

Bill of Materials

TI DESIGNS

TIDA-00821

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
IPC81	1		Printed Circuit Board		PWR763	Any	-	-
Aarvark	1		Aardvark embedded systems interface		TP240141	Total Phase	-	-
C6, C7, C8, C9	4	3300pF	CAP, CERM, 3300 pF, 50 V, +/- 10%, X7R, 0603	0603	GRM188R71H332KA01D	MuRata		
C14, C17, C18, C20, C21, C25, C26, C28, C29, C40, C41, C42, C44, C46, C48, C51, C52, C54, C55, C57, C60, C66, C67, C78, C79, C80, C82, C84, C86, C89, C90, C92, C93, C95, C98, C100, C101, C107, C113, C114, C116, C118, C120, C121, C122, C123, C124, C125, C129, C132, C133	51	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603	06035C104KAT2A	AVX		
C22, C23, C58, C59, C96, C97	6	0.047uF	CAP, CERM, 0.047 uF, 16 V, +/- 10%, X7R, 0603	0603	GRM188R71C473KA01D	MuRata		
C34, C69, C103	3	0.1uF	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, 0603	0603	GRM188R72A104KA35D	MuRata		
C35, C36, C37, C38, C62, C63, C64, C65, C73, C74, C75, C76, C108, C109, C110, C111	16	33pF	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	GRM1885C1H330JA01D	MuRata		
C39, C77, C112, C126, C135	5	10uF	CAP, CERM, 10 uF, 10 V, +/- 20%, X7R, 0805	0805	C2012X7R1A106M125A C	TDK		
C43, C45, C47, C81, C83, C85, C115, C117, C119	9	2.2uF	CAP, CERM, 2.2 uF, 10 V, +/- 10%, X7R, 0805	0805	GRM21BR71A225KA01L	MuRata		
C127	1	1uF	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, 0603	0603	C1608X7R1C105K	TDK		
C128, C130, C131, C134	4	4.7uF	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X5R, 0603	0603	C0603C475K8PACTU	Kemet		
C136	1	150pF	CAP, CERM, 150 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603	C0603C151J5GACTU	Kemet		
C137	1	1000pF	CAP, CERM, 1000 pF, 3150 V, +80/-20%, E, Radial Disc D7x6mm	Radial Disc D7x6mm	DEBE33F102ZC3B	MuRata		
D1, D2, D3	3	Yellow	LED, Yellow, SMD	0603(1608)	APT1608SYCK	Kingbright		

D4	1	-20V	MOSFET, P-CH, -20 V, -20 A, SON 2x2mm	SON 2x2mm	CSD25310Q2	Texas Instruments		None
D5, D6	2	30V	Diode, Schottky, 30 V, 0.2 A, SOD-323	SOD-323	BAT54HT1G	ON Semiconductor		
H1, H2, H3, H4	4		BRD SPT SNAP LOCK SCREW MNT 3/8"	BRD SPT SNAP LOCK SCREW MNT 3/8"	9030	Keystone		
J1, J2, J3, J4, J5, J6, J7, J8, J9, JP1, JP2, JP3, JP4, JP5, JP6, JP7, JP8, JP9, JP10, JP11, JP12, JP13, JP14, JP15, JP16, JP17, JP18	27		Header, 100mil, 2x1, Tin, TH	Header, 2 PIN, 100mil, Tin	PEC02SAAN	Sullins Connector Solutions		
JP19	1		Header, 100mil, 3x1, Tin, TH	Header, 3 PIN, 100mil, Tin	PEC03SAAN	Sullins Connector Solutions		
L1	1	10uH	Inductor, Wirewound, Ferrite, 10uH, 0.12A, 0.5 ohm, SMD	0805	LB2012T100KR	Taiyo Yuden		
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	-	-
P1, P2, P3	3		Header(Shrouded), 3.5mm, 7x1, R/A, TH	Header(Shrouded), 3.5mm, 7x1, R/A, TH	395021007	Molex		
P4, P5, P7, P8	4		Header (shrouded), 100mil, 5x2, Gold, TH	5x2 Shrouded header	5103308-1	TE Connectivity		
P6	1		Header, 5.08mm, 10x1, Tin, TH	Header, 5.08mm, 10x1, TH	HPM-10-05-T-S	Samtec		
P9, P10, P11	3		Will add component to BOM. Useful for cables, nuts, etc. not in libraries	Used in PnP output and some BOM reports	Used in BOM report	0395000007	-	
Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24	24	25V	MOSFET, N-CH, 25 V, 5 A, SON 2x2mm	SON 2x2mm	CSD16301Q2	Texas Instruments		None
R2, R3, R4, R5, R6, R7, R8, R9, R57, R58, R59, R60, R61, R62, R63, R64, R96, R101, R108, R141, R146, R181, R185	23	0	RES, 0, 5%, 0.1 W, 0603	0603	CRCW06030000Z0EA	Vishay-Dale		
R13, R14, R15, R16, R17, R18, R30, R31, R32, R33, R34, R35, R47, R48, R49, R50, R51, R52	18	1.0k	RES, 1.0 k, 5%, 0.1 W, 0603	0603	CRCW06031K00JNEA	Vishay-Dale		
R19, R29, R36, R46, R53	5	0	RES, 0, 5%, 0.25 W, 1206	1206	CRCW12060000Z0EA	Vishay-Dale		

