

Bill of Materials

TI DESIGNS

TIDM-3PH-ENERGY5-ESD

Digikey #	Description	Qty	Ref Des
1N4007FSCT-ND	DIODE GEN PURPOSE 1000V 1A DO41	3	D18, D20, D22
1N4757ADICT-ND	Diode Zener 51V 1W 1N4757A DO-41	3	D17, D19, D21
24LC02B-I/SN-ND	IC EEPROM 2KBIT 400KHZ 8SOIC	1	IC1
568-6094-1-ND	TRANSISTOR PNP 45V 100MA SOT23	2	Q1, Q2
495-2320-ND	CAP poly 0.22uF 305VAC/630VDC X2 10% (B32922C3224M)	3	C39, C46, C50
311-1059-1-ND	CAP CER 12PF 50V 5% NPO 0603	2	C37, C40
311-1343-1-ND	CAP CER 0.1UF 50V Y5V 0603	9	C18, C41, C42, C47, C52, C53, C54, C57, C59
311-1428-1-ND	CAP CER 0.47UF 16V 10% X7R 0603	1	C33
311-1455-1-ND	CAP CER 4.7UF 10V 10% X5R 0603	8	C4, C6, C14, C16, C29, C32, C49, C51
399-6841-1-ND	CAP Ceramic 100pF 25V NPO, 5% 0603	1	C61
445-5100-1-ND	CAP CER 10000PF 25V 10% X7R 0603	1	C45
490-6433-1-ND	CAP Ceramic .056uF 25V X7R 10% 0603	1	C60
311-1343-1-ND	CAP CER 0.1UF 50V Y5V 0603	7	C5, C7, C15, C17, C28, C30, C31
311-1143-1-ND	CAP CER 0.015UF 50V 10% X7R 0805	3	C10, C13, C23
311-1484-1-ND	CAP CER 47PF 500V 5% NPO 0805	6	C2, C3, C11, C12, C19, C20
311-1361-1-ND	CAP CER 0.1UF 50V Y5V 0805	3	C1, C9, C38
311-1355-1-ND	CAP CER 10UF 10V Y5V 0805	3	C8, C36, C43
445-4497-2-ND	CAP Ceramic 2.2uF 100V X7R 1210	1	C48
587-1383-1-ND	CAP Ceramic 47uF 10V X5R 1210	1	C62
300-8341-1-ND	CRYSTAL 32.768 KHZ 6PF SMD	1	XT1
P14374-ND	CAP ALUM 150UF 10V 20% RADIAL	1	C101
1189-1020-ND	CAP Electrolytic 100uF 100V 20%, 10mm(diameter) x 25 mm(height), ZL Rubycon, 5 mm spacing	1	C102
399-3685-1-ND	CAP TANT 10UF 6.3V 20% 1206	3	C55, C56, C58
399-6097-ND	CAP ALUM 4.7UF 400V 20% RADIAL	1	C100
102-1801-ND	Isolated Power Supply, 3.3 V, 700 mA	1	US1
SMAJ5.0ABCT-ND	DIODE TVS 5.0V 400W UNI 5% SMD	1	ZD3
1N4148XTPMSCT-ND	DIODE SWITCHING 75V 0.15A SOD523	6	D44, D45, D46, D47, D48, D49
LLSD103ADICT-ND	DIODE SCHOTTKY 40v 350MW MINIMELF	4	D24, D25, D26, D27
P10191CT-ND	BEAD CORE 4A 100 MHZ 0805 SMD	10	L1, L3, L5, L6, R/L1, R/L2, R/L3, R/L4, R/L9, R/L10
A32036-ND	CONN D-SUB RCPT STR 9POS 30GOLD	1	RS1
3M9447-ND	CONN HEADER VERT SGL 2POS GOLD	9	ACT, JP2, JP11, JP12, JP13, JP14, REACT, RX_EN, TX_EN
3M9448-ND	CONN HEADER VERT SGL 3POS GOLD	10	JP1, JP3, JP4, JP5, JP6, JP7, JP8, JP9, JP10, JP15
609-3201-ND	CONN HEADER 4POS .100 STR 30AU	1	JP16
3M9459-ND	CONN HEADER VERT DUAL 6POS GOLD	1	JP17
511-1249-ND	LED 3.1MM 650NM RED TRANSPARENT	1	LED_ACT
511-1251-ND	LED 3.1MM 585NM YELLOW TRANSP	3	LED_PHASE 1, LED_PHASE 2, LED_PHASE 3
511-1247-ND	LED 3.1MM 563NM GREEN TRANSP	1	LED_REACT
Must order from CoilCraft (MSS1038-105)	Inductor, SMT, MSS1038-105 (.402 x .394 inch)	1	L7
3M9447-ND	CONN HEADER VERT SGL 2POS GOLD	1	HD1
3M9449-ND	CONN HEADER VERT SGL 4POS GOLD	2	DGND, DVCC
MHC14K-ND	CONN HEADER 14 POS STRGHT GOLD	1	JTAG
From TI	MSP430F67641APZR	1	U4
P8079SCT-ND	SWITCH TACTILE SPST-NO 0.02A 15V	3	BTN1, BTN2, RESET
568-1749-1-ND	DIODE SW GPP 75V 200MA SOD80C	25	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D28, D29, D30, D31, D32, D33, D34, D35, D37
PS8802-1-F3-AXCT-ND	OPTOISOLATOR ANALOG HS OUT 8SSOP	2	U1, U2
A102234CT-ND	RES 1M OHM 1/16W 1% 0603	2	R35, R38
A102241CT-ND	RES 22.1K OHM 1/16W 1% 0603	1	R95
A102261DKR-ND	RES 31.6K OHM 1/16W 1% 0603	1	R97
A102292TR-ND	RES 51.1 OHM 1/16W 1% 0603	1	R96
RMCF0603FT68R0CT-ND	RES TF 68 OHM 1% 0.1W 0603	1	R65
RMCF0603JT100R0CT-ND	RES 100 OHM 1/10W 5% 0603 SMD	5	R20, R21, R22, R57, R58
RMCF0603JT1K00CT-ND	RES 1K OHM 1/10W 5% 0603 SMD	4	R62, R68, R72, R78
RMCF0603JT1K50CT-ND	RES 1.5K OHM 1/10W 5% 0603 SMD	1	R67

