

TIDEP-0091

Designator	PartNumber	Quantity	Description	Value	Manufacturer
!PCB1		1	Printed Circuit Board		Any
C1, C2, C20	GCM155R71C104KA55D	3	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0402	0.1uF	MuRata
C3, C4, C7, C8, C11, C13, C17, C18	GCM155R71C224KE02	9	CAP, CERM, 0.22 µF, 16 V, +/- 10%, X7R, AEC-Q200 Grade	0.22uF	MuRata
C5, C6	GCM188R71C105KA64D	2	CAP, CERM, 1 µF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1,	1uF	MuRata
C9, C12, C14, C19, C33	GCM21BR71A106KE22L	5	CAP, CERM, 10 µF, 10 V, +/- 10%, X7R, 0805	10uF	MuRata
C10	GCM21BR71A106KE22L	1	CAP, CERM, 10 µF, 10 V, +/- 10%, X7R, 0805	10uF	MuRata
C15, C16	GRM1555C1H4R7WA01D	2	CAP, CERM, 4.7 pF, 50 V, +/- 1%, COG/NP0, 0402	4.7pF	MuRata
C22	GJM1555C1H4R7BB01D	1	CAP, CERM, 4.7 pF, 50 V, +/- 2%, COG/NP0, 0402	4.7pF	MuRata
C23, C24, C29, C30, C31, C32, C35	CGA2B3X7R1H104K050BB	7	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1	0.1uF	TDK
C25	C1005X5R1A104K050BA	1	CAP, CERM, 0.1 µF, 10 V, +/- 10%, X5R, 0402	0.1uF	TDK
C26	GRM155R6YA105ME11D	1	CAP, CERM, 1 µF, 35 V, +/- 20%, X5R, 0402	1uF	MuRata
C27, C28, C34, C37	C1005C0G1H220J050BA	4	CAP, CERM, 22 pF, 50 V, +/- 5%, COG/NP0, 0402	22pF	TDK
C36	LMK212BJ475KD-T	1	CAP, CERM, 4.7 µF, 10 V, +/- 10%, X5R, 0805	4.7uF	Taiyo Yuden
C38, C44, C49, C55	06035A391JAT2A	4	CAP, CERM, 390 pF, 50 V, +/- 5%, COG/NP0, 0603	390pF	AVX
C39, C45, C53, C58, C62, C65, C66	C0805C106M8PACTU	12	CAP, CERM, 10 µF, 10 V, +/- 20%, X5R, 0805	10uF	Kemet
C40, C41, C43, C46, C48, C51, C54	GRM155R61A104KA01D	15	CAP, CERM, 0.1 µF, 10 V, +/- 10%, X5R, 0402	0.1uF	MuRata
C42, C47, C50, C56, C61, C69, C72	GRM31CR61C226ME15L	8	CAP, CERM, 22 µF, 16 V, +/- 20%, X5R, 1206	22uF	MuRata
C52, C75, C83	LLL219R71A474MA01L	3	CAP, CERM, 0.47 µF, 10 V, +/- 20%, X7R, 0508	0.47uF	MuRata
C60	GRM188R71C102KA01D	1	CAP, CERM, 1000 pF, 16 V, +/- 10%, X7R, 0603	1000pF	MuRata
C64, C68, C76, C84	C1608X7R1H103K080AA	4	CAP, CERM, 0.01 µF, 50 V, +/- 10%, X7R, 0603	0.01uF	TDK
C85, C86, C87, C92	TPSE156M050T0250V	4	CAP, TA, 15 µF, 50 V, +/- 20%, 0.25 ohm, SMD	22uF	AVX
C88	885012206087	1	CAP, CERM, 4700 pF, 50 V, +/- 10%, X7R, 0603	4700pF	Wurth Elektronik
C89	CEU4J2X7R1H104K125AE	1	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0805	0.1uF	TDK
C90	GRM188R71A225KE15D	1	CAP, CERM, 2.2 µF, 10 V, +/- 10%, X7R, 0603	2.2uF	MuRata
C91	GRM188R71E474KA12D	1	CAP, CERM, 0.47 µF, 25 V, +/- 10%, X7R, 0603	0.47uF	MuRata
C93	08055C472JAT2A	1	CAP, CERM, 4700 pF, 50 V, +/- 5%, X7R, 0805	4700pF	AVX
C94	08055C124KAT2A	1	CAP, CERM, 0.12 µF, 50 V, +/- 10%, X7R, 0805	0.12uF	AVX
C95, C96	EMK212BBJ226MG-T	2	CAP, CERM, 22 µF, 16 V, +/- 20%, X5R, 0805	22uF	Taiyo Yuden
C97	GRM155R61C104KA88D	1	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X5R, 0402	0.1uF	MuRata
C98	GCM155R71C104KA55D	1	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0402	0.1uF	MuRata
C99	GRM188R71A225KE15D	1	CAP, CERM, 2.2 µF, 10 V, +/- 10%, X7R, 0603	2.2uF	MuRata
D1, D2	CD0603-80230	2	Diode, Schottky, 35 V, 0.2 A, 0603 Diode	35V	Bourns
D3, D4	SMBJ30A-13-F	2	Diode, TVS, Uni, 30 V, 48.4 Vc, SMB	30V	Diodes Inc.
F1	0ZCC0075BF2B	1	Fuse, 0.75 A, 33 VDC, SMD		Bel Fuse
FID1, FID2, FID3, FID4	N/A	4	Fiducial mark. There is nothing to buy or mount.		N/A
H1, H2, H3, H4	NY PMS 440 0025 PH	4	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhea		B&F Fastener Supply
H5, H6, H7, H8	1902C	4	Standoff, Hex, 0.5"L #4-40 Nylon		Keystone
H9, H10, H11, H12	SJ-5303 (CLEAR)	4	Bumpon, Hemisphere, 0.44 X 0.20, Clear		3M

