

TI Design TIDA-00271

Bill of Materials (BOM)

Comment	Description	Designator	Footprint	LibRef	Quantity
PAD_80-MIL		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 64, 65, 66, 67, 68	PAD_80-MIL	PAD_80-MIL	66
TPIC2810	IC, TPIC2810, 8-Bit LED Driver, SOIC-16	21	SO16	TPIC2810	1
C1608X7R1H104K	CAP, CERM, 0.1uF, 50V, +10%, X7R, 0603	C1, C4	0603	C1608X7R1H104K	2
GRM32ER72A225KA35L	Cap, Cer-X7R, 2.2uF, 100V, 10%, 1210	C2, C3	1210	GRM32ER72A225KA35L	2
C3216X7R1E475M	CAP, CERM, 4.7uF, 25V, +/-20%, X7R, 1206	C5, C6, C7, C8	1206	C3216X7R1E475M	4
GRM155R70J104KA01D	Cap, Cer-X7R, 0.1uF, 6.3V, 10%, 0402	C9, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C48, C49, C52, C57, C59, C61, C63, C66, C71, C82, C83, C85, C87, C88, C91, C94, C99, C108, C109, C111, C113, C115, C117, C120, C125, C134, C135, C155, C157, C158, C159, C160, C161, C164, C165, C166	0402	GRM155R70J104KA01D	47
GRM31CR71E106KA12L	Cap, Cer-X7R, 10uF, 25V, 10%, 1206	C10, C11, C12	1206	GRM31CR71E106KA12L	3
GRM155R70J473KA01D	Cap, Cer-X7R, 0.047uF, 6.3V, 10%, 0402	C13	0402	GRM155R70J473KA01D	1
CC0402KRX7R9BB101	Cap, Cer-X7R, 100pF, 50V, 10%, 0402	C14	0402	CC0402KRX7R9BB101	1
GRM155R71C103KA01D	Cap, Cer-X7R, 10000pF, 16V, 10%, 0402	C15, C34	0402	GRM155R71C103KA01D	2
GRM31CR71C106KAC7L	Cap, Cer-X7R, 10uF, 16V, 10%, 1206	C16, C21, C24, C28, C31	1206	GRM31CR71C106KAC7L	5
GRM21BR71A475KA73L	Cap, Cer-X7R, 4.7uF, 10V, 10%, 0805	C17, C18	0805_HV	GRM21BR71A475KA73L	2
GRM188R71E102KA01D	Cap, Cer-X7R, 1000pF, 25V, 10%, 0603	C19	0603	GRM188R71E102KA01D	1
GRM155R70J103KA01D	Cap, Cer-X7R, 10000pF, 6.3V, 10%, 0402	C20, C25, C56, C58, C60, C62, C65, C68, C69, C70, C84, C86, C90, C92, C93, C96, C97, C98, C110, C112, C114, C116, C119, C122, C123, C124	0402	GRM155R70J103KA01D	26
GRM31CR71A226KE15L	Cap, Cer-X7R, 22uF, 10V, 10%, 1206	C22, C23, C26, C27, C29, C30, C32, C33	1206	GRM31CR71A226KE15L	8
GRM155R71C104KA88D	Cap, Cer-X7R, 0.1uF, 16V, 10%, 0402	C35	0402	GRM155R71C104KA88D	1
UMK105B7222KV-F	Cap, Cer-X7R, 2200pF, 50V, 10%, 0402	C46, C50	0402	Capacitor	2
LMK212B7475KG-T	Cap, Cer-X7R, 4.7uF, 10V, 10%, 0805	C47, C51, C64, C67, C89, C95, C118, C121, C136, C138, C141, C145, C146, C148, C149	0805_HV	LMK212B7475KG-T	15
C1005X7R1H104K050BB	Cap, Cer-X7R, 0.1uF, 50V, 10%, 0402	C53, C55, C73, C75, C101, C127, C147, C150, C152, C153	0402	C1005X7R1H104K050BB	10
GRM155R71H221KA01D	Cap, Cer-X7R, 220pF, 50V, 10%, 0402	C54	0402	GRM155R71H221KA01D	1
GRM32ER71C226KE18L	Cap, Cer-X7R, 22uF, 16V, 10%, 1210	C72, C100, C126	1210	GRM32ER71C226KE18L	3

C1608X7R1H473K	CAP, CERM, 0.047uF, 50V, +/-10%, X7R, 0603	C74, C76, C102, C128	0603	C1608X7R1H473K	4
