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### PMP9475 Ultrascale Virtex Power Solution

Designator	Description	Manufacturer	PartNumber	Quantity
!PCB1	Printed Circuit Board	Any	PMP9475	1
C1, C2, C3, C4, C5, C6, C7, C8, C145, C183, C223, C242	CAP, CERM, 0.01uF, 50V, +/-10%, X7R, 0402	MuRata	GRM155R71H103KA88D	12
C9	CAP, CERM, 0.01uF, 16V, +/-10%, X7R, 0402	MuRata	GRM155R71C103KA01D	1
C10, C11, C13, C14, C16, C46, C47, C71, C72, C87, C96, C102, C111, C117, C126, C153, C162, C265, C267, C270, C272	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603	MuRata	GRM188R71E104KA01D	21
C12, C15	CAP, CERM, 4.7uF, 6.3V, +/-10%, X5R, 0603	MuRata	GRM188R60J475KE19D	2
C17, C20	CAP, CERM, 39pF, 100V, +/-5%, C0G/NP0, 0603	MuRata	GRM1885C2A390JA01D	2
C18, C19	CAP, CERM, 110pF, 50V, +/-5%, C0G/NP0, 0603	MuRata	GRM1885C1H111JA01D	2
C21, C22	CAP, AL, 100uF, 25V, +/-20%, 0.3 ohm, SMD	Panasonic	EEE-FC1E101P	2
C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C128, C129, C130	CAP, CERM, 22uF, 25V, +/-10%, X5R, 1210	MuRata	GRM32ER61E226KE15L	13
C33, C147, C185, C225, C244	CAP, CERM, 1000pF, 25V, +/-10%, X7R, 0603	MuRata	GRM188R71E102KA01D	5
C34	CAP, CERM, 82pF, 50V, +/-5%, C0G/NP0, 0603	MuRata	GRM1885C1H820JA01D	1

Designator	Description	Manufacturer	PartNumber	Quantity
C35, C61, C88, C103, C118, C133, C154, C172, C189, C196, C209, C232, C247, C250	CAP, CERM, 0.1uF, 25V, +/-10%, X5R, 0402	MuRata	GRM155R61E104KA87D	14
C36	CAP, CERM, 820pF, 50V, +/-5%, C0G/NP0, 0603	MuRata	GRM1885C1H821JA01D	1
C37, C38, C39, C40, C41, C42, C49, C50, C51, C52, C53, C54, C62, C63, C64, C65, C66, C67, C74, C75, C76, C77, C78, C79, C89, C90, C91, C92, C94, C95, C104, C105, C106, C107, C109, C110, C119, C120, C121, C122, C124, C125, C137, C138, C139, C140,	CAP, CERM, 100uF, 6.3V, +/-20%, X5R, 1210	MuRata	GRM32ER60J107ME20L	73
C43, C45, C55, C68, C69, C73	CAP, CERM, 1000pF, 50V, +/-10%, X7R, 0603	MuRata	GRM188R71H102KA01D	6
C44, C58, C59, C60, C70, C131, C136, C170, C187, C207, C230, C245, C266, C268, C269, C271	CAP, CERM, 1uF, 25V, +/-10%, X5R, 0603	MuRata	GRM188R61E105KA12D	16

Designator	Description	Manufacturer	PartNumber	Quantity
C48, C82	CAP, CERM, 3300pF, 50V, +/-10%, X7R, 0603	MuRata	GRM188R71H332KA01D	2
C56, C57, C80, C81, C135, C211, C212, C234	CAP, TA, 560uF, 2V, +/-20%, 0.003 ohm, SMD	Panasonic	EEF-GX0D561L	8
C83, C97, C112, C148	CAP, CERM, 2.2uF, 25V, +/-10%, X5R, 0805	MuRata	GRM21BR61E225KA12L	4
C84	CAP, CERM, 0.033uF, 10V, +/-10%, X7R, 0402	MuRata	GRM155R71A333KA01D	1
C85, C86, C99, C100, C101, C114, C115, C116, C150, C151, C152, C164, C165, C166, C167, C168, C169, C190, C191, C192, C193, C194, C203, C246	CAP, CERM, 22uF, 25V, +/-10%, X7R, 1210	MuRata	GRM32ER71E226KE15L	24
C93, C159	CAP, AL, 220uF, 6.3V, +/-20%, 0.007 ohm, SMD	Panasonic	EEF-UE0J221LR	2
C98, C113	CAP, CERM, 0.015uF, 25V, +/-10%, X7R, 0402	MuRata	GRM155R71E153KA61D	2
C127, C163, C202, C226, C251	CAP, CERM, 330pF, 50V, +/-5%, C0G/NP0, 0402	MuRata	GRM1555C1H331JA01D	5
C132, C171, C208, C231	CAP, CERM, 4700pF, 25V, +/-10%, X7R, 0402	MuRata	GRM155R71E472KA01D	4
C142, C146, C175, C180, C184, C213, C220, C224, C235, C243, C260, C262	CAP, CERM, 1uF, 10V, +/-10%, X5R, 0402	MuRata	GRM155R61A105KE15D	12
C144, C182, C222, C241	CAP, CERM, 4.7uF, 16V, +/-10%, X5R, 0603	MuRata	GRM188R61C475KAAJ	4

