

## PMP22339 REV C Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C1, C16, C24, C25, C27, C33, C34, C40, C45, C102	10	0.1uF	C0603C104K5RACAUTO	Kemet	CAP, CERM, 0.1 $\mu$ F, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C2, C100	2	47 $\mu$ F	500LXW47MEFR18X25	Rubycon	Cap Alum 47UF 20% 500V Thruhole	RADIAL
C3, C4, C6, C7, C9, C10, C13, C14	8	0.1uF	CGA6L1X7T2J104K160AC	TDK	CAP, CERM, 0.1 uF, 630 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1210	1210
C5, C23	2	0.22uF	GRM188R71E224KA88D	MuRata	CAP, CERM, 0.22 uF, 25 V, +/- 10%, X7R, 0603	0603
C8, C11	2	1uF	CKG57NX7T2J105M500JJ	TDK	1 $\mu$ F $\pm$ 20% 630V Ceramic Capacitor X7T Stacked SMD, 2 J-Lead	5750
C12, C101	2	120 $\mu$ F	EKXJ451ELL121MM40S	United Chemi-Con	120 $\mu$ F 450V Aluminum Electrolytic Capacitors Radial, Can 12000 Hrs @ 105°C	RADIAL
C15, C17	2	1uF	GRM31MR71H105KA88L	MuRata	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 1206	1206
C18	1	1uF	C1608X7R1C105K080AC	TDK	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, 0603	0603
C19, C43	2	0.47uF	C1608X7R1H474K080AC	TDK	CAP, CERM, 0.47 uF, 50 V, +/- 10%, X7R, 0603	0603
C20, C36, C37, C42	4	1uF	GRM188R71E105KA12D	MuRata	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0603	0603
C21	1	100pF	GRM1885C1H101JA01D	MuRata	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C22, C26, C30	3	4.7uF	GRM31CR71E475KA88L	MuRata	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X7R, 1206	1206
C28	1	22uF	GRJ31CR71A226KE12L	MuRata	CAP, CERM, 22 $\mu$ F, 10 V, +/- 10%, X7R, 1206	1206
C29, C32	2	150pF	GRM1885C1H151JA01D	MuRata	CAP, CERM, 150 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C35	1	0.047uF	GRM188R71H473KA61D	MuRata	CAP, CERM, 0.047 uF, 50 V, +/- 10%, X7R, 0603	0603
C38, C44	2	4.7uF	GRM21BR71E475KA73L	MuRata	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X7R, 0805	0805
D1	1	1.2 KV	C4D05120A	Cree	Diode Silicon Carbide Schottky 1200V 9.5A (DC) Through Hole TO-220-2	TO220-2
D2, D3	2	30V	MBR0530T1G	ON Semiconductor	Diode, Schottky, 30 V, 0.5 A, SOD-123	SOD-123
D4, D6, D9	3	30V	BAT54HT1G	ON Semiconductor	Diode, Schottky, 30 V, 0.2 A, SOD-323	SOD-323
D5, D10	2	4.7V	MMSZ5230BS-7-F	Diodes Inc.	Diode, Zener, 4.7 V, 200 mW, SOD-323	SOD-323
H1	1		OMNI-220-18-25-1C	Wakefield-Vette	Heat Sink TO-220 Aluminum Board Level, Vertical	PTH_TO220_HEATSI NK
H2	1		OMNI-UNI-27-25	Wakefield Solutions	Heat Sink, TO-247, TO-264, Vertical	Heat Sink, 2-Leads, Body 25x18mm
H3, H4, H5, H6	4		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
H7, H8, H9, H10	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
J1, J2	2		282843-2	TE Connectivity	Terminal Block, 10.16mm, 2x1, Tin, TH	Terminal Block, 10.16mm, 2x1, TH
J3	1		PEC02SAAN	Sullins Connector Solutions	Header, 100mil, 2x1, Tin, TH	Header, 2 PIN, 100mil, Tin
J4	1		ED555/2DS	On-Shore Technology	Terminal Block, 3.5mm Pitch, 2x1, TH	7.0x8.2x6.5mm
J5, J7	2		PEC03SAAN	Sullins Connector Solutions	Header, 100mil, 3x1, Tin, TH	Header, 3 PIN, 100mil, Tin
J6, J8	2		PEC02SAAN	Sullins Connector Solutions	Header, 100mil, 2x1, Tin, TH	Header, 2 PIN, 100mil, Tin