J1	OSTTE030161	1	Terminal Block, 3.5mm, 3x1, Tin, R/A, TH		On-Shore Technology
J2, J3, J4, J5	PEC02SAAN	4	Header, 100mil, 2x1, Tin, TH		Sullins Connector Solutions
J6	FTSH-105-01-F-D-K	1	Header, 1.27 mm, 5x2, Gold, TH		Samtec
J7	1727010	1	Conn Term Block, 2POS, 3.81mm, TH	2x1	Phoenix Contact
L1	BRC2012T4R7MD	1	Inductor, Wirewound, 4.7 µH, 0.6 A, 0.265 ohm, SMD	4.7uH	Taiyo Yuden
L2, L3, L4, L5	IHL1616ABERR47M01	4	Inductor, Shielded Drum Core, Powdered Iron, 470 nH, 5 A	470nH	Vishay-Dale
L6	IFSC0806AZER1ROM01	1	Inductor, Shielded, Ferrite, 1 µH, 1.6 A, 0.115 ohm, SMD	1uH	Vishay-Dale
L7	IHL2020BZER2R2M01	1	Inductor, Shielded Drum Core, Powdered Iron, 2.2 µH, 4.2	2.2uH	Vishay-Dale
LBL1	THT-14-423-10	1	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 14		Brady
Q1	SQ4850EY	1	MOSFET, N-CH, 60 V, 12 A, SO-8	60V	Vishay-Siliconix
R1, R6, R7, R19, R24, R28	CRCW040210K0FKED	6	RES, 10.0 k, 1%, 0.063 W, 0402	10.0k	Vishay-Dale
R2, R4, R13, R14, R39, R40	RC0402JR-070RL, RC0402JR-070RL, C	6	RES, 0, 5%, 0.063 W, 0402, RES, 0, 5%, 0.063 W, 0402, RES,	0, 0, 10k, 0,	Yageo America, Yageo America, Vishay-Dale, Yageo America, Par
R3, R5, R11, R16, R21, R41, R42	RC0402JR-070RL	7	RES, 0, 5%, 0.063 W, 0402	0	Yageo America
R8, R9, R10	ERJ-2GEJ101X	3	RES, 100, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	100	Panasonic
R12, R17	CRCW040261R9FKED	2	RES, 61.9, 1%, 0.063 W, 0402	61.9	Vishay-Dale
R15, R30, R32	CRCW040210K0JNED	3	RES, 10 k, 5%, 0.063 W, 0402	10k	Vishay-Dale
R18, R23, R27	CRCW0402750RFKED	3	RES, 750, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	750	Vishay-Dale
R20, R25, R29	CRCW04027K87FKED	3	RES, 7.87 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	7.87k	Vishay-Dale
R22, R26, R33	CRCW040282K5FKED	3	RES, 82.5 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	82.5k	Vishay-Dale
R31, R34, R35	CRCW020133R2FNED	3	RES, 33.2, 1%, 0.05 W, 0201	33.2	Vishay-Dale
R36	CRCW040247K5FKED	1	RES, 47.5 k, 1%, 0.063 W, 0402	47.5k	Vishay-Dale
R37	ERJ-2GE0R00X	1	RES, 0, 5%, 0.063 W, 0402	0	Panasonic
R38	RG2012P-913-B-T5	1	RES, 91.0 k, 0.1%, 0.125 W, 0805	91.0k	Susumu Co Ltd
R43, R46, R49, R56	CRCW04023R90JNED	4	RES, 3.9, 5%, 0.063 W, 0402	3.9	Vishay-Dale
R44, R55	CRCW060320K0FKEA	2	RES, 20.0 k, 1%, 0.1 W, 0603	20.0k	Vishay-Dale
R45, R51, R57, R58, R60, R61, R62,	CRCW06033K24FKEA	9	RES, 3.24 k, 1%, 0.1 W, 0603	3.24k	Vishay-Dale
R47, R52, R54	CRCW060310K2FKEA	3	RES, 10.2 k, 1%, 0.1 W, 0603	10.2k	Vishay-Dale
R48, R59	CRCW06031K00FKEA	2	RES, 1.00 k, 1%, 0.1 W, 0603	1.00k	Vishay-Dale
R50, R53	CRCW060310R0JNEA	2	RES, 10, 5%, 0.1 W, 0603	10	Vishay-Dale
R63, R65	ERJ-3GEY0R00V	2	RES, 0, 5%, 0.1 W, 0603	0	Panasonic
R67, R71	RT0603DRE071K96L	2	RES, 1.96 k, 0.5%, 0.1 W, 0603	1.96k	Yageo America
R68, R72	RT0603DRE072K8L	2	RES, 2.80 k, 0.5%, 0.1 W, 0603	2.80k	Yageo America
R69	RT0603BRD0712K7L	1	RES, 12.7 k, 0.1%, 0.1 W, 0603	12.7k	Yageo America
R70	CRCW060310K0FKEA	1	RES, 10.0 k, 1%, 0.1 W, 0603	10.0k	Vishay-Dale
R73	CRCW06031K00JNEA	1	RES, 1.0 k, 5%, 0.1 W, 0603	1.0k	Vishay-Dale
R74	CRCW040210K0JNED	1	RES, 10 k, 5%, 0.063 W, 0402	10k	Vishay-Dale
R75, R76	CRCW04024R99FKED	2	RES, 4.99, 1%, 0.063 W, 0402	4.99	Vishay-Dale
SW1	KMR243GLFG	1	Switch, SPST-NO, Off-Mom, 0.01 A, 32 VDC, SMD		C&K Components
U1	XI1443QGABL	1	Single Chip 77 and 79 GHz FMCW Transceiver, ABL0161A		Texas Instruments

