

TIDA-080007 REV A Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
IPCB1	1		TIDA-080007	Any	Printed Circuit Board	
C1, C2	2	220uF	EMZR500ARA221MHA0G	Chemi-Con	CAP, AL, 220 µF, 50 V, +/- 20%, AEC-Q200 Grade 2, SMD	HA0
C3	1	22uF	EMVA500ADA220MF55G	Chemi-Con	CAP, AL, 22 µF, 50 V, +/- 20%, SMD	F55
C4	1	10uF	CL32B106KBJNNWE	Samsung Electro-Mechanics	CAP, CERM, 10 µF, 50 V, +/- 10%, X7R, 1210	1210
C5, C18, C19, C20, C24, C27, C501, C522, C535, C579, C581, C582, C583	13	2.2uF	EMK107BB7225MA-T	Taiyo Yuden	CAP, CERM, 2.2 µF, 16 V, +/- 10%, X7R, 0603	0603
C6	1	6.8uF	C4532X7R1H685M250KB	TDK	CAP, CERM, 6.8 µF, 50 V, +/- 20%, X7R, 1812	1812
C7, C14	2	15uF	C2012X6S1C156M125AC	TDK	CAP, CERM, 15 µF, 16 V, +/- 20%, X6S, 0805	0805
C8	1	4.7uF	GCM31CC71H475KA03L	MuRata	CAP, CERM, 4.7 µF, 50 V, +/- 10%, X7S, AEC-Q200 Grade 1, 1206	1206
C9, C13	2	0.022uF	C0603C223K5RACTU	Kemet	CAP, CERM, 0.022 µF, 50 V, +/- 10%, X7R, 0603	0603
C10	1	1uF	LMK212B7105KG-T	Taiyo Yuden	CAP, CERM, 1 µF, 10 V, +/- 10%, X7R, 0805	0805
C11	1	0.015uF	08055C153KAT2A	AVX	CAP, CERM, 0.015 µF, 50 V, +/- 10%, X7R, 0805	0805
C12, C22, C28, C29, C30, C31, C34, C35, C36, C37, C40, C41, C43, C47, C48, C49, C52, C500, C502, C503, C504, C506, C507, C508, C509, C510, C511, C512, C513, C514, C515, C516, C517, C518, C520, C523, C524, C525, C527, C528, C529, C530, C531, C532, C533, C534, C536, C537, C538, C539, C540, C541, C543, C544, C545, C546, C547, C548, C549, C551, C552, C553, C554, C555, C556, C558, C559, C564, C565, C566,	74	0.1uF	GCM155R71C104JA55D	MuRata	CAP, CERM, 0.1 µF, 16 V, +/- 5%, X7R, AEC-Q200 Grade 1, 0402	0402

