

## TIDA-01628 REV B Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
IPC81	1		TIDA-01628	Any	Printed Circuit Board	
C2, C3, C4, C5, C6, C9, C12, C20, C29, C31, C55, C56, C57, C58, C59, C60, C64, C68, C75	19	10uF	UMK325AB7106KMHT	Taiyo Yuden	CAP, CERM, 10 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1210	1210
C7, C10, C13, C15, C21, C28, C37, C38, C42, C44, C46, C48, C50, C52, C62, C69, C76	17	0.1uF	GCM155R71H104KE02D	MuRata	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
C8	1	100uF	EEE-FK1H101P	Panasonic	CAP, AL, 100 uF, 50 V, +/- 20%, 0.34 ohm, AEC-Q200 Grade 2, SMD	SMT Radial F
C11	1	2.2uF	C2012X5R1H225K125AB	TDK	CAP, CERM, 2.2 uF, 50 V, +/- 10%, X5R, 0805	0805
C14	1	1000pF	GRM155R71H102KA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0402	0402
C16, C33, C43, C45, C47	5	4.7uF	GCM21BR71C475KA73K	MuRata	CAP, CERM, 4.7 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
C17, C34, C40, C49, C51, C53, C65, C66, C74	9	1uF	GCM188R71C105KA64D	MuRata	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C18	1	150pF	CGA2B2C0G1H151J050BA	TDK	CAP, CERM, 150 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402	0402
C19	1	4700pF	CGA2B2X7R1H472K050BA	TDK	CAP, CERM, 4700 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
C22, C27, C30, C32, C73	5	0.22uF	CGA3E3X7R1H224K080AB	TDK	CAP, CERM, 0.22 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C23, C24, C25, C35, C36	5	22uF	CGA6P1X7R1C226M250AC	TDK	CAP, CERM, 22 uF, 16 V, +/- 20%, X7R, AEC-Q200 Grade 1, 1210	1210
C26, C39	2	0.01uF	CGA2B3X7R1H103K050BB	TDK	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
C41	1	0.015uF	CGA2B3X7R1H153K050BB	TDK	CAP, CERM, 0.015 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
C61	1	4.7pF	06035A4R7CAT2A	AVX	CAP, CERM, 4.7 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C63	1	33uF	EEE-FK1V330P	Panasonic	CAP, AL, 33 uF, 35 V, +/- 20%, 0.36 ohm, AEC-Q200 Grade 2, SMD	SMT Radial D
C67	1	100pF	C1608C0G1H101J080AE	TDK	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C70, C72	2	0.47uF	GCM188R71C474KA55D	MuRata	CAP, CERM, 0.47 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C71	1	0.01uF	GCM155R71E103KA37D	MuRata	CAP, CERM, 0.01 uF, 25 V, +/- 10%, X7R, 0402	0402
D1	1	60V	V10P6-M3/87A	Vishay-Semiconductor	Diode, Schottky, 60 V, 10 A, AEC-Q101, TO-277A	TO-277A
D2	1	33V	SMBJ33CA-13-F	Diodes Inc.	Diode, TVS, Bi, 33 V, SMB	SMB
D3, D4, D5, D6, D43, D44, D45, D46, D47, D48, D49, D50, D52, D53, D54, D55, D56, D57, D58, D59, D60, D61, D62, D63, D64, D65, D66, D67	28	White	KW DPLS32.EC-6H6J-4F8G-1	OSRAM	LED, White, SMD	4x1.4mm

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
D7, D8, D9, D25, D26, D27	6	Red	LS T67K-J1L2-1-Z	OSRAM	LED, Super Red, SMD	3.2x2.8mm
D10, D11, D12, D13, D28, D29, D30, D31	8	Yellow	LY T67K-J2M1-26-Z	OSRAM	LED, Yellow, SMD	3.2x2.8mm
D14	1	Blue	LB T673-L2P1-25-Z	OSRAM	LED, Blue, SMD	3.2x2.8mm
D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D32, D33, D34, D35, D36, D37, D38, D39, D40, D41, D42	21	Green	LG T67K-G2K1-24-Z	OSRAM	LED, Green, SMD	3.2x2.8mm
D51	1	60V	SSA36	Fairchild Semiconductor	Diode, Schottky, 60 V, 3 A, AEC-Q101, SMA	SMA
