Vishay-Dale		
R3	1	13.0k	RES, 13.0 k, 1%, 0.1 W, 0603	0603	CRCW060313K0FKEA	Vishay-Dale		
R4, R5	2	330k	RES, 330 k, 5%, 1 W, 2512	2512	CRCW2512330KJNEG	Vishay-Dale		
R6	1	10.0k	RES, 10.0k ohm, 1%, 0.1W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale		
R7	1	511	RES, 511 ohm, 1%, 0.1W, 0603	0603	CRCW0603511RFKEA	Vishay-Dale		
R8	1	2.49k	RES, 2.49k ohm, 1%, 0.1W, 0603	0603	CRCW06032K49FKEA	Vishay-Dale		
R9	1	10.0	RES, 10.0 ohm, 1%, 0.25W, 1206	1206	CRCW120610R0FKEA	Vishay-Dale		
R10	1	100k	RES, 100k ohm, 1%, 0.1W, 0603	0603	CRCW0603100KFKEA	Vishay-Dale		
R11, R101	2	0.82	RES, 0.82, 1%, 0.5 W, 1206	1206	CRM1206-FX-R820ELF	Bourns		
R12, R14, R17, R18	4	1.0Meg	RES, 1.0 M, 5%, 0.25 W, 1206	1206	CRCW12061M00JNEA	Vishay-Dale		
RT1	1	10 ohm	Thermistor NTC, 10 ohm, 20%, Disc 11.5mmx6mm	Disc 11.5mmx6mm	B5723S60100M000	EPCOS Inc		
TP1	1	Red	Test Point, Miniature, Red, TH	Red Miniature Testpoint	5000	Keystone		
TP2	1	Black	Test Point, TH, Miniature, Black	Keystone5001	5001	Keystone	Equivalent	Any
U1	1		BICMOS LOW-POWER CURRENT-MODE PWM CONTROLLER, D0008A	D0008A	UCC28C42D	Texas Instruments		None
D6	0	15V	Diode, TVS, Uni, 15 V, 600 W, SMB	SMB	SMBJ15A-13-F	Diodes Inc.		
R13	0	10.0	RES, 10.0, 1%, 0.25 W, 1206	1206	CRCW120610R0FKEA	Vishay-Dale		

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.

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