L1	1	10uH	CBC2518T100M	Taiyo Yuden	Inductor, Wirewound, Ceramic, 10 uH, 0.48 A, 0.36 ohm, SMD	2.5x1.8x1.8mm
L2	1	33uH	LPS4018-333MLB	Coilcraft	Inductor, Shielded Drum Core, Ferrite, 33 uH, 0.68 A, 0.42 ohm, SMD	LPS4018
Q1	1	1.2 KV	IMW120R140M1HXKSA1	Infineon Technologies	N-Channel 1.2kV 19A (Tc) 94W (Tc) Through Hole PG-TO247-3-41	TO247-3
Q2	1	60 V	MMBT2907ALT1G	ON Semiconductor	Transistor, PNP, 60 V, 0.6 A, SOT-23	SOT-23

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
Q3, Q4	2	60V	2N7002P,215	Nexperia	MOSFET, N-CH, 60 V, 0.36 A, SOT-23	SOT-23
R1, R4, R6, R8	4	10.0	CRCW060310R0FKEA	Vishay-Dale	RES, 10.0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R2	1	49.9k	CRCW060349K9FKEA	Vishay-Dale	RES, 49.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R3	1	0.05	CSRN2512FT50L0	Stackpole Electronics Inc	RES, 0.05, 1%, 2 W, 2512	2512
R7, R10, R11, R13	4	499k	CRCW1206499KFKEA	Vishay-Dale	RES, 499 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R9, R21, R26, R27, R28, R29, R30, R39, R50, R53, R64	11	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R12	1	649	CRCW0603649RFKEA	Vishay-Dale	RES, 649, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R14, R24, R41, R46, R47, R54, R58, R59	8	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R15	1	402	CRCW0603402RFKEA	Vishay-Dale	RES, 402, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R16	1	590k	CRCW1206590KFKEA	Vishay-Dale	RES, 590 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R18	1	169k	CRCW0603169KFKEA	Vishay-Dale	RES, 169 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R20	1	3.74k	CRCW06033K74FKEA	Vishay-Dale	RES, 3.74 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R22, R36, R38	3	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R23, R51	2	20.0k	CRCW060320K0FKEA	Vishay-Dale	RES, 20.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R25	1	0.033	WSL2512R0330FEA18	Vishay-Dale	RES, 0.033, 1%, 2 W, AEC-Q200 Grade 0, 2512	2512
R31, R32	2	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R33	1	52.3k	CRCW060352K3FKEA	Vishay-Dale	RES, 52.3 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R34	1	182k	CRCW0603182KFKEA	Vishay-Dale	RES, 182 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R35	1	13.3k	CRCW060313K3FKEA	Vishay-Dale	RES, 13.3 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R37	1	5.49k	CRCW06035K49FKEA	Vishay-Dale	RES, 5.49 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R40	1	274k	CRCW0603274KFKEA	Vishay-Dale	RES, 274 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R42	1	21.5k	CRCW060321K5FKEA	Vishay-Dale	RES, 21.5 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R43	1	16.5k	CRCW060316K5FKEA	Vishay-Dale	RES, 16.5 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R44	1	51.1k	CRCW060351K1FKEA	Vishay-Dale	RES, 51.1 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R45	1	165	CRCW0603165RFKEA	Vishay-Dale	RES, 165, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R48	1	75.0k	CRCW060375K0FKEA	Vishay-Dale	RES, 75.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R49, R55	2	100k	PV36W104C01B00	Bourns	Potentiometer, 100k Ohm, 0.5W, TH	9.53x4.83mm
