

TIDA-00657

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPC6	1		Printed Circuit Board		PWR583	Any	-	-
C1	1	2.2uF	CAP, CERM, 2.2uF, 25V, +/-10%, X7R, 1206	1206	GRM31MR71E225KA93L	MuRata		
C2, C3, C4, C5, C6, C7	6	10uF	CAP, CERM, 10uF, 25V, +/-10%, X5R, 1206	1206	GRM31CR61E106KA12L	MuRata		
C10	1	22uF	CAP, CERM, 22uF, 25V, +/-10%, X5R, 1210	1210	GRM32ER61E226KE15L	MuRata		
C12	1	1000pF	CAP, CERM, 1000pF, 50V, +/-10%, X7R, 0603	0603	GRM188R71H102KA01D	MuRata		
C13, C24	2	0.047uF	CAP, CERM, 0.047uF, 50V, +/-10%, X7R, 0603	0603	GRM188R71H473KA61D	MuRata		
C15, C20	2	1uF	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	0603	GRM188R71E105KA12D	MuRata		
C16, C18, C19, C28, C29, C30, C35	7	0.1uF	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603	0603	GRM188R71E104KA01D	MuRata		
C21	1	2.2uF	CAP, CERM, 2.2uF, 16V, +/-10%, X5R, 0603	0603	GRM188R61C225KE15D	MuRata		
C22, C27	2	0.01uF	CAP, CERM, 0.01uF, 50V, +/-10%, X7R, 0603	0603	C0603X103K5RACTU	Kemet		
C25	1	470pF	CAP, CERM, 470pF, 50V, +/-10%, X7R, 0603	0603	GRM188R71H471KA01D	MuRata		
C31, C32	2	100pF	CAP, CERM, 100pF, 50V, +/-5%, C0G/NP0, 0603	0603	C0603C101J5GAC	Kemet		
C34	1	2200pF	CAP, CERM, 2200pF, 50V, +/-5%, C0G/NP0, 0805	0805	C2012C0G1H222J	TDK		
C37	1	2.2uF	CAP, CERM, 2.2uF, 10V, +/-10%, X7R, 0603	0603	GRM188R71A225KE15D	MuRata		
D1, D7	2	30V	Diode, Schottky, 30V, 0.2A, SOD-323	SOD-323	BAT54HT1G	ON Semiconductor		
D3, D4	2	Green	LED, Green, SMD	1.6x0.8x0.8mm	LTST-C190GKT	Lite-On		
D5, D6	2	Orange	LED, Orange, SMD	1.6x0.8x0.8mm	LTST-C190FKT	Lite-On		
H9, H10, H11, H12	4		Bump, Hemisphere, 0.44 X 0.20, Clear	Transparent Bump	SJ-5303 (CLEAR)	3M		
J1	1		TERMINAL BLOCK 5.08MM VERT 2POS	TERM_BLK, 2pos, 5.08mm	ED120/2DS	On-Shore Technology, Inc.		
J2	1		TERMINAL BLOCK 5.08MM VERT 3POS	TERM_BLK, 3pos, 5.08mm	ED120/3DS	On-Shore Technology, Inc.		
J3	1		Terminal Block, 6A, 3.5mm Pitch, 6-POS, TH	20.5x8.2x6.5mm	ED555/6DS	On-Shore Technology, Inc.		
JP1, JP2, JP3, JP4, JP5, JP6	6		Header, 100mil, 2x1, Gold plated, TH	Header, 2x1, 100mil	5-146261-1	TE Connectivity		
L1	1	3.3uH	Inductor, Shielded, Powdered Iron, 3.3uH, 9.2A, 17.7 ohm, SMD	322x158x322mil	IHLP3232DZER3R3M01	Vishay-Dale		
LBL1	1		Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650"H x 0.200"W	THT-14-423-10	Brady	-	-
Q1, Q2, Q3, Q4, Q5	5	30V	MOSFET, N-CH, 30V, 47A, SON 3.3x3.3mm	SON 3.3x3.3mm	CSD17308Q3	Texas Instruments		None
Q7	1	50V	MOSFET, N-CH, 50V, 0.2A, SOT-323	SOT-323	BSS138W-7-F	Diodes Inc.		None
Q8	1	60V	MOSFET, N-CH, 60V, 0.26A, SOT-23	SOT-23	2N7002ET1G	ON Semiconductor		None
R1, R2	2	3.9	RES, 3.9 ohm, 5%, 0.5W, 1210	1210	ERJ-14YJ3R9U	Panasonic		
R3	1	430k	RES, 430k ohm, 1%, 0.1W, 0603	0603	RC0603FR-07430KL	Yageo America		
R4	1	66.5k	RES, 66.5k ohm, 1%, 0.1W, 0603	0603	CRCW060366K5FKEA	Vishay-Dale		
