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1600W Isolated Power

Designator	Description	Manufacturer	Part Number	Qty
!PCB	Printed Circuit Board	Any	PMP6712	1
C1, C2, C39, C40	CAP, CERM, 0.01uF, 1000V, +/- 10%, X7R, 1210	Vishay-Vitramon	VJ1210Y103KXGAT5Z	4
C3, C4, C5, C6, C7, C8, C9, C10, C12, C13, C14, C15, C17, C18, C19, C20, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56		MuRata	GRM32ER72A225KA35L	32
C11	CAP, AL, 150uF, 100V, +/-20%, 0.17 ohm, SMD	Panasonic	EEV-FK2A151M	1
C16	CAP, AL, 33uF, 100V, +/-20%, 0.7 ohm, SMD	Panasonic	EEE-FK2A330P	1
C21, C22, C57, C58	CAP, CERM, 220pF, 630V, +/-5%, C0G/NP0, 1206	TDK	C3216C0G2J221J	4
C23, C24, C25, C26, C31, C32, C59, C60, C61, C62, C67, C68, C76, C81, C84, C86	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	MuRata	GRM188R71E105KA12D	16
C27, C28, C29, C30, C33, C34, C63, C64, C65, C66, C69, C70, C75, C85	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603	TDK	C1608X7R1E104K	14
C35, C71, C82, C89, C91	CAP, CERM, 0.01uF, 25V, +/-10%, X7R, 0603	MuRata	GRM188R71E103KA01D	5
C36, C37, C72, C73	CAP, CERM, 0.1uF, 250V, +/-10%, X7R, 1206	TDK	C3216X7R2E104K	4
C38, C74	CAP, CERM, 820pF, 50V, +/-5%, C0G/NP0, 0603	MuRata	GRM1885C1H821JA01D	2
C77, C78	CAP, CERM, 2200pF, 1000V, +/-5%, C0G/NP0, 1210	Vishay-Vitramon	VJ1210A222JXGAT5Z	2
C79, C80, C87	CAP, CERM, 0.47uF, 100V, +/-10%, X7R, 1206	TDK	C3216X7R2A474K	3
C83	CAP, CERM, 3300pF, 50V, +/-5%, C0G/NP0, 0603	TDK	C1608C0G1H332J	1
C88	CAP, CERM, xxxF, xxV, [TempCo], xx%, [PackageReference]	Not Used	Not Used	1
C90	CAP, CERM, 2200pF, 50V, +/-5%, C0G/NP0, 0603	TDK	C1608C0G1H222J	1
C92	CAP, AL, 10uF, 63V, +/-20%, 1.5 ohm, SMD	Panasonic	EEE-FK1J100P	1
C93, C94, C95, C96, C97, C98, C99	CAP, CERM, 0.01uF, 1500V, +/- 10%, X7R, 1812	AVX	1812SC103KAT1A	7
D1, D11	Diode, Ultrafast Avalanche, 200V, 2A, SMA	Vishay	BYG22D	2
D2, D12, D19, D25, D26	Diode, Ultrafast, 100V, 0.15A, SOD- 123	Diodes Inc.	1N4148W-7-F	5
D3, D4	Diode, Zener, 5.6V, 200mW, SOD- 323	Diodes Inc.	MMSZ5232BS-7-F	2
D5, D6, D7, D8, D9, D10, D13, D14, D15, D16, D17, D18, D24	Diode, Ultrafast, 200V, 2A, SMA	Diodes Inc.	ES2DA-13-F	13
D20	Diode, Schottky, 100V, 1A, PowerDI123	Diodes Inc.	DFLS1100-7	1
D21	Diode, Zener, 6.8V, 225mW, SOT-23	ON Semiconductor	BZX84C6V8LT1G	1
D22	DIODE ZENER 75V 500MW SOD- 123	On Semiconductor	MMSZ5267BT1G	1
D23	Diode, Schottky, 45V, 0.1A, SOD-523	Diodes Inc.	SDM10U45-7-F	1
FID1, FID2, FID3, FID4, FID5, FID6	Fiducial mark. There is nothing to buy or mount.	N/A	N/A	6
H1, H2, H5, H6	Standoff, Hex, 0.5"L #4-40 Nylon	Keystone	1902C	4

Designator	Description	Manufacturer	Part Number	Qty
H3, H4, H7, H8	Machine Screw, Round, #4-40 x 1/4,	B&F Fastener Supply	NY PMS 440 0025 PH	4
-, , , -	Nylon, Philips panhead			
HS1	MOSFET Heat Sink 24W 3.5in x1in	CCI	mosfet-3w-hsink 00Z91170101	1
HS2	Transformer Heat Sink 20W 3.5in x 1.5in	CCI	transformer-hsink 00Z91150101	1
HS3	MOSFET Heat Sink 32W 3.3in x1.1in	CCI	mosfet-2w-hsink 00Z91160101	1