R52	1	1.18k	CRCW06031K18FKEA	Vishay-Dale	RES, 1.18 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R56	1	1.91k	CRCW06031K91FKEA	Vishay-Dale	RES, 1.91 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R57	1	2.00k	CRCW06032K00FKEA	Vishay-Dale	RES, 2.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R60	1	4.02k	CRCW06034K02FKEA	Vishay-Dale	RES, 4.02 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R61	1	1.00k	CRCW12061K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.25 W, 1206	1206
R100	1	499	CRCW0805499RFKEA	Vishay-Dale	RES, 499, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
T1	1		RLTI-1363	Renco Electronics	COUPLED INDUCTOR 160uH	PTH_1IN85_0IN92
TP1, TP2, TP4, TP7, TP9, TP17	6		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
TP3, TP5, TP8	3		5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
TP10, TP11, TP16	3		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
TP12, TP15	2		5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
TP13, TP14	2		5003	Keystone	Test Point, Miniature, Orange, TH	Orange Miniature Testpoint
U1	1		INA293A1IDBVR	Texas Instruments	INA293 High-Voltage, High Bandwidth, Unidirectional, 110-V Common-Mode, Current-Sense Amplifier, DBV0005A (SOT-23-5)	DBV0005A

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U2	1		UCC27531DBVR	Texas Instruments	2.5-A, 5-A, 35-VMAX VDD FET and IGBT Single Gate Driver, DBV0006A (SOT-23-6)	DBV0006A
U3	1		LM5022QDGSRQ1	Texas Instruments	2.2MHz 60-V Low Side Controller for Boost, SEPIC and Flyback, DGS0010A (VSSOP-10)	DGS0010A
U4	1		LMR14203XMKX/NOPB	Texas Instruments	SIMPLE SWITCHER 4.5V to 42V, 0.3A Step-Down DC/DC Switching Regulator in SOT-23, DDC0006A (SOT-23-T-6)	DDC0006A
U5	1		LMR64010XMFE/NOPB	Texas Instruments	SIMPLE SWITCHER(R) 2.7V to 14V, 1A Step-Up Regulator in SOT-23 Package, DBV0005A (SOT-23-5)	DBV0005A
U6	1		TPS3711DDCR	Texas Instruments	36-V Voltage Detector, DDC0006A (SOT-23-T-6)	DDC0006A
U7	1		TLC272AIDR	Texas Instruments	LinCMOS(TM) Precision Dual Operational Amplifier, 4 to 16 V, -40 to 85 degC, 8-pin SOIC (D8), Green (RoHS & no Sb/Br)	D0008A
U8	1		SN74LVC1G34DCKR	Texas Instruments	Single Buffer Gate, DCK0005A, LARGE T&R	DCK0005A
U9	1		LM4132AMF-3.0/NOPB	Texas Instruments	0.05% 20ppm/degC Drift Precision Series Voltage Reference with Shutdown Enable, DBV0005A (SOT-23-5)	DBV0005A
C31	0	0.1uF	C0603C104K5RACAUTO	Kemet	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C39	0	150pF	GRM1885C1H151JA01D	MuRata	CAP, CERM, 150 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C41	0	10pF	GRM1885C1H100JA01D	MuRata	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
D7	0	30V	BAT54HT1G	ON Semiconductor	Diode, Schottky, 30 V, 0.2 A, SOD-323	SOD-323
D8	0	4.7V	MMSZ5230BS-7-F	Diodes Inc.	Diode, Zener, 4.7 V, 200 mW, SOD-323	SOD-323
R17	0	66.5k	CRCW060366K5FKEA	Vishay-Dale	RES, 66.5 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R19, R62, R101, R102	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R63	0	10.0	CRCW060310R0FKEA	Vishay-Dale	RES, 10.0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603

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