R5, R45	2	1.00Meg	RES, 1.00Meg ohm, 1%, 0.1W, 0603	0603	CRCW06031M00FKEA	Vishay-Dale		
R6	1	3.01Meg	RES, 3.01Meg ohm, 1%, 0.1W, 0603	0603	CRCW06033M01FKEA	Vishay-Dale		
R7	1	4.7	RES, 4.7 ohm, 5%, 0.1W, 0603	0603	CRCW06034R70JNEA	Vishay-Dale		
R8, R23	2	0.01	RES, 0.01 ohm, 1%, 1W, 1206	1206	WSP1206R0100FEA	Vishay-Dale		
R9, R11, R31, R32, R37, R39, R40, R41, R46	9	10.0k	RES, 10.0k ohm, 1%, 0.1W, 0603	0603	CRCW060310K0FKEA	Vishay-Dale		
R12, R13, R28	3	4.02k	RES, 4.02k ohm, 1%, 0.1W, 0603	0603	CRCW06034K02FKEA	Vishay-Dale		
R15, R16	2	0	RES, 0 ohm, 5%, 0.1W, 0603	0603	CRCW06030000Z0EA	Vishay-Dale		
R17	1	10.0	RES, 10.0 ohm, 1%, 0.25W, 1206	1206	ERJ-8ENF10R0V	Panasonic		
R19	1	6.8	RES, 6.8 ohm, 5%, 0.1W, 0603	0603	CRCW06036R80JNEA	Vishay-Dale		
R20, R36	2	100k	RES, 100k ohm, 5%, 0.1W, 0603	0603	CRCW0603100KJNEA	Vishay-Dale		
R21	1	316k	RES, 316k ohm, 1%, 0.1W, 0603	0603	CRCW0603316KJNEA	Vishay-Dale		
R26, R27, R29	3	10.0	RES, 10.0 ohm, 1%, 0.1W, 0603	0603	RC0603FR-0710RL	Yageo America		
R30, R38, R42, R44	4	2.00k	RES, 2.00k ohm, 1%, 0.1W, 0603	0603	CRCW06032K00FKEA	Vishay-Dale		
R33	1	499k	RES, 499k ohm, 1%, 0.1W, 0603	0603	CRCW0603499KJNEA	Vishay-Dale		
R34	1	49.9k	RES, 49.9k ohm, 1%, 0.1W, 0603	0603	CRCW060349K9FKEA	Vishay-Dale		
R35	1	140k	RES, 140k ohm, 1%, 0.1W, 0603	0603	CRCW0603140KJNEA	Vishay-Dale		
R47	1	30.1k	RES, 30.1k ohm, 1%, 0.1W, 0603	0603	CRCW060330K1FKEA	Vishay-Dale		
TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP17	13	White	Test Point, TH, Miniature, White	Keystone5002	5002	Keystone		
TP14	1	Orange	Test Point, Miniature, Orange, TH	Orange Miniature Testpoint	5003	Keystone		
TP15, TP16	2	Black	Test Point, Miniature, Black, TH	Black Miniature Testpoint	5001	Keystone		
U1	1		1-4 Cell Turbo Boost Mode Battery Charge Controller with Power Monitoring and /PROCHOT for CPU Throttling, RUY0028A	RUY0028A	BQ24780SRUY	Texas Instruments		None
U2	1		Single-Channel, Adjustable Supervisory Circuit in Ultra-Small Package, DRY0006A	DRY0006A	TPS3898ADRY	Texas Instruments		None
C8, C9	0	10uF	CAP, CERM, 10uF, 25V, +/-10%, X5R, 1206	1206	GRM31CR61E106KA12L	MuRata		
C11	0	150uF	CAP, TA, 150uF, 16V, +/-20%, 0.05 ohm, SMD	7.3x2.8x4.3mm	16TQC150MYF	Panasonic		
C14, C26	0	DNP	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603	0603	GRM188R71E104KA01D	MuRata		
C17	0	1uF	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	0603	GRM188R71E105KA12D	MuRata		
C23	0	0.1uF	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603	0603	GRM188R71E104KA01D	MuRata		
C33	0	100pF	CAP, CERM, 100pF, 50V, +/-5%, C0G/NP0, 0603	0603	C0603C101J5GAC	Kemet		
D2	0	DNP	Diode, Schottky, 30V, 0.2A, SOD-323	SOD-323	BAT54HT1G	ON Semiconductor		
D8	0	DNP	Diode, Schottky, 20V, 1A, SMA	SMA	SS12-E3/61T	Vishay-Semiconductor		
D9	0	8.2V	Diode, Zener, 8.2V, 500mW, SOD-123	SOD-123	BZT52C8V2-7-F	Diodes Inc.		