R21, R22, R23, R24, R25, R26, R27, R28, R38, R39, R40, R41, R42, R43, R44, R45, R67, R69, R72, R73, R76, R79, R87, R92, R95, R98, R102, R109, R111, R114, R116, R118, R120, R122, R125, R131, R136, R138, R142, R145, R148, R151, R153, R155, R157, R159, R162, R164, R173, R175, R178, R182, R186, R202, R214	55	1.00k	RES, 1.00 k, 0.1%, 0.1 W, 0603	0603	RG1608P-102-B-T5	Susumu Co Ltd		
R66, R74, R81, R93, R100, R110, R113, R119, R124, R133, R139, R147, R150, R156, R160, R167, R176, R183	18	47	RES, 47, 5%, 1 W, 2512	2512	CRCW251247R0JNEG	Vishay-Dale		
R68, R115, R152	3	0	RES, 0, 5%, 0.125 W, 0805	0805	CRCW08050000Z0EA	Vishay-Dale		
R70, R75, R80, R82, R83, R196, R207, R208, R209, R211	10	10.0k	RES, 10.0 k, 1%, 0.1 W, 0603	0603	ERJ-3EKF1002V	Panasonic		
R71, R78, R90, R97, R107, R112, R117, R121, R129, R137, R143, R149, R154, R158, R163, R174, R180, R187, R190, R191, R192, R195	22	1.0Meg	RES, 1.0 M, 5%, 0.1 W, 0603	0603	CRCW06031M00JNEA	Vishay-Dale		
R77, R123, R161	3	1.6k	RES, 1.6 k, 5%, 0.1 W, 0603	0603	CRCW06031K60JNEA	Vishay-Dale		
R84, R85, R127, R128, R165, R166	6	1.47k	RES, 1.47 k, 1%, 0.1 W, 0603	0603	CRCW06031K47FKEA	Vishay-Dale		
R86, R126, R135, R168, R172, R204	6	100k	RES, 100 k, 1%, 0.1 W, 0603	0603	CRCW0603100KFKEA	Vishay-Dale		
R88, R130, R171, R188, R189, R193, R194, R197, R201, R203, R205, R206	12	100	RES, 100, 5%, 0.1 W, 0603	0603	CRCW0603100RJNEA	Vishay-Dale		
R89, R91, R132, R134, R169, R170	6	1.82k	RES, 1.82 k, 1%, 0.1 W, 0603	0603	CRCW06031K82FKEA	Vishay-Dale		
R210	1	2.00	RES, 2.00, 1%, 0.1 W, 0603	0603	RC0603FR-072RL	Yageo America		
R212	1	523k	RES, 523 k, 1%, 0.1 W, 0603	0603	RC0603FR-07523KL	Yageo America		
R213	1	169k	RES, 169 k, 1%, 0.1 W, 0603	0603	RC0603FR-07169KL	Yageo America		