GRM319R71H104KA01D	Cap, Cer-X7R, 0.1uF, 50V, 10%, 1206	C77, C79, C103, C105, C129, C131	1206	GRM319R71H104KA01D	6
GRM31CR71E475KA88L	Cap, Cer-X7R, 4.7uF, 25V, 10%, 1206	C78, C80, C104, C106, C130, C132	1206	GRM31CR71E475KA88L	6
GRM21BR70J106KE76L	Cap, Cer-X7R, 10uF, 6.3V, 10%, 0805	C81, C107, C133, C154	0805_HV	GRM21BR70J106KE76L	4
C1005X7R1H104M	CAP, CERM, 0.1uF, 50V, +/-20%, C0G/NP0, 0402	C137, C139, C140, C142, C143, C144	0402	C1005X7R1H104M	6
C0603C104K5RACTU	Cap, Cer-X7R, 0.1uF, 50V, 10%, 0603	C151	0603	C0603C104K5RACTU	1
C3216X7R1C475K	CAP, CERM, 4.7uF, 16V, +/-10%, X7R, 1206	C156, C162, C163	1206	C3216X7R1C475K	3
MMSZ5245B-TP	Diode, Zener, 15V, 10mA, 500mW, SOD123	D1, D2	MMSZ5245B-TP	MMSZ5245B-TP	2
B360-13-F	Diode, Schottky, 3A, 60V, SMC	D3	SMC	B360-13-F	1
SZMMBZ27VCLT1G	TVS Diode, Uni, 22V, CAN Bus Protector, SOT-23	D4	SOT-23	SZMMBZ27VCLT1G	1
SML-P12YTT86	LED, Single, Yellow, SMD	D5, D6, D7, D8, D9, D10, D11, D12, D13, D15, D17, D19, D21, D22, D23, D24	LED_SMLP12_Yellow	SML-P12YTT86	16
SML-P12DTT86	LED, Single, Orange, SMD	D14, D16, D18, D20	LED_SMLP12_ORANGE	SML-P12DTT86	4
Fiducial	Fiducial mark. There is nothing to buy or mount.	FID1, FID2, FID3	Fiducial10-20	Fiducial	3
1727010	Conn Term Block, 2POS, 3.81mm, TH	J1	PhoenixConact_1727010	1727010	1
22-27-2021	Header, 2x1, 100mil, TH	J2	MOLEX_22-27-2021	22-27-2021	1
PEC03SAAN	Conn, Header, Male, 1x3, 2.54mm, 3A, Unshrouded, Breakaway, ST, TH	J3, J4, J5, J6, J9, J10	CONN_PEC03SAAN	PEC03SAAN	6
851-43-006-10-001000	Conn, B2B, Female Socket, 1x6, TH	J7, J8	Mill-Max_851-XX-006-10-001000	851-43-006-10-001000	2
54104-3631	CONN FFC/FPC .5MM 36POS R/A SMD	J11, J16, J19	Molex_54104-3631	54104-3631	3
PEC02SAAN	Conn, Header, Male, 1x1, 2.54mm, 3A, Unshrouded, Breakaway, ST, TH	J12, J17, J20, J21, J25, J27, J28, J29	CONN_PEC02SAAN	PEC02SAAN	8
59S20X-400L5-Z	RIGHT ANGLE PLUG FOR PCB	J13, J18, J22	Rosenberger_59S20X-400L5	59S20X-400L5-Y	3
MCX-J-P-H-ST-SM1	Conn, MCX JACK, 1x1, 50E, 0-6GHz, ST, SMD	J14, J15	Samtec_MCX-J-P-H-ST-SM1	MCX-J-P-H-ST-SM1	2
D4S20D-40MA5-Z	Conn, RF, Plug, Unshielded, 2GHz, 100E, RA, SMD	J23	Rosenberger_D4S20D-40MA5	D4S20D-40MA5-Z	1
PEC03DAAN	Conn, Header, Male, 2x3, 2.54mm, 3A, Unshrouded, Breakaway, ST, TH	J24	SULLINS_PEC03DAAN	PEC03DAAN	1
52901-0474	Receptacle, 40Pos, SMD	J26	Molex_52901-0474	52901-0474	1
HEADER_TMM-103-01-G-D-RA	Conn, B2B, Male, 2x3, ST, SMD	J30	HEADER_TMM-103[2X]	HEADER_TMM-103-01-G-D-RA	1
DRQ127-2R2-R	Ind, Dual, 2.2uH, 20%, 6.23A, 8.05mE, Shielded, SMD	L1	DRQ127	DRQ127-2R2-R	1

7447789003	Ind, Power, 3.3uH, 20%, 3.42A, 30mE, Shielded, SMD	L2	WE-PD-S	7447789003	1
