

# Bill of Materials

**TI DESIGNS TIDA-00218**
**Contactless and Precise AC-Current Sensing Using a Hall Sensor**

Designator	Description	Manufacturer	PartNumber	Quantity
!PCB1	Printed Circuit Board	Any	ISE4016	1
C1	CAP, CERM, 4.7uF, 10V, +/-10%, X5R, 0805	AVX	0805ZD475KAT2A	1
C2, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33	CAP, CERM, 1uF, 16V, +/-10%, X7R, 0603	TDK	C1608X7R1C105K	11
C3	CAP, CERM, 2.2uF, 10V, +/-10%, X5R, 0805	Kemet	C0805C225K8PACTU	1
C4	CAP, CERM, 0.01uF, 16V, +/-10%, X7R, 0402	MuRata	GRM155R71C103KA01D	1
C5	CAP ALUM 22UF 10V 20% SMD	Panasonic - ECG	EEE-1AA220WR	1
C6, C8, C19	CAP, CERM, 2200pF, 100V, +/-5%, X7R, 0603	AVX	06031C222JAT2A	3
C7, C9	CAP, CERM, 18pF, 50V, +/-5%, C0G/NP0, 0603	AVX	06035A180JAT2A	2
C10, C12, C13	CAP, CERM, 0.22uF, 10V, +/-10%, X5R, 0402	MuRata	GRM155R61A224KE19D	3
C11, C34, C35, C36, C37	CAP, CERM, 0.47uF, 10V, +/-10%, X5R, 0402	MuRata	GRM155R61A474KE15D	5
C14, C18	CAP, CERM, 10uF, 10V, +/-10%, X5R, 0805	Kemet	C0805C106K8PACTU	2
C15, C16, C38	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	AVX	06033C104JAT2A	3
C17	CAP, CERM, 0.1uF, 16V, +/-10%, X5R, 0402	MuRata	GRM155R61C104KA88D	1
C20	CAP, CERM, 1000pF, 2000V, +/-10%, X7R, 1210	Kemet	C1210C102KGRACTU	1
C21	CAP, CERM, 0.01uF, 50V, +/-10%, C0G/NP0, 0402	MuRata	GCM155R71H103KA55D	1
C22, C23	CAP, CERM, 10uF, 50V, +/-10%, X7R, 1210	MuRata	GRM32ER71H106KA12L	2
D1, D2, D3, D4, D5, D8	ESD in 0402 Package with 10 pF Capacitance and 6 V Breakdown, 1 Channel, -40 to +125 degC, 2-pin X2SON (DPY), Green (RoHS & no Sb/Br)	Texas Instruments	TPD1E10B06DPYR	6
D6	LED, Green, SMD	Lite-On	LTST-C190GKT	1
D7	Diode, Zener, 7.5V, 550mW, SMB	ON Semiconductor	1SMB5922BT3G	1
D9	Diode, Schottky, 40V, 0.25A, SOD-523	ON Semiconductor	NSR0240V2T1G	1
D10	Diode, TVS, Bi, 36V, 400W, SMA	Littelfuse	SMAJ36CA	1
J1, J3	Header, 100mil, 2x1, Tin plated, TH	Molex	90120-0122	2
J2	Connector, Receptacle, Mini-USB Type B, R/A, Top Mount SMT	TE Connectivity	1734035-2	1
J4	Header, 100mil, 3x1, Tin plated, TH	Sullins Connector Solutio	PEC03SAAN	1
J5	Header (shrouded), 100 mil, 7x2, Gold plated, TH	Sullins Connector Solutio	SBH11-PBPC-D07-ST-BK	1
J6	Conn Term Block, 2POS, 5.08mm, TH	Phoenix Contact	1715721	1
J7	Power Jack, SMT	CUI Inc.	PJ-002AH-SMT-TR	1
L1, L2, L3	1.5A Ferrite Bead, 330 ohm @ 100MHz, SMD	MuRata	BLM18SG331TN1D	3
L4	Inductor, Wirewound, Ferrite, , 0.3A, 0.45 ohm, SMD	Bourns	SRF2012-361YA	1
Q1	MOSFET, N-CH, 50V, 0.22A, SOT-23	Fairchild Semiconductor	BSS138	1
R1	RES, 0 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW04020000Z0ED	1
R2, R4, R7	RES, 47.5k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060347K5FKEA	3
R3	RES, 200 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW0603200RJNEA	1
R5	RES, 1.00Meg ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW04021M00FKED	1
R6	RES, 1.50k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW04021K50FKED	1
R8, R9	RES, 0 ohm, 5%, 0.063W, 0402	Panasonic	ERJ-2GE0R00X	2
R10, R11, R12, R13	RES, 1.50 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW04021K50FKED	4
R14, R15	RES, 3.16k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06033K16FKEA	2
S1, S2, S3	Switch, Tactile, SPST-NO, 0.05A, 12V, SMT	TE Connectivity	4-1437565-1	3

Designator	Description	Manufacturer	PartNumber	Quantity
SH-J1, SH-J2	Shunt, 2mm, Gold plated, Black	Samtec	2SN-BK-G	2
TP1, TP2, TP3	Test Point, Miniature, Red, TH	Keystone	5000	3
TP4	Test Point, Miniature, Orange, TH	Keystone	5003	1
TP5	Test Point, Miniature, Yellow, TH	Keystone	5004	1
U1	Micropower 150 mA Low-Noise Ultra Low-Dropout Regulator, 5-pin SOT-23, Pb-Free	National Semiconductor	LP2985AIM5-3.3/NOPB	1
U2	Low-Capacitance + / - 15 kV ESD-Protection Array for High-Speed Data Interfaces, 3 Channels, -40 to +85 degC, 5-pin SOT (DRL), Green (RoHS & no Sb/Br)	Texas Instruments	TPD3E001DRLR	1
U3	Mixed Signal MicroController, PN0080A	Texas Instruments	MSP430F5529IPN	1
U4, U5, U6, U7	Analog Linear Hall -80 mV/mt-40 - 125°C, LPG0003A	Texas Instruments	DRV5053VAQLPGRQ1	4
U8	60-V, 5-µA IQ, 100-mA, Low-Dropout VOLTAGE REGULATOR With Enable and Power-Good, DGN0008C	Texas Instruments	TPS7A1633QDGNRQ1	1
U9	Module, 128x64-pixel graphics display	Electronic Assembly	EA DOGM128W-6	1
U10	Low-Power, Digital Temperature Sensor with Two-Wire Interface in WCSP, YFF0004AAAA	Texas Instruments	TMP103AYFF	1
Y1	Crystal, 24.000MHz, 18pF, SMD	Abracon Corporation	ABMM-24.000MHZ-B2-T	1
Z1, Z2, Z3, Z4	TI Flux Concentrator Clip	Produkt Works	TI Flux Concentrator Clip	4
FID1, FID2, FID3, FID4, FID5, FID6	Fiducial mark. There is nothing to buy or mount.	N/A	N/A	0

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