Designator	Description	Manufacturer	PartNumber	Quantity
C149	CAP, CERM, 0.022uF, 25V, +/-10%, X7R, 0402	MuRata	GRM155R71E223KA61D	1
C174	CAP, TA, 330uF, 2V, +/-20%, 0.003 ohm, SMD	Panasonic	EEF-GX0D331R	1
C186, C201	CAP, CERM, 100pF, 100V, +/-5%, C0G/NP0, 0603	MuRata	GRM1885C2A101JA01D	2
C188	CAP, CERM, 2.2uF, 16V, +/-10%, X5R, 0603	MuRata	GRM188R61C225KE15D	1
C197, C198, C199	CAP, CERM, 47uF, 6.3V, +/-20%, X5R, 1210	MuRata	GRM32ER60J476ME20L	3
C200	CAP, AL, 220uF, 4V, +/-20%, 9 ohm, SMD	Panasonic	EEFSX0G221ER	1
C204, C205, C206, C227, C228, C229	CAP, CERM, 10uF, 25V, +/-10%, X7R, 1206	MuRata	GRM31CR71E106KA12L	6
C210, C258	CAP, CERM, 1500pF, 50V, +/-10%, X7R, 0402	MuRata	GRM155R71H152KA01D	2
C233	CAP, CERM, 1000pF, 50V, +/-10%, X7R, 0402	TDK	C1005X7R1H102K	1
C248	CAP, CERM, 33pF, 50V, +/-5%, C0G/NP0, 0402	MuRata	GRM1555C1H330JA01D	1
C249	CAP, CERM, 3300pF, 50V, +/-10%, X7R, 0402	MuRata	GRM155R71H332KA01D	1
C263	CAP, CERM, 1000pF, 16V, +/-10%, X5R, 0402	MuRata	GRM155R61C102KA01D	1
C264	CAP, CERM, 470pF, 50V, +/-10%, X7R, 0603	MuRata	GRM188R71H471KA01D	1
D1	Diode, Zener, 5.1V, 300mW, SOD-523	Diodes Inc.	BZT52C5V1T-7	1
FID1, FID2, FID3	Fiducial mark. There is nothing to buy or mount.	N/A	N/A	3
H1, H2, H3, H4	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	B&F Fastener Supply	NY PMS 440 0025 PH	4
H5, H6, H7, H8	Standoff, Hex, 0.5"L #4-40 Nylon	Keystone	1902C	4
J1	Header, 100mil, 5x2, Tin plated, TH	Sullins Connector Solutions	PEC05DAAN	1
J2, J3	Standard Banana Jack, Uninsulated	Keystone	6095	2
J4, J5	Lug, Copper, 35A,	Panduit	CX35-36-CY	2
J6, J7, J8, J9, J10, J11, J12, J13, J14, J15	TERMINAL BLOCK 5.08MM VERT 2POS, TH	On-Shore Technology	ED120/2DS	10
L1, L2	Inductor, High Fq, High Current, ±10%	Coiltronic	CTX01-18738-R	2
L3	Inductor, Shielded Drum Core, WE-Superflux200, 1uH, 15A, 0.0046 ohm, SMD	Würth Elektronik eiSos	744311100	1
L4, L5	Inductor, Shielded Drum Core, Ferrite, 1.5uH, 16.5A, 0.0044 ohm, SMD	Würth Elektronik eiSos	7443340150	2
L6	Inductor, Shielded Drum Core, WE-Perm, 470nH, 26A, 0.00095 ohm, SMD	Würth Elektronik eiSos	744355047	1
L7	Inductor, Shielded Drum Core, Superflux, 1.2uH, 20A, 0.00178 ohm, SMD	Würth Elektronik eiSos	744325120	1
L8	Inductor, Shielded Drum Core, Superflux, 720nH, 22A, 0.00135 ohm, SMD	Würth Elektronik eiSos	744325072	1
L9	Inductor, Shielded Drum Core, Powdered Iron, 2.2uH, 16A, 0.003 ohm, SMD	Würth Elektronik eiSos	7443310220	1
L10	Inductor, Shielded Drum Core, Ferrite, 250nH, 40A, 0.00032 ohm, SMD	Würth Elektronik eiSos	744301025	1
L11	Inductor, Shielded Drum Core, Powdered Iron, 820nH, 13A, 0.0067 ohm, SMD	Vishay-Dale	IHLP2525CZERR82M01	1
L12	Inductor, Shielded Drum Core, Powdered Iron, 2.2uH, 5.8A, 0.0292 ohm, SMD	Vishay-Dale	IHLP2020CZER2R2M01	1
LBL1	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	Brady	THT-14-423-10	1

