

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
A1	0	DNM	DNM	DNM	DNM	
C3 C4 C5 C7 C9 C16 C20 C30 C32 C38 C39 C43 C46 C52 C53 C54 C55 C56 C57	19	100nF	GRM155R70J104KA01D	MURATA	CAPACITOR, CERAMIC X7R, 100nF, 6.3V, -10%/+10%, -55DEGC/+125DEGC, 0402, SMD	0402
C6 C8	2	22uF	GRM188R60J226MEA0D	MURATA	CAPACITOR, CERAMIC, X5R, 22uF, 6.3V, -20%/+20%, -55DEGC/+85DEGC, 0603, SMD	0603
C11 C22	2	3.6pF	GRM1555C1H3R6CA01D	MURATA	CAPACITOR, CERAMIC C0G/NP0, 3.6pF, 50V, -0.25pF/+0.25pF, -55DEGC/+125DEGC, 0402, SMD	0402
C12	1	2.7pF	GRM1555C1H2R7CA01D	MURATA	CAPACITOR, CERAMIC C0G/NP0, 2.7pF, 50V, -0.25pF/+0.25pF, -55DEGC/+125DEGC, 0402, SMD	0402
C13	1	6.2pF	GRM1555C1H6R2CA01D	MURATA	CAPACITOR, CERAMIC C0G/NP0, 6.2pF, 50V, -0.25pF/+0.25pF, -55DEGC/+125DEGC, 0402, SMD	0402
C14	1	3pF	GRM1555C1H3R0CA01D	MURATA	CAPACITOR, CERAMIC C0G/NP0, 3pF, 50V, -0.25pF/+0.25pF, -55DEGC/+125DEGC, 0402, SMD	0402
C15 C21	2	100pF	GRM1555C1H101JA01D	MURATA	CAPACITOR, CERAMIC C0G/NP0, 100pF, 50V, -5%/+5%, -55DEGC/+125DEGC, 0402, SMD	0402
C17 C18 C33 C34	4	12pF	GRM1555C1H120JA01D	MURATA	CAPACITOR, CERAMIC C0G/NP0, 12pF, 50V, -5%/+5%, -55DEGC/+125DEGC, 0402, SMD	0402
C19 C40 C42 C44	4	1uF	GRM155R61A105KE15D	MURATA	CAPACITOR, CERAMIC X5R, 1uF, 10V, -10%/+10%, -55DEGC/+85DEGC, 0402, SMD	0402
C24 C58	0	DNM	DNM	DNM	DNM	DNM
C35 C36 C37 C41 C50	5	10nF	CAPACITOR_0402_10nF_X7R_M_+/-10%_25V	MANUFACTURER SELECTION	CAPACITOR, CERAMIC X7R, 10nF, 25V, -10%/+10%, -55DEGC/+125DEGC, 0402, SMD	0402
C45 C48 C49	3	2.2uF	GRM155R60J225KE95D	MURATA	CAPACITOR, CERAMIC X5R, 2.2uF, 6.3V, -10%/+10%, -55DEGC/+85DEGC, 0402, SMD	0402
C47	1	15pF	CAPACITOR_0402_15pF_C0G/NP0_M_+/-5%_50V	MANUFACTURER SELECTION	CAPACITOR, CERAMIC C0G/NP0, 15pF, 50V, -5%/+5%, -55DEGC/+125DEGC, 0402, SMD	0402
C59	1	100nF	CAPACITOR_0402_100nF_X7R_M_+/-10%_10V	MANUFACTURER SELECTION	CAPACITOR, CERAMIC X7R, 100nF, 10V, -10%/+10%, -55DEGC/+125DEGC, 0402, SMD	0402
CR1 CR5	2	LPL296-J2L2-25	LP L296-J2L2-25	OSRAM	OPTO, LED, GREEN COLOR, 562nm, 0.02A, 0.08W, 0603, SMD	0603