XFL3012-332MEB	Ind, Power, 3.3uH, 20%, 1.6A, .127E, Shielded, 61.6MHz, SMD	L3, L4, L5	XFL3012	XFL3012-332MEB	3
BLM15AX102SN1D	F-Bead, 1K, 0.35A, SMD0402	L6, L7, L11, L12, L16, L17, L21, L22	0402L	BLM15AX102SN1D	8
BLM18AG102SN1D	F-Bead, 1k, 400mA, SMD0603	L8, L13, L18	0603L	BLM18AG102SN1D	3
1008PS-472KLB	Ind, Power, 4.7uH, 10%, 0.95A, 350mE, Shielded, 160MHz, SMD	L9, L14, L19	1008PS-472KLB	1008PS-472KLB	3
MSS7341T-104MLB	Ind, Power, 100uH, 20%, 1.15A, 310mE, Shielded, 7.2MHz, SMD	L10, L15, L20	MSS7341T-104MLB	MSS7341T-104MLB	3
DLW21SN900HQ2L	Filter, Choke coil, CM, 90E, 25%, 0.28A, SMD	L23	IND_DLW21S	DLW21SN900HQ2L	1
SQ2360EES-T1-GE3	Transistor, N-MOSFET, 60V, 4.4A, Vgs=10V, 3W, TO236	M1	SQ2360EES-T1-GE3	SQ2360EES-T1-GE3	1
SQJ461EP	MOSFET, P-CH, -60V, 30A, PowerPAK_SO-8L	Q1, Q2	PowerPAK_SO-8L	SQJ461EP	2
MGSF1N02LT1G	Transistor, N-MOSFET, 20V, 750mA, Vgs=10V, 400mW, SOT23	Q3	SOT-23	MGSF1N02LT1G	1
BC846BLT1G	Transistor, BJT, NPN, 65V, 100mA, 300mW, SOT23	Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12	SOT-23	BC846BLT1G, ON Semiconductor	9
TR-IRLML2402	MOSFET, N-ch, 20-V, 1.2-A, 250-milliohm	Q13, Q14, Q15, Q16	SOT-23	TR-IRLML2402	4
CRCW20100000Z0EF	Res, Chip, 0E, 3/4W, 5%, 2010	R1	2010M	CRCW20100000Z0EF	1
ERJ-3EKF1003V	Res, Chip, 100K, 1/10W, 1%, 0603	R2, R6	0603	Resistor	2
RC0603FR-0720KL	Res, Chip, 20K, 1/10W, 1%, 0603	R3, R4	0603	RC0603FR-0720KL	2
CRCW060311K8FK	RES, 11.8 ohm, 1%, 0.1W, 0603	R5	0603	CRCW060311R8FKEA	1
CRCW06031K00FKEA	RES, 1.00k ohm, 1%, 0.1W, 0603	R7	0603	CRCW06031K00FKEA	1
CRCW08050000Z0EA	Res, Chip, 0E, 1/8W, JUMP, 0805	R8, R19	0805_HV	CRCW08050000Z0EA	2
CRCW1206100KJNEA	Res, Chip, 100K, 1/4W, 5%, 1206	R9, R21, R24, R28	1206	CRCW1206100KJNEA	4
CRCW04022K32FKED	RES, 2.32k ohm, 1%, 0.063W, 0402	R10	0402	CRCW04022K32FKED	1
CRCW040218K2FKED	RES, 18.2k ohm, 1%, 0.063W, 0402	R11	0402	CRCW040218K2FKED	1
CRCW040249R9FKED	RES, 49.9 ohm, 1%, 0.063W, 0402	R12, R114, R151, R180, R289	0402	CRCW040249R9FKED	5
CRCW040254K9FKED	RES, 54.9k ohm, 1%, 0.063W, 0402	R13	0402	CRCW040254K9FKED	1
CRCW040210K0FKED	RES, 10.0k ohm, 1%, 0.063W, 0402	R14, R122, R126, R130, R159, R163, R168, R188, R192, R195	0402	CRCW040210K0FKED	10
CRCW04020000Z0ED	RES, 0 ohm, 5%, 0.063W, 0402	R15, R22, R73, R74, R77, R78, R80, R82, R88, R89, R100, R101, R103, R105, R106, R107, R108, R109, R110, R111, R116, R118, R123, R124, R138, R143, R144, R155, R156, R160, R162, R173, R175, R176, R182, R184, R189, R191, R204, R207, R208, R211, R213, R214, R215, R229, R252, R288, R291, R297, R298, R501	0402	CRCW04020000Z0ED	52