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C15, C16, C21, C50, C53, C542, C575	7	10uF	C2012X7R1A106M125AC	TDK	CAP, CERM, 10 uF, 10 V, +/- 20%, X7R, 0805	0805
C17	1	330pF	GRM155R71H331KA01D	MuRata	CAP, CERM, 330 pF, 50 V, +/- 10%, X7R, 0402	0402
C23	1	0.47uF	GRM188R71E474KA12D	MuRata	CAP, CERM, 0.47 uF, 25 V, +/- 10%, X7R, 0603	0603
C25, C587	2	1uF	GCM188R71E105KA64D	MuRata	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C26, C32, C33, C567, C570, C571, C577, C585	8	0.22uF	GCM188R71H224KA64D	MuRata	CAP, CERM, 0.22 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C38, C505, C519, C521, C526, C550, C557, C560, C561, C568, C569, C572, C573, C574	14	22pF	CGA2B2NP01H220J050BA	TDK	CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402	0402
C39, C44, C45	3	2200pF	GRM155R71C222KA01D	MuRata	CAP, CERM, 2200 pF, 16 V, +/- 10%, X7R, 0402	0402
C42, C46	2	15pF	GCM1885C1H150JA16D	MuRata	CAP, CERM, 15 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	0603
C51	1	100pF	CGA2B2C0G1H101J050BA	TDK	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402	0402
C54, C55	2	22uF	CGA5L1X7R0J226M160AC	TDK	CAP, CERM, 22 uF, 6.3 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206
C562, C563	2	1uF	GCM219R71C105KA37D	MuRata	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
C586	1	680pF	CGA2B2X7R1H681K050BA	TDK	CAP, CERM, 680 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
D1	1	24V	SMBJ24A-13-F	Diodes Inc.	Diode, TVS, Uni, 24 V, 38.9 Vc, SMB	SMB
D2	1	16V	SMBJ16A-13-F	Diodes Inc.	Diode, TVS, Uni, 16 V, 26 Vc, SMB	SMB
D3	1	40V	MBR0540T1G	ON Semiconductor	Diode, Schottky, 40 V, 0.5 A, SOD-123	SOD-123
D4	1	20V	MBR1020VL	Fairchild Semiconductor	Diode, Schottky, 20 V, 1 A, SOD-123F	SOD-123F
D500	1	6.2V	MMSZ5234B-7-F	Diodes Inc.	Diode, Zener, 6.2 V, 500 mW, SOD-123	SOD-123
FB1, FB500, FB501, FB502, FB503, FB504, FB505, FB506, FB507, FB508, FB509, FB510	12		FBMH1608HM101-TV	Taiyo Yuden	Ind Chip Bead Multi-Layer 100Ohm 25% 100MHz Ferrite 2.5A 0603 T/R	0603
FID1, FID2, FID3, FID500, FID501, FID502	6		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
J1	1		502352-0200	Molex	CONN HEADER SMD R/A 2POS 2MM	HDR2
J2, J5	2		501568-0707	Molex	CONN HEADER 1MM 7POS SMD R/A	HDR7
J3	1		203559-0607	Molex	CONN HEADER SMD R/A 6POS 1MM	HDR6
J4	1		501568-0907	Molex	CONN HEADER SMD R/A 9POS 1MM	HDR9
J6	1		505110-1692	Molex	CONN FPC BOTTOM 16POS .5MM R/A	CONN_SMT_12MM7_5MM25
J500	1		450-2.700-L-13.25-149	Texas Instruments	Socket Assembly for DLP5531	SOCKET_CPGA149
L1	1	3.9uH	744773039	Würth Elektronik	Inductor, Unshielded Drum Core, Metal Composite, 3.9 uH, 1.88 A, 0.054 ohm, SMD	4.5x3.2x4.0mm
L2	1	50 ohm	742792114	Würth Elektronik	Ferrite Bead, 50 ohm @ 100 MHz, 3 A, 1206	1206
L3	1	2.7uH	SDE0604A-2R7M	Bourns	Inductor, Unshielded Drum Core, Ferrite, 2.7 uH, 3.8 A, 0.055 ohm, AEC-Q200 Grade 1, SMD	
L4	1	10uH	FDSD0420D-100M	MuRata Toko	Inductor, Shielded, 10 uH, 1.7 A, 0.2 ohm, AEC-Q200 Grade 1, SMD	4.2x4.2mm
L5	1	120 ohm	MMZ1005Y121CT000	TDK	Ferrite Bead, 120 ohm @ 100 MHz, 0.4 A, 0402	0402
L6	1	10uH	VLCF5020T-100M1R1-1	TDK	Inductor, Shielded, Ferrite, 10 uH, 1.13 A, 0.237 ohm, SMD	5x2x5mm

