

PMP40441 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C1, C96, C97, C98, C99	5	1uF	C1005X5R1C105K050BC	TDK	CAP, CERM, 1 µF, 16 V,+/- 10%, X5R, 0402	0402
C2, C152, C153	3	100pF	GRM1555C1H101JA01D	MuRata	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C3, C4, C5, C30, C102, C104, C105, C107	8	0.1uF	GRM155R61C104KA88D	MuRata	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X5R, 0402	0402
C6, C8	2	47uF	JMK212BJ476MG-T	Taiyo Yuden	CAP, CERM, 47 µF, 6.3 V, +/- 20%, X5R, 0805	0805
C7, C22	2	1uF	885012105012	Wurth Elektronik	CAP, CERM, 1 µF, 10 V,+/- 20%, X5R, 0402	0402
C9, C123, C126	3	10uF	GRM188R61E106MA73D	MuRata	CAP, CERM, 10 µF, 25 V, +/- 20%, X5R, 0603	0603
C10, C119, C124	3	0.1uF	GRM155R61E104KA87D	MuRata	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X5R, 0402	0402
C11, C12	2	0.033uF	GRM188R71H333KA61D	MuRata	CAP, CERM, 0.033 µF, 50 V, +/- 10%, X7R, 0603	0603
C13	1	0.47uF	GRM21BR71H474KA88L	MuRata	CAP, CERM, 0.47 µF, 50 V, +/- 10%, X7R, 0805	0805
C14, C138, C139	3	0.047uF	GRM155R61C473KA01D	MuRata	CAP, CERM, 0.047 µF, 16 V, +/- 10%, X5R, 0402	0402
C15, C145	2	1000pF	C0402C102J3RACTU	Kemet	CAP, CERM, 1000 pF, 25 V, +/- 5%, X7R, 0402	0402
C16	1	10uF	CL05A106MP5NUNC	Samsung Electro-Mechanics	CAP, CERM, 10 µF, 10 V,+/- 20%, X5R, 0402	0402
C17, C116, C127, C128	4	10uF	GRM21BR6YA106KE43L	MuRata	CAP, CERM, 10 µF, 35 V, +/- 10%, X5R, 0805	0805
C18, C19	2	220pF	GRM1555C1H221JA01D	MuRata	CAP, CERM, 220 pF, 50 V,+/- 5%, C0G/NP0, 0402	0402
C20	1	4.7uF	C1005X5R0J475M050BC	TDK	CAP, CERM, 4.7 µF, 6.3 V, +/- 20%, X5R, 0402	0402
C21	1	1uF	GRM155R6YA105KE11D	MuRata	CAP, CERM, 1 µF, 35 V, +/- 10%, X5R, 0402	0402
C23	1	0.1uF	GRM155R61H104ME14D	MuRata	CAP, CERM, 0.1 µF, 50 V, +/- 20%, X5R, 0402	0402
C24, C27, C28, C33, C108	5	0.01uF	GRM155R61C103KA01D	MuRata	CAP, CERM, 0.01 µF, 16 V,+/- 10%, X5R, 0402	0402
C25, C26	2	0.1uF	C1005X5R1A104K050BA	TDK	CAP, CERM, 0.1 µF, 10 V, +/- 10%, X5R, 0402	0402
C29, C31	2	47pF	GRM1555C1H470FA01D	MuRata	CAP, CERM, 47 pF, 50 V, +/- 1%, C0G/NP0, 0402	0402
C32	1	1100pF	C0402C112J5GAC7867	Kemet	CAP, CERM, 1100 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C103	1	1uF	C1005X5R1E105K050BC	TDK	CAP, CERM, 1 µF, 25 V, +/- 10%, X5R, 0402	0402
C106	1	3300pF	GRM155R71H332KA01D	MuRata	CAP, CERM, 3300 pF, 50 V, +/- 10%, X7R, 0402	0402
C114	1	0.01uF	GRM155R71H103KA88D	MuRata	CAP, CERM, 0.01 µF, 50 V, +/- 10%, X7R, 0402	0402
C115	1	1000pF	GRM155R61H102KA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 10%, X5R, 0402	0402
C120, C136	2	56uF	EEHZA1E560P	Panasonic	CAP, Polymer Hybrid, 56 µF, 25 V, +/- 20%, 50 ohm, 6.3x5.8 SMD	6.3x5.8