D68, D69	2	Red	LTST-C170KRKT	Lite-On	LED, Red, SMD	Red 0805 LED
H1, H2, H3, H4, H5	5		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
H6, H7, H8, H9, H10	5		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
J1	1		1759017	Phoenix Contact	Header (Shrouded), 5.08mm, 2x1, Tin, R/A, TH	Header (Shrouded), 5.08mm, 2x1, R/A, TH
J2, J3	2		PBC02SAAN	Sullins Connector Solutions	Header, 100mil, 2x1, Gold, TH	Sullins 100mil, 1x2, 230 mil above insulator
J4, J5	2		PEC10DAAN	Sullins Connector Solutions	Header, 2.54mm, 10x2, Tin, TH	Header, 10x2, 2.54mm, TH
J6	1		5-146261-1	TE Connectivity	Header, 100mil, 2x1, Gold, TH	Header, 2x1, 100mil
L1	1	560nH	XEL4020-561MEB	Coilcraft	Inductor, Shielded, Composite, 560 nH, 11.3 A, 0.008 ohm, AEC-Q200 Grade 1, SMD	
L2	1	1uH	7447730	Würth Elektronik	Inductor, Shielded Drum Core, Ferrite, 1 uH, 4 A, 0.049 ohm, SMD	4.5x3.2x4.0mm
L3	1	1.8uH	7440430018	Würth Elektronik	Inductor, Shielded Drum Core, Ferrite, 1.8 uH, 2.45 A, 0.02 ohm, SMD	WE-TPC-M2
L4	1	1.5uH	7447713015	Würth Elektronik	Inductor, Shielded Drum Core, Ferrite, 1.5 uH, 6.2 A, 0.0137 ohm, SMD	SMD
L5	1	4.7uH	7447713047	Würth Elektronik	Inductor, Shielded Drum Core, Ferrite, 4.7 uH, 4 A, 0.026 ohm, SMD	SMD
LBL1	1		THT-14-423-10	Brady	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650 x 0.200 inch
Q1	1	60V	DMT6007LFG-13	Diodes Inc.	MOSFET, N-CH, 60 V, 15 A, AEC-Q101, 8-PowerVDFN	8-PowerVDFN
Q2	1	60V	BUK9M85-60EX	NXP Semiconductor	MOSFET, N-CH, 60 V, 12.8 A, AEC-Q101, 3.4x0.9x2.7mm	3.4x0.9x2.7mm
Q3	1	550nm	TEMT6200FX01	Vishay-Semiconductor	Ambient Light Sensor in 0805 Package	0805
R2, R5, R6, R8, R10, R15, R18, R67	8	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R3	1	49.9	CRCW040249R9FKED	Vishay-Dale	RES, 49.9, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R4	1	0.015	WSLP1206R0150FEA	Vishay-Dale	RES, 0.015, 1%, 1 W, 1206	1206
R7	1	2.00	RC0603FR-072RL	Yageo America	RES, 2.00, 1%, 0.1 W, 0603	0603
R9	1	10.0	CRCW040210R0FKED	Vishay-Dale	RES, 10.0, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R11, R12	2	9.53k	CRCW06039K53FKEA	Vishay-Dale	RES, 9.53 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R13	1	4.02k	CRCW04024K02FKED	Vishay-Dale	RES, 4.02 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R14	1	0	CRCW12060000Z0EA	Vishay-Dale	RES, 0, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R16, R20	2	100k	CRCW0402100KFKED	Vishay-Dale	RES, 100 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R17	1	18.0k	CRCW040218K0FKED	Vishay-Dale	RES, 18.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R19	1	43.2k	CRCW040243K2FKED	Vishay-Dale	RES, 43.2 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R21, R22	2	11.0k	CRCW040211K0FKED	Vishay-Dale	RES, 11.