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L7, L8	2	4.7uH	78438335047	Würth Elektronik	Inductor, Shielded, Powdered Iron, 4.7 uH, 1.5 A, 0.162 ohm, AEC-Q200 Grade 1, SMD	SMD, 2-Leads, Body 3x3mm
Q1	1	30V	CSD17313Q2Q1	Texas Instruments	MOSFET, N-CH, 30 V, 5 A, AEC-Q101, DQK0006C (WSON-6)	DQK0006C
R1	1	6.98k	CRCW04026K98FKED	Vishay-Dale	RES, 6.98 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R2	1	45.3k	CRCW040245K3FKED	Vishay-Dale	RES, 45.3 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R3	1	10.5k	CRCW080510K5FKEA	Vishay-Dale	RES, 10.5 k, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R4	1	100k	ERJ-2RKF1003X	Panasonic	RES, 100 k, 1%, 0.1 W, 0402	0402
R5, R547	2	51.0k	ERJ-2RKF5102X	Panasonic	RES, 51.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R6, R9, R14, R16, R512, R514, R515, R516, R517, R519, R520, R522, R523, R525, R526	15	33.0	ERJ-2RKF33R0X	Panasonic	RES, 33.0, 1%, 0.1 W, 0402	0402
R7, R8, R20, R21, R501, R502, R504, R505, R510, R513, R521, R524, R527, R528, R530, R531, R533, R536, R538, R539, R541, R542, R543, R544	24	10k	ERJ-2GEJ103X	Panasonic	RES, 10 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R10, R11, R17, R506, R508, R532	6	2.20k	ERJ-2RKF2201X	Panasonic	RES, 2.20 k, 1%, 0.1 W, 0402	0402
R12, R13, R503	3	42.2k	ERJ-6ENF4222V	Panasonic	RES, 42.2 k, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R15, R24, R25, R26, R529, R534	6	1.0k	ERJ-2GEJ102X	Panasonic	RES, 1.0 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R18	1	3.00k	ERJ-6ENF3001V	Panasonic	RES, 3.00 k, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R19	1	1.0Meg	ERJ-6GEYJ105V	Panasonic	RES, 1.0 M, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R22, R23	2	56	ERJ-6GEYJ560V	Panasonic	RES, 56, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R500, R511	2	3.30k	ERJ-2RKF3301X	Panasonic	RES, 3.30 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R507, R509, R518, R535, R537, R540	6	75	ERJ-6GEYJ750V	Panasonic	RES, 75, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R545	1	10.0k	ERJ-3EKF1002V	Panasonic	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R546	1	30.0k	ERJ-3EKF3002V	Panasonic	RES, 30.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10	10		5015	Keystone	Test Point, Miniature, SMT	Testpoint_Keystone_Miniature
U1	1		LM74610QDGKRQ1	Texas Instruments	Zero Iq Reverse Polarity Protection Smart Diode Controller, DGK0008A (VSSOP-8)	DGK0008A
U2	1		LMR36015FSC3RNXTQ1	Texas Instruments	Automotive 65-V 1.5-A Synchronous Step-Down Converter, RNX0012B (VQFN-HR-12)	RNX0012B
U3	1		TPS61170QDRVRQ1	Texas Instruments	Automotive Catalog 1.2A Switch, High Voltage Boost Converter in 2x2mm QFN Package, DRV0006A (WSON-6)	DRV0006A
U4	1		TPS9900TPZPRQ1	Texas Instruments	DLP® System Management and Illumination Controller for DLP553x-Q1 Chipset, PZP0100K (TQFP-100)	PZP0100K

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U5, U9, U10, U11, U501	5		TPD4E05U06QDQARQ1	Texas Instruments	Automotive 4-Channel ESD Protection Solution for SuperSpeed (up to 5 Gbps) Interface, DQA0010A (USON-10)	DQA0010A
U6	1		74CBTLV1G125DBVRQ1	Texas Instruments	Automotive Catalog Low-Voltage Single FET Bus Switch, DBV0005A (SOT-23-5)	DBV0005A
U7	1		DLPC230TZDQQ1	Texas Instruments	DLP® Automotive DMD Controller for DLP553x-Q1 Chipset, ZDQ0324 (BGA-324)	ZDQ0324
U8	1		TMP411AQDGKRQ1	Texas Instruments	Automotive Grade, Remote and Local Temperature Sensor with N-Factor and Series-R Correction, DGK0008A (VSSOP-8)	DGK0008A
U12	1		TPS62424QDRCRQ1	Texas Instruments	Automotive 2.25-MHz Fixed VOUT Dual 800mA Step-Down Converter for ADAS Camera applications, DRC0010J (VSON-10)	DRC0010J
U500	1		MT25QL128ABA8ESF-0AAT	Micron	FLASH - NOR Memory IC 128Mb (16M x 8) SPI 133MHz 16-SOP2	SOP2-16
U502	1		TPD2E2U06QDCKRQ1	Texas Instruments	Automotive Dual-Channel High-Speed ESD Protection Device, DCK0003A (SOT-SC70-3)	DCK0003A
Y1	1		AM16070006	TXC Corporation	SMD SEAM SEALING X'TAL 3.2x2.5	SMT_XTAL_3MM2_2MM5

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