J1	Connector 5 pin		Conn-5pin	1
J2	Connector 4 pin		Conn-4pin	1
J3, J4	Header, TH, 100mil, 2x1, Gold	Samtec, Inc.	TSW-102-07-G-S	2
,	plated, 230 mil above insulator			
J5, J6, J7, J8	Chassis 0.125in		CH-125mil	4
L1, L3	Inductor, Shielded E Core, Ferrite,	Coilcraft	SER2918H-153KL	2
	15uH, 18A, 0.0026 ohm, SMD			
L2	Inductor, Shielded E Core, Ferrite,	Coilcraft	SER2010-901MLB	1
	900nH, 45A, 0.0009 ohm, SMD			
L4	XFMR, SMT 50uH 1:1 2250VDC	Coilcraft	NA5890-AL	1
L5	Inductor, Shielded Drum Core, Ferrite, 470uH, 0.9A, 0.7075 ohm, SMD	Coilcraft	MSS1278-474KLB	1
Q1, Q2, Q3, Q4, Q9, Q10, Q11, Q12, Q15, Q16, Q17, Q18, Q23, Q24, Q25, Q26	MOSFET, N-CH, 150V, 50A, PG- TDSON-8	Infineon Technologies	BSC190N15NS3 G	16
Q5, Q6, Q7, Q8, Q19, Q20, Q21, Q22	MOSFET, N-CH, 80V, 100A, PG- TDSON-8	Infineon Technologies	BSC057N08NS3 G	8
Q13, Q14, Q29	Transistor, NPN, 40V, 0.2A, SOT-23	Diodes Inc.	MMBT3904-7-F	3
Q27	MOSFET P-CH 240V 480MA SOT223	Diodes / Zetex	ZVP4424GTA	1
Q28	Transistor, PNP, 40V, 0.2A, SOT-23	Diodes Inc.	MMBT3906-7-F	1
R1, R2, R4, R5, R9, R10, R15, R16, R28, R29, R50, R51, R52, R53, R57, R58, R63, R64, R112	RES, 10k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060310K0JNEA	19
R3	RES, 0.24 ohm, 1%, 0.5W, 1210	Rohm	MCR25JZHFLR240	1
R6, R7, R54, R55	RES, 15.0 ohm, 1%, 0.25W, 1206	Vishay-Dale	CRCW120615R0FKEA	4
R8, R56, R111, R117	RES, 10k ohm, 5%, 0.25W, 1206	Vishay-Dale	CRCW120610K0JNEA	4
R11, R12, R13, R14, R59, R60, R61, R62	RES, 33 ohm, 5%, 0.25W, 1206	Vishay-Dale	CRCW120633R0JNEA	8
R17, R18, R19, R20, R21, R22, R23, R24, R65, R66, R67, R68, R69, R70, R71, R72, R122	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0EA	17
R25, R73	RES, 10 ohm, 5%, 0.125W, 0805	Vishay-Dale	CRCW080510R0JNEA	2
R26, R27, R31, R32, R49, R74, R75, R93	RES, 10.0k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060310K0FKEA	8
R30	RES, 2.4k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06032K40JNEA	1
R33, R35, R77, R79	RES, 1.5k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06031K50JNEA	4
R34, R36, R37, R78, R80, R81	RES, 13.0k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060313K0FKEA	6
R38, R39, R82, R83, R100, R116, R120	RES, 1.0k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06031K00JNEA	7
R40, R84, R108	RES, 100 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW0603100RJNEA	3
R41, R45, R85, R89	RES, 26.1k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060326K1FKEA	4
R42, R86	RES, 59.0k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060359K0FKEA	2
R43, R87, R94	RES, 4.7Meg ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06034M70JNEA	3
R44, R88	RES, 634 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603634RFKEA	2
R46, R90, R107	RES, 1.00k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06031K00FKEA	3
R47, R91	RES, 12.4k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060312K4FKEA	2
R48, R92	RES, 1.21k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06031K21FKEA	2