C121, C122	2	47uF	C3216X5R1E476M160AC	TDK	CAP, CERM, 47 µF, 25 V, +/- 20%, X5R, 1206_190	1206_190
C125	1	1uF	GRM155R61E105KA12D	MuRata	CAP, CERM, 1 µF, 25 V, +/- 10%, X5R, 0402	0402
C130, C131	2	330pF	GRM1555C1H331JA01D	MuRata	CAP, CERM, 330 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C132, C135	2	22uF	C3216X5R1V226M160AC	TDK	CAP, CERM, 22 µF, 35 V, +/- 20%, X5R, 1206_190	1206_190
C137	1	1uF	C1005X5R1C105K050BC	TDK	CAP, CERM, 1 µF, 16 V, +/- 10%, X5R, 0402	0402
C140	1	33pF	GRM1555C1H330JA01D	MuRata	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C142	1	15pF	GRM1555C1H150JA01D	MuRata	CAP, CERM, 15 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C143	1	1800pF	GRM155R71H182KA01D	MuRata	CAP, CERM, 1800 pF, 50 V, +/- 10%, X7R, 0402	0402
C144	1	680pF	GRM1555C1H681JA01D	MuRata	CAP, CERM, 680 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C151	1	2.2uF	C1005X5R1C225K050BC	TDK	CAP, CERM, 2.2 µF, 16 V, +/- 10%, X5R, 0402	0402
D1	1	24V	CDSOD323-T24S	Bourns	Diode, TVS, Uni, 24 V, 49 Vc, SOD-323	SOD-323
D2, D3, D5	3	45V	BAS 52-02V H6327	Infineon Technologies	Diode, Schottky, 45 V, 0.75 A, SOD-523	SOD-523
D4, D6	2	15V	BZX384-C15,115	NXP Semiconductor	Diode, Zener, 15 V, 300 mW, SOD-323	SOD-323
D7, D8	2	75V	1N4148WX-TP	Micro Commercial Component	Diode, Switching, 75 V, 0.15 A, SOD-323	SOD-323
D9	1	30V	RB521S30T1G	ON Semiconductor	Diode, Schottky, 30 V, 0.2 A, AEC-Q101, SOD-523	SOD-523

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
D12, D13, D14, D15	4	Green	LTST-C190GKT	Lite-On	LED, Green, SMD	1.6x0.8x0.8mm
D16	1	Orange	LTST-C190KFKT	Lite-On	LED, Orange, SMD	1.6x0.8x0.8mm
J1	1		12401610E4#2A	Amphenol Canada	Receptacle, 0.5mm, USB TYPE C, R/A, SMT	Receptacle, 0.5mm, USB TYPE C, R/A, SMT
J2, J3	2		FLE-107-01-G-DV	Samtec	Receptacle, 1.27mm, 7x2, Gold, SMT	Receptacle, 1.27mm, 7x2, SMT
J4	1		614 104 150 121	Würth Elektronik	Connector, Receptacle, USB Type A, R/A, Bottom Mount TH	Connector, Receptacle, USB Type A, TH
J5, J6	2		20021121-00014T4LF	FCI	Header, 1.27 mm, 7x2, Au, SMT	Header, 1.27mm, 7x2, SMT
L5	1	2.2uH	XFL4020-222MEB	Coilcraft	Inductor, Shielded, Composite, 2.2 µH, 3.7 A, 0.02 ohm, SMD	4x2x4mm
L8	1	2.2uH	XEL6060-222MEB	Coilcraft	Inductor, Shielded, 2.2 µH, 16 A, 0.0067 ohm, AEC-Q200 Grade 1, SMD	6.36x6.56mm
P1	1		M22-5330405	Harwin	Header, 2mm, 4x1, Gold, Black, R/A, SMT	Header, 2mm, 4x1, R/A, SMT
Q1, Q11	2	25V	CSD16323Q3	Texas Instruments	MOSFET, N-CH, 25 V, 60 A, DQG0008A (VSON-CLIP-8)	DQG0008A
Q2	1	-20V	CSD25404Q3	Texas Instruments	MOSFET, P-CH, -20 V, -60 A, VSON-CLIP-8	DQG0008A