Designator	Description	Manufacturer	PartNumber	Quantity
Q1, Q2	Synchronous Buck NexFET Power Stage, NexFET Q5M	Texas Instruments	CSD95378B	2
Q3, Q4, Q5, Q6	Transistor, NPN, 40V, 0.2A, SOT-23	Fairchild Semiconductor	MMBT3904	4
R1, R2, R4, R6, R27	RES, 1.00k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06031K00FKEA	5
R3	RES, 41.2k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060341K2FKEA	1
R5, R65, R74	RES, 90.9k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060390K9FKEA	3
R7, R8, R9, R10, R11, R12, R17, R20, R22, R23, R41, R44, R117	RES, 10.0k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060310K0FKEA	13
R13, R14, R15	RES, 2.21k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06032K21FKEA	3
R16	RES, 80.6k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060380K6FKEA	1
R18, R19	RES, 29.4k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060329K4FKEA	2
R21	RES, 84.5k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060384K5FKEA	1
R24, R157	RES, 10.0k ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	RG1608P-103-B-T5	2
R25, R43, R55, R64, R73, R83, R93, R103, R121, R127, R138, R155, R165, R166, R167, R168	RES, 0 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW04020000Z0ED	16
R26, R36, R40, R119	RES, 49.9 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060349R9FKEA	4
R30	RES, 16.9k ohm, 0.1%, 0.1W, 0603	Yageo America	RT0603BRD0716K9L	1
R31	RES, 12.1k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060312K1FKEA	1
R32, R33, R42, R47, R48, R116, R164	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0EA	7
R34, R52	RES, 121k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603121KFKEA	2
R37	RES, 40.2k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060340K2FKEA	1
R38, R39, R53, R54	RES, 1.0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06031R00JNEA	4
R50	RES, 16.2k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060316K2FKEA	1
R51	RES, 25.5k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060325K5FKEA	1
R56	RES, 243k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603243KFKEA	1
R57	RES, 52.3k ohm, 0.1%, 0.1W, 0603	Yageo America	RT0603BRD0752K3L	1
R58	RES, 47.5k ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	RG1608P-4752-B-T5	1

Designator	Description	Manufacturer	PartNumber	Quantity
R59, R62, R68, R71, R77, R80, R82, R89, R97, R100, R102, R109, R126, R133, R137, R144, R153, R163	RES, 49.9 ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040249R9FKED	18
R60, R69, R78, R98, R156	RES, 0.005 ohm, 1%, 2W, 1224	Ohmite	LVK25R005FER	5
R61, R70, R79, R99, R123	RES, 100k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW0603100KJNEA	5
R63, R72, R81, R101	RES, 2.55k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06032K55FKEA	4
R66, R75	RES, 10.0k ohm, 0.1%, 0.1W, 0603	Yageo America	RT0603BRD0710KL	2
R67, R76	RES, 89.8k ohm, 0.1%, 0.1W, 0603	Yageo America	RT0603BRD0789K8L	2
R85	RES, 60.4k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040260K4FKED	1
R86	RES, 60.4k ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	RG1608P-6042-B-T5	1
R88, R141, R143	RES, 30.1k ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	RG1608P-3012-B-T5	3
R90, R110, R111, R134, R145	RES, 38.3k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040238K3FKED	5
R91, R92	RES, 27.4k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040227K4FKED	2
R94	RES, 255k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603255KFKEA	1
R95	RES, 40.2k ohm, 0.1%, 0.1W, 0603	Yageo America	RT0603BRD0740K2L	1
R96	RES, 60.4k ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	ERA-3AEB6042V	1
R106	RES, 133k ohm, 1%, 0.1W, 0603	Panasonic	ERA-3AEB1333V	1
R108, R132	RES, 30.0k ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	RG1608P-303-B-T5	2
R112	RES, 56.2k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040256K2FKED	1
R113	RES, 158k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603158KFKEA	1
R114	RES, 42.2k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060342K2FKEA	1
R115	RES, 150k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603150KFKEA	1
R118	RES, 73.2k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060373K2FKEA	1
R120	RES, 240k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-07240KL	1
R122	RES, 71.5k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060371K5FKEA	1
R124	RES, 162k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603162KFKEA	1
R125	RES, 37.4k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060337K4FKEA	1
R130	RES, 20.0k ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	RG1608P-203-B-T5	1
R135, R146	RES, 133k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402133KFKED	2
R136, R151	RES, 10.0k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040210K0FKED	2
R147	RES, 17.8k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040217K8FKED	1
R148	RES, 130k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402130KFKED	1
R149	RES, 10 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW040210R0JNED	1
R150	RES, 100k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW0402100KJNED	1
R152	RES, 23.7k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW040223K7FKED	1
R154	RES, 8.66k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW04028K66FKED	1
R159	RES, 499 ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402499RFKED	1
R160, R162	RES, 100 ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW0402100RFKED	2
R161	RES, 4.99k ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	RG1608P-4991-B-T5	1
R169	RES, 1.0 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW04021R00JNED	1
R170, R171, R172	RES, 10k ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW040210K0JNED	3
R173	RES, 3.0 ohm, 5%, 0.25W, 1206	Vishay-Dale	CRCW12063R00JNEA	1