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
FID1, FID2, FID3	0		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A		
H1, H2, H3, H4	0		Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply	-	-
H5, H6, H7, H8	0		Standoff, Hex, 0.5"L #4-40 Nylon	Standoff	1902C	Keystone	-	-
Q6	0	30V	MOSFET, N-CH, 30V, 47A, SON 3.3x3.3mm	SON 3.3x3.3mm	CSD17308Q3	Texas Instruments		None
R10	0	DNP	RES, 84.5k ohm, 0.1%, 0.1W, 0603	0603	RG1608P-8452-B-T5	Susumu Co Ltd		
R14	0	DNP	RES, 0 ohm, 5%, 0.1W, 0603	0603	CRCW06030000Z0EA	Vishay-Dale		
R25	0	DNP	RES, 100k ohm, 1%, 0.1W, 0603	0603	CRCW0603100KFKEA	Vishay-Dale		
TP1	0		Compact Probe Tip Circuit Board Test Points, TH, 25 per	TH Scope Probe	131-5031-00	Tektronix		
	0		12-Bit 4-Ch MUX-Input SAR ADC With Intelligent System Power Control	RTE0016	ADS7924IRTER	Texas Instruments	-	-

Notes:

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

IMPORTANT NOTICE FOR TI DESIGN INFORMATION AND RESOURCES

Texas Instruments Incorporated ("TI") technical, application or other design advice, services or information, including, but not limited to, reference designs and materials relating to evaluation modules, (collectively, "TI Resources") are intended to assist designers who are developing applications that incorporate TI products; by downloading, accessing or using any particular TI Resource in any way, you (individually or, if you are acting on behalf of a company, your company) agree to use it solely for this purpose and subject to the terms of this Notice.

TI's provision of TI Resources does not expand or otherwise alter TI's applicable published warranties or warranty disclaimers for TI products, and no additional obligations or liabilities arise from TI providing such TI Resources. TI reserves the right to make corrections, enhancements, improvements and other changes to its TI Resources.

You understand and agree that you remain responsible for using your independent analysis, evaluation and judgment in designing your applications and that you have full and exclusive responsibility to assure the safety of your applications and compliance of your applications (and of all TI products used in or for your applications) with all applicable regulations, laws and other applicable requirements. You represent that, with respect to your applications, you have all the necessary expertise to create and implement safeguards that (1) anticipate dangerous consequences of failures, (2) monitor failures and their consequences, and (3) lessen the likelihood of failures that might cause harm and take appropriate actions. You agree that prior to using or distributing any applications that include TI products, you will thoroughly test such applications and the functionality of such TI products as used in such applications. TI has not conducted any testing other than that specifically described in the published documentation for a particular TI Resource.

You are authorized to use, copy and modify any individual TI Resource only in connection with the development of applications that include the TI product(s) identified in such TI Resource. NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT OF TI OR ANY THIRD PARTY 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 products or services are used. Information regarding or referencing third-party products or services does not constitute a license to use such products or services, or a warranty or endorsement thereof. Use of TI Resources 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 RESOURCES ARE PROVIDED "AS IS" AND WITH ALL FAULTS. TI DISCLAIMS ALL OTHER WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, REGARDING TI RESOURCES OR USE THEREOF, INCLUDING BUT NOT LIMITED TO ACCURACY OR COMPLETENESS, TITLE, ANY EPIDEMIC FAILURE WARRANTY AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY YOU AGAINST ANY CLAIM, INCLUDING BUT NOT LIMITED TO ANY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON ANY COMBINATION OF PRODUCTS EVEN IF DESCRIBED IN TI RESOURCES OR OTHERWISE. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, DIRECT, SPECIAL, COLLATERAL, INDIRECT, PUNITIVE, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES IN CONNECTION WITH OR ARISING OUT OF TI RESOURCES OR USE THEREOF, AND REGARDLESS OF WHETHER TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

You agree to fully indemnify TI and its representatives against any damages, costs, losses, and/or liabilities arising out of your non-compliance with the terms and provisions of this Notice.

This Notice applies to TI Resources. Additional terms apply to the use and purchase of certain types of materials, TI products and services. These include; without limitation, TI's standard terms for semiconductor products (<http://www.ti.com/sc/docs/stdterms.htm>), [evaluation modules](#), and [samples](http://www.ti.com/sc/docs/sampterm.htm) (<http://www.ti.com/sc/docs/sampterm.htm>).

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2017, Texas Instruments Incorporated