RMCF0603JT220RCT-ND	RES 220 OHM 1/10W 5% 0603 SMD	1	R64
RMCF0603JT2K20CT-ND	RES 2.2K OHM 1/10W 5% 0603 SMD	2	R69, R71
RMCF0603JT330RCT-ND	RES 330 OHM 1/10W 5% 0603 SMD	1	R48
RMCF0603JT47K0CT-ND	RES 47K OHM 1/10W 5% 0603 SMD	1	R51
RMCF0603JT47R0CT-ND	RES 47 OHM 1/10W 5% 0603 SMD	1	R47
RMCF0603ZTOR00CT-ND	RES 0.0 OHM 1/10W 0603 SMD	18	R73, R74, R75, R76, R77, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91
RNCF0603BTE33K2	RES 33.2K OHM 1/16W .1% 0603	1	R37
RMCF0805JT100KCT-ND	RES 100K OHM 1/8W 5% 0805 SMD	2	R49, R50
RMCF0805JT10K0CT-ND	RES 10K OHM 1/8W 5% 0805 SMD	5	R19, R40, R41, R63, R98
445-2554-1-ND	THERMISTOR NTC 10K OHM 1% 0603	1	RTH
DNI	DNI	4	R44, R45, R66, R70
A110360CT-ND	RES 12.4 OHM 1/10W 0.1% 0805 SMD	3	R5, R8, R24
CRT0805-BY-10R0ELFCT-ND	RES 10 OHM 1/8W 0.1% 0805 SMD	3	R117, R123, R127
RMCF0805JT10R0CT-ND	RES 10 OHM 1/8W 5% 0805 SMD	1	R36
MCU0805-1.00K-MDCT-ND	RES 1.0K OHM 1/16W 0.1% 0805 SMD	9	R6, R7, R9, R10, R26, R27, R116, R120, R124
RMCF0805ZTOR00CT-ND	RES 0.0 OHM 1/8W 0805 SMD	13	R92, R39
P1MDACT-ND	RES 1M OHM 1/8W 0.1% 0805	9	R4, R14, R15, R102, R103, R104, R32, R109, R110, R111, R99, R100, R101, R105, R106, R107, R108, R112, R113, R114, R115
P20KDACT-ND	RES 20K OHM 1/8W 0.1% 0805	3	R118, R121 R125
P10KDACT-ND	RES 10K OHM 1/8W 0.1% 0805	3	R119, R122 R126
P100W-2BK-ND	RES 100 OHM 2W 5% AXIAL	3	R92, R93, R94
495-1417-ND	VARISTOR 275V RMS 20MM RADIAL	3	R1, R2, R3
SMAJ5.0CABCT-ND	DIODE TVS 5.0V 400W BI 5% SMD	3	TVS1, TVS2, TVS3
P14155-ND	CAP SUPER 1F 3.6V AXIAL	1	C63
751-1068-1-ND	TXRX IRDA 115.2KBIT 1.9MM 6-SMD	1	IRDA
TFM-110-02-SM-D-A-K	CONN HEADER 20POS 1.27MM GLD SMD	2	RF1, RF2
DNI	DNI	1	LCD1
PS2501-1A-ND	OPTOCOUPLER 1CH TRANS 4-DIP	2	OPTO1, OPTO2
296-30339-5-ND	IC REG BUCK ADJ 0.5A 10MSOP	1	U3
641-1107-1-ND	Diode Schottky 1A 60V B160 SMB	1	D23

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.