R215	1	1.0	RES, 1.0, 5%, 0.1 W, 0603	0603	CRCW06031R00JNEA	Vishay-Dale		
RT1, RT2, RT3, RT4, RT5, RT6	6	10.0k ohm	Thermistor NTC, 10.0k ohm, 1%, 0603	0603	ERT-J1VG103FA	Panasonic		
SH-J1, SH-J2, SH-J3, SH-J4, SH-J5, SH-J6, SH-J7, SH-J8, SH-JP1, SH-JP2, SH-JP3, SH-JP4, SH-JP5, SH-JP6, SH-JP7, SH-JP8, SH-JP9, SH-JP10, SH-JP11, SH-JP12, SH-JP13, SH-JP14, SH-JP15, SH-JP16, SH-JP17, SH-JP18, SH-JP19	27	1x2	Shunt, 100mil, Gold plated, Black	Shunt	969102-0000-DA	3M	SNT-100-BK-G	Samtec
T1	1	400 uH	Transformer, 400 uH, SMT	6.6x6.99mm	Q4470-CLB	Coilcraft		
TP1, TP2, TP3, TP4, TP5, TP6, TP1, TP-2, TP-3, TP-4, TP-5, TP-6, TP-7, TP-8, TP-9, TP-10, TP-11, TP-12, TP-13, TP-14, TP-15, TP-16, TP-17, TP-18, TP-19, TP-AGN, TP-C1, TP-C2, TP-C3, TP-C4, TP-C5, TP-C6, TP-SW1, TP-VPROG1, TP-VPROG2, TP-VPROG3, TP-VSS1, TP-VSS2, TP-VSS3, TPTP-VSS1	40	SMT	Test Point, Miniature, SMT	Testpoint_Keystone_Miniature	5015	Keystone		
U1, U2, U3	3		3 to 6 Series Cell Lithium-Ion Battery Monitor and Secondary Protection IC for EV & HEV Applications, -40 to 105 degC, 64-pin HTQFP (PAP), Green (RoHS & no Sb/Br)	PAP0064F	BQ76PL536ATPAPRQ1	Texas Instruments	Equivalent	None
U4, U6	2		25 Mbps Quad Channels, 3 / 1, Digital Isolator, 3.3 V / 5 V, -40 to +125 degC, 16-pin SOIC (DW), Green (RoHS & no Sb/Br)	DW0016A	ISO7241CDW	Texas Instruments	Equivalent	Texas Instruments
U5	1		Remote 8-Bit I2C and SMBus Low-Power I/O Expander with Reset and Configuration Registers, 2.3 to 5.5 V, -40 to 85 degC, 16-pin TSSOP (PW), Green (RoHS & no Sb/Br)	PW0016A	PCA9557PWR	Texas Instruments	Equivalent	Texas Instruments

U7	1		Single Output LDO, 100 mA, Fixed 3.3 V Output, 2.7 to 10 V Input, with Low IQ, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br)	DBV0005A	TPS76933DBVR	Texas Instruments	Equivalent	Texas Instruments
U8	1		LOW POWER CURRENT MODE PUSH-PULL PWM, D0008A	D0008A	UCC2808DTR-2	Texas Instruments	UCC2808D-2	Texas Instruments
U9	1		Ultralow-Power 100-mA Low-Dropout Linear Regulators, DBV0005A	DBV0005A	TPS76901DBV	Texas Instruments		Texas Instruments
Z2, Z3, Z4, Z5, Z6, Z7, Z8, Z9, Z10, Z11, Z12, Z13, Z14, Z16, Z17, Z18, Z19, Z20, Z21, Z22, Z23, Z24, Z25, Z26, Z28, Z29, Z30, Z31, Z32, Z33, Z34, Z35, Z36, Z37, Z38, Z39	36	5.6V	Diode, Zener, 5.6 V, 500 mW, SOD-123	SOD-123	MMSZ5232B-7-F	Diodes Inc.		
C1, C2, C3, C4, C5, C10, C11, C12, C13	0	0.1uF	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603	06035C104KAT2A	AVX		
C15, C16, C19, C24, C27, C30, C49, C50, C53, C56, C61, C68, C87, C88, C91, C94, C99, C102	0	0.1uF	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, 0603	0603	GRM188R72A104KA35D	MuRata		
C31, C32, C33, C70, C71, C72, C104, C105, C106	0	0.1uF	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0603	0603	C0603C104K4RACTU	Kemet		
FID1, FID2, FID3	0		Fiducial mark. There is nothing to buy or mount.	Fiducial	N/A	N/A		
R1, R10, R11, R12, R54, R55, R56, R65	0	1.00k	RES, 1.00 k, 1%, 0.25 W, 1206	1206	CRCW12061K00FKEA	Vishay-Dale		
R20, R37, R94, R99, R103, R104, R105, R106, R140, R144, R177, R179, R184, R198, R199, R200	0	0	RES, 0, 5%, 0.1 W, 0603	0603	CRCW06030000Z0EA	Vishay-Dale		
Z1, Z15, Z27	0	36V	Diode, TVS, Bi, 36 V, 400 W, SMA	SMA	SMAJ36CA	Littelfuse		

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