CRCW040210K0JNED	Res, Chip, 10K, 1/16W, 5%, 0402	R16, R31, R32, R34, R36, R42, R43, R51, R52, R60, R61, R64, R65, R75, R81, R90, R91, R115, R120, R121, R132, R133, R134, R135, R136, R141, R142, R147, R148, R153, R157, R158, R164, R165, R170, R171, R174, R177, R181, R186, R187, R197, R198, R199, R200, R205, R206, R209, R210, R220, R223, R292, R293, R294, R295, R502	0402	CRCW040210K0JNED	56
CRCW0402100KJNED	Res, Chip, 100K, 1/16W, 5%, 0402	R17, R18, R20, R23	0402	CRCW0402100KJNED	4
CRCW0603100KJNEA	Res, Chip, 100K, 1/10W, 5%, 0603	R25	0603	CRCW0603100KJNEA	1
CRCW06030000Z0EA	RES, 0 ohm, 5%, 0.1W, 0603	R26, R76, R79, R216, R219, R226, R227, R228, R230	0603	CRCW06030000Z0EA	9
CRCW040212K4FKED	RES, 12.4k ohm, 1%, 0.063W, 0402	R27	0402	CRCW040212K4FKED	1
CRCW04029K76FKED	RES, 9.76k ohm, 1%, 0.063W, 0402	R29	0402	CRCW04029K76FKED	1
CRCW0402162RFKED	RES, 162 ohm, 1%, 0.063W, 0402	R30	0402	CRCW0402162RFKED	1
CRCW0402510KJNED	Res, Chip, 510K, 1/16W, 5%, 0402	R33, R35	0402	CRCW0402510KJNED	2
ERJ-3RQFR27V	Res, Chip, 0.27E, 1/10W, 1%, 0603	R37, R47, R56	0603	ERJ-3RQFR27V	3
CRCW0402100KFKED	RES, 100k ohm, 1%, 0.063W, 0402	R38, R46, R55, R92, R190, R196	0402	CRCW0402100KFKED	6
CRCW040251R1FKED	RES, 51.1 ohm, 1%, 0.063W, 0402	R39, R40, R49, R50, R58, R59	0402	CRCW040251R1FKED	6
CRCW040275K0FKED	RES, 75.0k ohm, 1%, 0.063W, 0402	R41, R48, R57	0402	CRCW040275K0FKED	3
CRCW04021K00FKED	RES, 1.00k ohm, 1%, 0.063W, 0402, RES, 1.00k ohm, 1%, 0.063W, 0402, RES, 1.00k ohm, 1%, 0.063W, 0402, RES, 1.00 k, 1%, 0.063 W, 0402	R44, R53, R62, R296	0402	CRCW04021K00FKED	4
CRCW04021K50FKED	RES, 1.50k ohm, 1%, 0.063W, 0402	R45, R54, R63	0402	CRCW04021K50FKED	3
CRCW04024K70JNED	Res, Chip, 4.7K, 1/16W, 5%, 0402	R66, R67, R69, R70, R71, R72, R83, R84, R86, R87, R93, R237, R242, R246, R247, R283, R284, R500	0402	CRCW04024K70JNED	18
CRCW0402200KJNED	Res, Chip, 200K, 1/16W, 5%, 0402	R68, R85	0402	CRCW0402200KJNED	2
CRCW0402402RFKED	RES, 402 ohm, 1%, 0.063W, 0402	R94, R95, R96, R97, R98, R99, R102, R104, R117, R119, R152, R154, R183, R185, R202, R203, R232, R234, R264, R265	0402	CRCW0402402RFKED	20
RC0603JR-071KL	Res, Chip, 1K, 1/10W, 5%, 0603	R112, R113, R149, R150, R178, R179	0603L	RC0603JR-071KL	6
CRCW04023K01FKED	RES, 3.01k ohm, 1%, 0.063W, 0402	R125, R131, R137, R172, R201	0402	CRCW04023K01FKED	5
CRCW04028K45FKED	RES, 8.45k ohm, 1%, 0.063W, 0402	R127, R128, R129, R139, R140, R145, R146, R166, R167, R193, R194, R212, R231, R233	0402	CRCW04028K45FKED	14
CRCW040211K0FKED	RES, 11.0k ohm, 1%, 0.063W, 0402	R161, R169	0402	CRCW040211K0FKED	2
CRCW060310K0JNEA	Res, Chip, 10K, 1/10W, 5%, 0603	R217, R218, R235, R236, R285, R286, R287, R290	0603	CRCW060310K0JNEA	8
