

PSR Flyback with universal 3-phase input

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
!PCB1	1		Printed Circuit Board		PMP9044	Any	-	-
C2	1	2700uF	CAP ALUM 2700UF 6.3V 20% RADIAL	RCAP, 6.3x8mm	6.3ZLJ2700M10X20	Rubycon		
C3	1	10uF	CAP, CERM, 10uF, 25V, +/-20%, X7R, 1210	1210	C3225X7R1E106M	TDK		
C4	1	0.1uF	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0805	0805	08053C104KAT2A	AVX		
C5, C6	2	10uF	CAP ALUM 10UF 400V 20% RADIAL	RCAP, TH, 10 x 20mm	EEU-EE2G100	Panasonic		
C7	1	4700pF	CAP, CERM, 4700pF, 500V, +/-10%, C0G/NP0, 2220	2220	VJ2220A472KBEAT4X	Vishay-Vitramon		
C9	1	18uF	CAP, AL, 18uF, 35V, +/-20%, TH	RCAP, 5x5mm	35ZL18MEFC5X7	Rubycon		
C101	1	470pF	CAP, CERM, 470pF, 630V, +/-5%, C0G/NP0, 1206	1206	C3216C0G2J471J	TDK		
D1	1	30V	Diode, Schottky, 30V, 1A, SMB	SMB	B130LB-13-F	Diodes Inc.		
D2, D3, D4, D7, D8, D9	6	1000V	Diode, Ultrafast, 1000V, 1A, SMA	SMA	US1M-13-F	Diodes Inc.		
D6	1	1.7V	Diode, Ultrafast, 1000V, 1A, SMA	SMA	US1M-13-F	Diodes Inc.		
D10	1		DIODE SWITCH 200V 200MA SOD323	SOD-323	BAS20HT1G			
Line1, Line2, Line3, Neutral, TP1, TP2	6		PCB Pin, Swage Mount, TH	3104-2	3104-2-00-34-00-00-08-0	Mill-Max		
Q1	1		TRANSISTOR NPN 600V 2A TO-220	TO-220AB	KSC5502TU	Fairchild Semiconductor		
R2	1	100	RES 100 OHM 1W 5% 2512 SMD	2512	ERJ-1TYJ101U	Panasonic		
R3, R5	2	10.0Meg	RES, 10.0Meg ohm, 1%, 0.25W, 1206	1206	CRCW120610M0FKEA	Vishay-Dale		
R4	1	49.9	RES, 49.9 ohm, 1%, 0.25W, 1206	1206	CRCW120649R9FKEA	Vishay-Dale		
R6	1	0	RES, 0 ohm, 5%, 0.1W, 0603	0603	CRCW06030000Z0EA	Vishay-Dale		
R7	1	102k	RES, 102k ohm, 1%, 0.1W, 0603	0603	CRCW0603102KFKEA	Vishay-Dale		
R8	1	0	RES, 0 ohm, 5%, 0.063W, 0402	0402	CRCW04020000Z0ED	Vishay-Dale		
R9	1	5.11k	RES, 5.11k ohm, 1%, 0.063W, 0402	0402	CRCW04025K11FKED	Vishay-Dale		
R10	1	1.74k	RES, 1.74k ohm, 1%, 0.125W, 0805	0805	CRCW08051K74FKEA	Vishay-Dale		
R11	1	3.9	RES, 3.9 ohm, 5%, 0.125W, 0805	0805	CRCW08053R90JNEA	Vishay-Dale		
R12	1	19.6k	RES, 19.6k ohm, 1%, 0.1W, 0603	0603	CRCW060319K6FKEA	Vishay-Dale		
R101	1	121k	RES, 121k ohm, 1%, 0.25W, 1206	1206	CRCW1206121KFKEA	Vishay-Dale		
T1	1	850uH	Transformer, 450uH, TH	XFMR, 730x725x730mil, TH	TBD	Renco Electronics		
U1	1		CONSTANT-VOLTAGE, CONSTANT-CURRENT CONTROLLER WITH PRIMARY SIDE REGULATION, D0007A	D0007A	UCC28720D	Texas Instruments		None
C1	0	100pF	CAP, CERM, 100pF, 100V, +/-5%, C0G/NP0, 0603	0603	C1608C0G2A101J	TDK		
C8	0	0.1uF	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	0603	06035C104KAT2A	AVX		
D5	0	200V	DIODE ZENER 200V 5W DO214AA	SMB	SMBJ5388B	Micro Commercial Co		
D11, D12	0	1000V	Diode, Ultrafast, 1000V, 1A, SMA	SMA	US1M-13-F	Diodes Inc.		
R1	0	DNP	RES, 0 ohm, 5%, 0.125W, 0805	0805	CRCW08050000Z0EA	Vishay-Dale		
R13	0	DNP	RES, 0 ohm, 5%, 0.063W, 0402	0402	CRCW04020000Z0ED	Vishay-Dale		
R14	0	0	RES, 0 ohm, 5%, 0.25W, 1206	1206	RC1206JR-070RL	Yageo America		