U2	SN65HVDA540QDR	1	5 V CAN Transceiver with I/O Level Shifting and Supply O	Texas Instruments
U3	S25FL116K0XNFV010	1	16 Mbit (2 Mbyte), 3.0 V SPI Flash Memory, WND008	Cypress Semiconductor
U4	MSP432P401RIPZR	1	Mixed-Signal Microcontroller, PZ0100A (LQFP-100)	Texas Instruments
U5	LP87524FRNFRQ1	1	Four-Phase Buck Converter Up to 10-A Total Current with	Texas Instruments
U6	TPS3780ADRYR	1	Low Power, Dual Voltage Detector in Small uSON package	Texas Instruments
U7	TPS7A8801RTJR	1	Dual, 1-A, Low Noise (3.8- μ VRMS), LDO Voltage Regulator	Texas Instruments
U8	TPS7A8101DRBR	1	Low-Noise, High-Bandwidth PSRR, Low-Dropout 1-A Linea	Texas Instruments
U9	LM74610QDGKRQ1	1	Smart Diode Controller, DGK0008A	Texas Instruments
U10	LM536025QPWPTQ1	1	5V, 2A, Buck Regulator For Automotive Applications, PWP	Texas Instruments
Y1	CX3225SA40000D0PTWCC	1	Crystal, 40 MHz, 8pF, SMD	Kyocera
Y2	X1A0001410014	1	Crystal, 32.768 KHz, 12.5 pF, SMD	Epson
Y3	FA-238 48.0000MB-W0	1	Crystal, 48MHz, 12pF, SMD	Epson

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