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R23	1	24.9k	CRCW040224K9FKED	Vishay-Dale	RES, 24.9 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R24, R25, R26, R27	4	68	CRCW060368R0JNEA	Vishay-Dale	RES, 68, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63	35	130	CRCW0603130RFKEA	Vishay-Dale	RES, 130, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R42	1	75	CRCW060375R0JNEA	Vishay-Dale	RES, 75, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R65	1	681k	CRCW0402681KFKED	Vishay-Dale	RES, 681 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R66	1	130k	CRCW0402130KFKED	Vishay-Dale	RES, 130 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R68	1	24k	CRCW040224K0JNED	Vishay-Dale	RES, 24 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R69	1	30.1k	CRCW060330K1FKEA	Vishay-Dale	RES, 30.1 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R70, R72, R79, R80, R81, R82	6	51k	CRCW040251K0JNED	Vishay-Dale	RES, 51 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R71	1	1.47k	CRCW06031K47FKEA	Vishay-Dale	RES, 1.47 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R73, R75	2	12.4k	CRCW040212K4FKED	Vishay-Dale	RES, 12.4 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R74	1	1.58k	CRCW04021K58FKED	Vishay-Dale	RES, 1.58 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R76	1	100	ERJ-3EKF1000V	Panasonic	RES, 100, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R77	1	6.34k	CRCW06036K34FKEA	Vishay-Dale	RES, 6.34 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R78	1	634	CRCW0603634RFKEA	Vishay-Dale	RES, 634, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
S1	1		219-4MST	CTS Electrocomponents	Switch, SPST, Slide, Off-On, 4 Pos, 0.1A, 20V, SMD	11.63x6.7mm
SH-J1, SH-J2	2		M7582-05	Harwin	Single Operation 2.54mm Pitch Open Top Jumper Socket	Single Operation 2.54mm Pitch Open Top Jumper Socket
TP1, TP6, TP15, TP16, TP17, TP18, TP19, TP20, TP21, TP22, TP23, TP24, TP26, TP30	14		5002	Keystone	Test Point, Miniature, White, TH	White Miniature Testpoint
TP2, TP3, TP4, TP5, TP7, TP8, TP9, TP10, TP11, TP12, TP14, TP25, TP27, TP29	14		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
U1	1		LM5150QRUMTQ1	Texas Instruments	Wide VIN Automotive Low IQ Boost Controller, RUM0016C (WQFN-16)	RUM0016C
U2	1		LM74700QDBVTQ1	Texas Instruments	Low Iq Always ON Smart Diode Controller, DBV0006A (SOT-23-6)	DBV0006A
U3	1		LM43602AQPWPRQ1	Texas Instruments	Automotive Qualified SIMPLE SWITCHER(R) 3.5V to 36V, 2A Synchronous Step-Down Voltage Converter, PWP0016G (TSSOP-16)	PWP0016G
U4	1		LMR33630CQRNXRQ1	Texas Instruments	SIMPLE SWITCHER 3.8-V to 36-V 3-A Synchronous Step-Down Voltage Regulator, RNX0012A (VQFN-HR-12)	RNX0012A
U5, U6, U7	3		TLC6C5816QPWPRQ1	Texas Instruments	Power Logic 16-Bit Shift Register LED Driver with Diagnostic, PWP0028C (TSSOP-28)	PWP0028C
U8	1		TPS61193PWPRQ1	Texas Instruments	Low-EMI, High-Performance 3-Channel LED Driver for Automotive Lighting, PWP0020D (TSSOP-20)	PWP0020D

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U9	1		TPA6211A1TDGNRQ1	Texas Instruments	Automotive Catalog 3.1-W Mono, Fully Differential, Class-AB Audio Amplifier, -40 to 105 degC, 8-pin SOP (DGN8), Green (RoHS & no Sb/Br)	DGN0008D
U10	1		OPA320AQDBVRQ1	Texas Instruments	Automotive Qualified Precision, Zero-Crossover, 20MHz, 0.9pA Ib, RRIO, CMOS Operational Amplifier, DBV0005A (SOT-23-5)	DBV0005A
C1, C54	0	2200pF	GCM155R71H222KA37D	MuRata	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
R1, R64	0	2.0	CRCW20102R00JNEF	Vishay-Dale	RES, 2.0, 5%, 0.75 W, AEC-Q200 Grade 0, 2010	2010

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