Notes:

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

IMPORTANT NOTICE FOR TI REFERENCE DESIGNS

Texas Instruments Incorporated ("TI") reference designs are solely intended to assist designers ("Buyers") who are developing systems that incorporate TI semiconductor products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products.

TI reference designs have been created using standard laboratory conditions and engineering practices. **TI has not conducted any testing other than that specifically described in the published documentation for a particular reference design.** TI may make corrections, enhancements, improvements and other changes to its reference designs.

Buyers are authorized to use TI reference designs with the TI component(s) identified in each particular reference design and to modify the reference design in the development of their end products. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN, including but not limited to any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI components or services are used. Information published by TI regarding third-party products or services does not constitute a license to use such products or services, or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

TI REFERENCE DESIGNS ARE PROVIDED "AS IS". TI MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE REFERENCE DESIGNS OR USE OF THE REFERENCE DESIGNS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. TI DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO TI REFERENCE DESIGNS OR USE THEREOF. TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY BUYERS AGAINST ANY THIRD PARTY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON A COMBINATION OF COMPONENTS PROVIDED IN A TI REFERENCE DESIGN. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES, HOWEVER CAUSED, ON ANY THEORY OF LIABILITY AND WHETHER OR NOT TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, ARISING IN ANY WAY OUT OF TI REFERENCE DESIGNS OR BUYER'S USE OF TI REFERENCE DESIGNS.

TI reserves the right to make corrections, enhancements, improvements and other changes to its semiconductor products and services per JESD46, latest issue, and to discontinue any product or service per JESD48, latest issue. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All semiconductor products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its components to the specifications applicable at the time of sale, in accordance with the warranty in TI's terms and conditions of sale of semiconductor products. Testing and other quality control techniques for TI components are used to the extent TI deems necessary to support this warranty. Except where mandated by applicable law, testing of all parameters of each component is not necessarily performed.

TI assumes no liability for applications assistance or the design of Buyers' products. Buyers are responsible for their products and applications using TI components. To minimize the risks associated with Buyers' products and applications, Buyers should provide adequate design and operating safeguards.

Reproduction of significant portions of TI information in TI data books, data sheets or reference designs is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Buyer acknowledges and agrees that it is solely responsible for compliance with all legal, regulatory and safety-related requirements concerning its products, and any use of TI components in its applications, notwithstanding any applications-related information or support that may be provided by TI. Buyer represents and agrees that it has all the necessary expertise to create and implement safeguards that anticipate dangerous failures, monitor failures and their consequences, lessen the likelihood of dangerous failures and take appropriate remedial actions. Buyer will fully indemnify TI and its representatives against any damages arising out of the use of any TI components in Buyer's safety-critical applications.

In some cases, TI components may be promoted specifically to facilitate safety-related applications. With such components, TI's goal is to help enable customers to design and create their own end-product solutions that meet applicable functional safety standards and requirements. Nonetheless, such components are subject to these terms.

No TI components are authorized for use in FDA Class III (or similar life-critical medical equipment) unless authorized officers of the parties have executed an agreement specifically governing such use.

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.