Q3, Q4	2	-30V	SI7101DN-T1-GE3	Vishay-Siliconix	MOSFET, P-CH, -30 V, -35 A, PowerPAK 1212	PowerPAK 1212
Q5, Q6, Q7, Q8	4	30V	CSD17308Q3	Texas Instruments	MOSFET, N-CH, 30 V, 47 A, DQG0008A (VSON-CLIP-8)	DQG0008A
Q9, Q10	2	50V	BSS138W	Fairchild Semiconductor	MOSFET, N-CH, 50 V, 0.21 A, SOT-323	SOT-323
Q14	1	12 V	NSS12201LT1G	ON Semiconductor	Transistor, NPN, 12 V, 2 A, SOT-23	SOT-23
R1, R2, R47, R53	4	33	CRCW080533R0JNEA	Vishay-Dale	RES, 33, 5%, 0.125 W, 0805	0805
R3, R6	2	4.99	CRCW04024R99FKED	Vishay-Dale	RES, 4.99, 1%, 0.063 W, 0402	0402
R4	1	10Meg	CRCW040210M0JNED	Vishay-Dale	RES, 10 M, 5%, 0.063 W, 0402	0402
R5	1	3.0Meg	CRCW04023M00JNED	Vishay-Dale	RES, 3.0 M, 5%, 0.063 W, 0402	0402
R7	1	1.00k	CRCW08051K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.125 W, 0805	0805
R8	1	1.0	CRCW04021R00JNED	Vishay-Dale	RES, 1.0, 5%, 0.063 W, 0402	0402
R9, R119	2	1.00Meg	RC0402FR-071ML	Yageo America	RES, 1.00 M, 1%, 0.063 W, 0402	0402
R10, R11, R12, R13, R16, R19, R34, R35, R76, R77, R81, R113	12	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
R14, R32, R36, R87	4	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, 0402	0402
R15	1	470k	CRCW0402470KJNED	Vishay-Dale	RES, 470 k, 5%, 0.063 W, 0402	0402
R17	1	196k	CRCW0402196KFKED	Vishay-Dale	RES, 196 k, 1%, 0.063 W, 0402	0402
R18	1	1.0Meg	CRCW04021M00JNED	Vishay-Dale	RES, 1.0 M, 5%, 0.063 W, 0402	0402
R20, R41, R42, R95	4	100k	CRCW0402100KFKED	Vishay-Dale	RES, 100 k, 1%, 0.063 W, 0402	0402
R21	1	200	CRCW0402200RFKED	Vishay-Dale	RES, 200, 1%, 0.063 W, 0402	0402
R22, R122	2	100k	RG1005P-104-B-T5	Susumu Co Ltd	RES, 100 k, 0.1%, 0.063 W, 0402	0402
R23, R28, R128	3	3.01Meg	CRCW04023M01FKED	Vishay-Dale	RES, 3.01 M, 1%, 0.063 W, 0402	0402
R24	1	2.00Meg	CRCW04022M00FKED	Vishay-Dale	RES, 2.00 M, 1%, 0.063 W, 0402	0402
R25, R37	2	100k	CRCW0402100KJNED	Vishay-Dale	RES, 100 k, 5%, 0.063 W, 0402	0402
R26, R27	2	100	RC0402FR-07100RL	Yageo America	RES, 100, 1%, 0.063 W, 0402	0402
R29	1	1.00Meg	CRCW04021M00FKED	Vishay-Dale	RES, 1.00 M, 1%, 0.063 W, 0402	0402
R30, R130	2	330k	RC0402FR-07330KL	Yageo America	RES, 330 k, 1%, 0.0625 W, 0402	0402
R31	1	200k	CRCW0402200KFKED	Vishay-Dale	RES, 200 k, 1%, 0.063 W, 0402	0402
R33	1	220	CRCW0402220RJNED	Vishay-Dale	RES, 220, 5%, 0.063 W, 0402	0402
R38	1	47k	CRCW040247K0JNED	Vishay-Dale	RES, 47 k, 5%, 0.063 W, 0402	0402

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R45	1	1.0k	CRCW04021K00JNED	Vishay-Dale	RES, 1.0 k, 5%, 0.063 W, 0402	0402
R55, R57	2	5.1k	CRCW04025K10JNED	Vishay-Dale	RES, 5.1 k, 5%, 0.063 W, 0402	0402