CRCW0402294KFKED	RES, 294k ohm, 1%, 0.063W, 0402	R221, R222	0402	CRCW0402294KFKED	2
CRCW040240K2FKED	RES, 40.2k ohm, 1%, 0.063W, 0402	R224, R225	0402	CRCW040240K2FKED	2

CRCW040251R0JNED	Res, Chip, 51E, 1/16W, 5%, 0402	R238, R239, R240, R241, R243, R244, R245, R248, R249, R250, R251, R253, R254, R255, R256, R257, R258, R259, R260, R261, R262, R263, R266, R267, R268, R269, R270, R271, R272, R273, R274, R275, R276, R277, R278, R279, R280, R281, R282	0402	CRCW040251R0JNED	39
SKRKAEE010	Switch, Tactile, 12v, 50mA, Vertical, SMD	S1, S2	SW_SKRKAEE010	SKRKAEE010	2
TLVH431AQDBVRQ1	IC, Shunt Regulator, Vka=1.24-18V, Ik=70mA, SOT-23-5	U1	TLVH431AQDBVRQ1	TLVH431AQDBVRQ1	1
TPS55340QRTEQ1	Integrated 5-A 40-V Wide Input Range Boost/SEPIC/Flyback DC-DC Regulator, RTE0016C	U2	RTE0016C	TPS55340QRTEQ1	1
TPS7A6633QDGNRQ1	IC, LDO, Reg, 4-40Vin, 3.3Vout/150mA, MSOP-8	U3	DGN0008D_N	TPS7A6633QDGNRQ1	1
TPS62133AQRGTRQ1	IC, Sync Buck Reg, 3-17Vin, 5Vout, 3A, QFN-16	U4	RGT0016C	TPS62133RGTR	1
TPS62153AQRGTRQ1	IC, Buck Reg, 3-17Vin, 5Vout, 1A, 2.5MHz, Step-Down Converter, QFN-16	U5	RGT0016C	TPS62153RGTR	1
TPS62172DSGR	IC, Buck Reg, 3-17Vin, 3.3Vout, 500mA, Step-Down Converters with DCS-Control, WSON-8	U6	DSG0008A	TPS62172DSGR	1
TPS62160QDSGRQ1	IC, Buck Reg, 3-17Vin, .9-6Vout/1A, Step-Down Converters with DCS-Control, WSON-8	U7	DSG0008A	TPS62160DSGT	1
LMD18400N/NOPB	IC, LMD18400, Quad High Side Driver, DIP-20	U8	N20A	LMD18400N/NOPB	1
TPS2553QDBVRQ1	IC, TPS2553, Power Distribution Switch, SOT-23	U9, U12, U15	DBV0006A_N	TPS2553DBV-1	3
SN74AHC1G04QDCKRQ1	IC, Single Hex Inverter	U10, U13, U16	SOP_5P.65MM(DCK)	SN74AHC1G04DCK	3
INA200AQDGKRQ1	High-Side Measurement Current-Shunt Monitor with Open-Drain Comparator and Reference, DGK0008A	U11, U14, U17	DGK0008A_N	INA200AIDGK	3
MSP430F2272IRHA	Mixed Signal Microcontroller, RHA0040B	U18, U21	RHA0040B	MSP430F2272IRHA	2
TS3USB221AQRSERQ1	IC, TS3USB221A-Q1, Dual USB Switch, UQFN-10	U19	RSE0010A	TS3USB221AQRSERQ1	1
PCA9306TDCURQ1	IC, PCA9306, Dual Bidir I2C & SM Bus Voltage-Level Translator, US-8	U20, U22	DCU0008A_N	PCA9306DCUR	2
SN65HVDA100QDRQ1	IC, SN65HVDA100-Q1, LIN PHY Interface, SOIC-8	U23	D0008A_N	SN65HVDA100QDRQ1	1
DS90UB914ATRHSTQ1	FPD-Link III Serializer and Deserializer, RHS0048A	U24, U25, U26	RHS0048A	DS90UB914ATRHSTQ1	3
DS90UB926QSQ/NOPB	IC, DS90UB926Q, FPD-Link III, WQFN-60	U27	NKB0060B	DS90UB926QSQ/NOPB	1
XA2C256-8VQG100Q	IC, CPLD, XA2C256, CoolRunner-II, VQFP-100	U28	TQFP100_N	XA2C256-8VQG100Q	1
CSX-750FMB29491200T	Osc, XO, 29.4912MHz, +/-50ppm, 1.8V, CMOS, SMD	Y1	CFM_CSX-750F	CSX-750FMB29491200T	1

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