<b>Designator</b>	<b>Description</b>	<b>Manufacturer</b>	<b>PartNumber</b>	<b>Quantity</b>
TP1, TP7, TP8, TP15, TP16, TP18	Test Point, Miniature, White, TH	Keystone	5002	6
TP2, TP4, TP19, TP20	Test Point, Miniature, Red, TH	Keystone	5000	4
TP3, TP5, TP12, TP13, TP14	Test Point, Miniature, Black, TH	Keystone	5001	5
TP6, TP10, TP23, TP24, TP27, TP28, TP31, TP32, TP36, TP39, TP40, TP44, TP47, TP51, TP55, TP59, TP60	Test Point, Multipurpose, Red, TH	Keystone	5010	17
TP9, TP17, TP25, TP29, TP33, TP37, TP41, TP45, TP48, TP52, TP56, TP61	Test Point, Multipurpose, Black, TH	Keystone	5011	12
TP11, TP21, TP22, TP26, TP30, TP34, TP35, TP38, TP42, TP43, TP49, TP50, TP53, TP54, TP57, TP58	Test Point, Miniature, SMT	Keystone	5015	16
TP46	Test Point, Multipurpose, Orange, TH	Keystone	5013	1
U1	IC, Digital PWM System Controller	TI	UCD90120ARGC	1
U2	Dual output, 2 phase, stackable PMBUS synchronous buck driverless controller, RHA0040B	Texas Instruments	TPS40428RHA	1
U3, U5, U7, U10	22-V Input, 12-A Integrated FET Converter With Ultra-Low Quiescent, RVE0028A	Texas Instruments	TPS51367RVE	4
U4, U6, U8, U11	Micro-Power (50mA), Zero-Drift, Rail-to-Rail Out Instrumentation Amplifier	Texas Instruments	INA333AIDGK	4
U9, U12, U14, U15	TPS544B20 18V, 20A PMBUS SYNCHRONOUS BUCK CONVERTERS, RVF0040A	Texas Instruments	TPS544B20RVF	4
U13	High Performance, 12-A Single Synchronous Step-Down Converter, RVE0028A	Texas Instruments	TPS53515RVE	1

<b>Designator</b>	<b>Description</b>	<b>Manufacturer</b>	<b>PartNumber</b>	<b>Quantity</b>
U16	3.0-V TO 20-V PMBus SYNCHRONOUS BUCK CONTROLLER, RHL0024A	Texas Instruments	TPS40400RHL	1
U17	MOSFET, N/P-CH, 25V, 20A, 3.4x1.4x3.4mm	Texas Instruments	CSD86330Q3D	1



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Only those TI components that TI has specifically designated as military grade or "enhanced plastic" are designed and intended for use in military/aerospace applications or environments. Buyer acknowledges and agrees that any military or aerospace use of TI components that have **not** been so designated is solely at Buyer's risk, and Buyer is solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI has specifically designated certain components as meeting ISO/TS16949 requirements, mainly for automotive use. In any case of use of non-designated products, TI will not be responsible for any failure to meet ISO/TS16949.