R76	RES, 825k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603825KFKEA	1
R95	RES, 6.8k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06036K80JNEA	1
R96	RES, 261k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603261KFKEA	1
R97	RES, 100k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603100KFKEA	1
R98	RES, 2.0k ohm, 5%, 0.125W, 0805	Vishay-Dale	CRCW08052K00JNEA	1
R99	RES, 4.7k ohm, 5%, 0.25W, 1206	Vishay-Dale	CRCW12064K70JNEA	1

Designator	Description	Manufacturer	Part Number	Qty
R101	RES, 200k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603200KFKEA	1
R102	RES, 127k ohm, 1%, 0.25W, 1206	Vishay-Dale	CRCW1206127KFKEA	1
R103	RES, 46.4k ohm, 1%, 0.25W, 1206	Vishay-Dale	CRCW120646K4FKEA	1
R104	RES, 7.32k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06037K32FKEA	1
R105	RES, 47k ohm, 5%, 0.25W, 1206	Vishay-Dale	CRCW120647K0JNEA	1
R106	RES, 4.64k ohm, 1%, 0.125W, 0805	Vishay-Dale	CRCW08054K64FKEA	1
R109, R115	RES, 5.1k ohm, 5%, 0.25W, 1206	Vishay-Dale	CRCW12065K10JNEA	2
R110, R121	RES, 20k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060320K0JNEA	2
R113	RES, 47k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060347K0JNEA	1
R114	RES, 2.0k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06032K00JNEA	1
R118	RES, 56.2k ohm, 1%, 0.25W, 1206	Vishay-Dale	CRCW120656K2FKEA	1
R119	RES, 51.1k ohm, 1%, 0.25W, 1206	Vishay-Dale	CRCW120651K1FKEA	1
R123, R124	RES, 2.49k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-072K49L	2
T1, T3	Transformer, Current Sense 1T:200T		B82801C2245A200	2
11, 13	Transformer, Guirent Gense 11.2001	Lр003	D0200102240/1200	-
T2, T4	XFMR, SMT 800W 3T:5T	Coilcraft	NA5871-AL	2
TP1, TP2, TP7, TP8	Terminal, Turret, TH, Double	Keystone	1502-2	4
TP3, TP4, TP5, TP6, TP12, TP13, TP14,	Test Point, TH, Miniature, White	Keystone	5002	15
TP15, TP19, TP20, TP22, TP25, TP27, TP28, TP29	, , .			
TP9, TP10, TP11, TP16, TP17, TP18, TP23, TP26	Test Point, TH, Miniature, Black	Keystone	5001	8
TP21, TP24	Test Point, TH, Miniature, Red	Keystone	5000	2
U1, U2, U7, U8	3A High Voltage High-Side and Low- Side Gate Driver, 8-pin Narrow SOIC, Pb-Free	National Semiconductor	LM5100AM/NOPB	4
U3, U4, U9, U10	2A 175V High-Side and Low-Side Gate Driver, 8-pin Narrow SOIC, Pb- Free	Maxim Integrated Products	MAX15013AASA+	4
U5, U11	IC, Advanced Phase-Shifted PWM Controller	Texas Instruments	UCC28950PW	2
U6, U12	IC, DUAL DIGITAL ISOLATORS	Texas Instruments	ISO7420FED	2
U13	Low Power Low Offset Voltage Dual Comparator, 8-pin Narrow SOIC	National Semiconductor	LM393MX	1
U14, U19, U20	IC, Precision Adjustable Shunt Regulator	Texas Instruments	TL431AIDBZ	3
U15		Texas Instruments	CD4050BNSR	1
U16	100V Constant On-Time PFET Buck Switching Controller, 8-pin PSOP, Pb- Free	National Semiconductor	LM5017MRX/NOPB	1
U17, U18	IC, Optocoupler, 5000V, 80-160% CTR	Fairchild Optoelectronics Group	FOD817ASD	2

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