R59	1	10k ohm	ERT-J0EG103HA	Panasonic	Thermistor NTC, 10k ohm, 3%, 0402	0402
R60, R72, R73	3	0.01	WSP1206R0100FEA	Vishay-Dale	RES, 0.01, 1%, 1 W, 1206	1206
R62, R63	2	100	CRCW0402100RFKED	Vishay-Dale	RES, 100, 1%, 0.063 W, 0402	0402
R78, R79, R84	3	10	CRCW040210R0JNED	Vishay-Dale	RES, 10, 5%, 0.063 W, 0402	0402
R82, R83	2	56	CRCW060356R0JNEA	Vishay-Dale	RES, 56, 5%, 0.1 W, 0603	0603
R86	1	40.2k	CRCW040240K2FKED	Vishay-Dale	RES, 40.2 k, 1%, 0.063 W, 0402	0402
R92	1	383k	CRCW0402383KFKED	Vishay-Dale	RES, 383 k, 1%, 0.063 W, 0402	0402
R93	1	80.6k	CRCW040280K6FKED	Vishay-Dale	RES, 80.6 k, 1%, 0.063 W, 0402	0402
R94	1	221k	CRCW0402221KFKED	Vishay-Dale	RES, 221 k, 1%, 0.063 W, 0402	0402
R98	1	137k	CRCW0402137KFKED	Vishay-Dale	RES, 137 k, 1%, 0.063 W, 0402	0402
R99	1	30.1k	CRCW040230K1FKED	Vishay-Dale	RES, 30.1 k, 1%, 0.063 W, 0402	0402
R100, R101, R102, R103, R104	5	3.3k	CRCW04023K30JNED	Vishay-Dale	RES, 3.3 k, 5%, 0.063 W, 0402	0402
R105	1	665k	CRCW0402665KFKED	Vishay-Dale	RES, 665 k, 1%, 0.063 W, 0402	0402
R106	1	130k	CRCW0402130KFKED	Vishay-Dale	RES, 130 k, 1%, 0.063 W, 0402	0402
R112	1	0.05	ERJ-8CWFR050V	Panasonic	RES, 0.05, 1%, 1 W, 1206	1206
S1	1		B3U-1100P	Omron Electronic Components	Switch, SPST-NO, Off-Mom, 12 V, SMD	SMD, 3-Leads, Body 3x2.5mm
U1	1		BQ25713RSNR	Texas Instruments	I2C Narrow VDC Buck-Boost Battery Charge Controller With System Power Monitor and Processor Hot Monitor, RSN0032B (WQFN-32)	RSN0032B
U2	1		TUSB4221YFPR	Texas Instruments	USB PD TCPCi Port Controller, YFP0009-C01 (DSBGA-9)	YFP0009-C01
U3	1		TPS70933DRVR	Texas Instruments	150-mA, 30-V, Ultra-Low IQ, Wide Input Low-Dropout Regulator with Reverse Current Protection, DRV0006A (WSO-6)	DRV0006A
U4	1		TPD6S300RUK	Texas Instruments	USB Type C Interface Protector: Short-to-VBUS Over Voltage and IEC 61000-4-2 ESD Protection, RUK0020B	RUK0020B
U5	1		MSP430FR5949IRHAR	Texas Instruments	MSP430FR5949 16 MHz Ultra-Low-Power Microcontroller featuring 64 KB FRAM, 2 KB SRAM, 33 IO, RHA0040B (VQFN-40)	RHA0040B
U7	1		BQ7791500PWR	Texas Instruments	3-5S Ultra Low-Power Voltage, Current, Temperature, and Open Wire Stackable Lithium-ion Battery Protector with Smart Cell Balancing, PW0024A (TSSOP-24)	PW0024A
U8	1		TLV62130RGTR	Texas Instruments	4-17V 3A Step-Down Converter with DCS-Control, RGT0016C	RGT0016C
U9	1		TPS2514ADBVR	Texas Instruments	USB Dedicated Charging Port Controller, DBV0006A	DBV0006A
U10	1		TPD2E1B06DRLR	Texas Instruments	DUAL CHANNEL HIGH SPEED ESD PROTECTION DEVICE, DRL0006A	DRL0006A

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