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CR2 CR4	2	LS L296-P2Q2-1	LS L296-P2Q2-1	OSRAM	OPTO, LED, SUPER RED COLOR, 630nm, 1.8V TO 2.3V, 0.06A, 0603, SMD	0603
CR6	1	TPD4E004DRY	TPD4E004DRYR	TEXAS INSTRUMENTS	DIODE, PROTECTION, ESD ARRAY, 4 CHANNEL, 6V TO 8V, -40DEGC/+85DEGC, SON6, SMD	SON6
CR7 CR8	2	TPD6E004RSER	TPD6E004RSER	TEXAS INSTRUMENTS	DIODE, PROTECTION, ESD, 7V, -40DEGC/+85DEGC, QFN8, SMD	QFN8
FIDU1 FIDU2 FIDU3 FIDU4 FIDU5 FIDU6	0	DNM			DNM	
FL1	1	BLM18HE152SN1	BLM18HE152SN1D	MURATA	FILTER, EMI, 1500@100MHz, -55DEGC/+125DEGC, 0603, SMD	0603
J1 J2	2	SSQ-110-23-L-D	SSQ-110-23-L-D	SAMTEC	CONNECTOR, HEADER, FEMALE, STRAIGHT, 2 ROWS, 20 ROWS, 2.54mm, PTH	
J6	1	105164-0001	105164-0001	MOLEX	CONNECTOR, USB, FEMALE, RIGHT ANGLE, 1 ROW, 5 PINS, PITCH 0.65mm, SMD	
L1	1	6.8uH	MLZ2012N6R8LT000	TDK	INDUCTOR, STANDARD, CHIP, FERRITE CORE, SHIELDED, 6.8uH, -20%/+20%, 1.1A, -55DEGC/+125DEGC, 0805, SMD	0805
L12 L23	2	7.5nH	LQG15HS7N5J02D	MURATA	INDUCTOR, RF, CHIP, NON-MAGNETIC CORE, 7.5nH, -5%/+5%, 0.3A, -55DEGC/+125DEGC, 0402, SMD	0402
L13 L14	2	6.8nH	LQG15HS6N8J02D	MURATA	INDUCTOR, RF, CHIP, NON-MAGNETIC CORE, 6.8nH, -5%/+5%, 0.3A, -55DEGC/+125DEGC, 0402, SMD	0402
L22	1	27nH	LQG15HS27NJ02D	MURATA	INDUCTOR, RF, CHIP, NON-MAGNETIC CORE, 27nH, -5%/+5%, 0.3A, -55DEGC/+125DEGC, 0402, SMD	0402
M1 M2 M3 M4 M5 M6 M7 M8 M9 M10 M11 M12 M13 M14	14	SNT-100BK-G	SNT-100-BK-G	SAMTEC	MECHANIC, SHUNT, CURRENT RATING 4.3A PER PIN, 2.54 X 5.08 X 6.1mm, BLACK	
MH1 MH2	0	DNM			DNM	
MH3 MH4	0	DNM			DNM	
MH5	0	DNM			DNM	
P1 P2 P10	3	BB02-HC031-KB1-603000	BB02-HC031-KB1-603000	GRADCONN	CONNECTOR, HEADER, MALE, STRAIGHT, 1 ROW, 3 PINS, PITCH 2.54mm, PTH	
P4	1	BB02-HJ221-KB1-603000	BB02-HJ221-KB1-603000	GRADCONN	CONNECTOR, HEADER, MALE, STRAIGHT, 2 ROWS, 22 PINS, PITCH 2.54mm, PTH	

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P5 P7	2	FTSH-105-01-F-DV-K	FTSH-105-01-F-DV-K	SAMTEC	CONNECTOR, HEADER, MALE, STRAIGHT, 10 PINS, 2 ROWS, PITCH 1.27mm, SMD	
P6	1	BB02-HJ041-KB1-603000	BB02-HJ041-KB1-603000	GRADCONN	CONNECTOR, HEADER, MALE, STRAIGHT, 2 ROWS, 4 PINS, PITCH 2.54mm, PTH	
P8	0	DNM			DNM	
P11	1	MM5829-2700	MM5829-2700RJ4	MURATA	CONNECTOR, COAX, MALE, UP TO 12GHz, 30V, SMD	
R1 R61 R62 R63 R65	5	100k	RESISTOR_0402_100k_+/-5%_50V_0.063W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 100k, -5%/+5%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R2 R3 R58	3	3.3k	RESISTOR_0402_3.3k_+/-5%_50V_0.063W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 3.3k, -5%/+5%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R11	1	2.2k	RESISTOR_0402_2.2k_+/-5%_50V_0.063W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 2.2k, -5%/+5%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R12	1	1.8pF	GJM1555C1H1R8BB01D	MURATA	CAPACITOR, CERAMIC C0G/NP0, 1.8pF, 50V, -0.1pF/+0.1pF, -55DEGC/+125DEGC, 0402, SMD	0402
R13	0	DNM	DNM	DNM	DNM	DNM
R14 R25	2	220	RESISTOR_0402_220_+/-5%_50V_0.063W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 220, -5%/+5%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R15 R23	2	180	RESISTOR_0402_180_+/-5%_50V_0.063W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 180, -5%/+5%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R17	1	10k	RESISTOR_0402_10k_+/-5%_50V_0.063W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 10k, -5%/+5%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R18	1	4.7k	RESISTOR_0402_4.7k_+/-5%_50V_0.063W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 4.7k, -5%/+5%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R19 R21 R59 R60	0	DNM	DNM	DNM	DNM	DNM
R20	1	100	RESISTOR_0402_100_+/-1%_50V_0.063W_M_+/-100ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 100, -1%/+1%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R22	1	330k	RESISTOR_0402_330k_+/-1%_50V_0.063W_M_+/-100ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 330k, -1%/+1%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402

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R24	1	220k	RESISTOR_0402_220k_+/-1%_50V_0.063W_M_+/-100ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 220k, -1%/+1%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R27 R29 R30 R39	4	1k	RESISTOR_0402_1k_+/-5%_50V_0.063W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 1k, -5%/+5%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R28	1	4.87k	RESISTOR_0402_4.87k_+/-1%_50V_0.063W_M_+/-100ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 4.87k, -1%/+1%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R31	1	51	RESISTOR_0402_51_+/-5%_50V_0.063W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 51, -5%/+5%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R32	1	33k	RESISTOR_0402_33k_+/-1%_50V_0.063W_M_+/-100ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 33k, -1%/+1%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R33	1	51k	RESISTOR_0402_51k_+/-5%_50V_0.063W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 51k, -5%/+5%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R34	1	30k	RESISTOR_0402_30k_+/-5%_50V_0.063W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 30k, -5%/+5%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
R46 R47 R48 R49 R51	0	DNM	DNM	DNM	DNM	DNM
R52	1	0	RESISTOR_0603_0_+/-5%_75V_0.1W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 0, 0.1W, 75V, -55DEGC/+155DEGC, 0603, SMD	0603
R55 R56 R57 R66	4	100	RESISTOR_0402_100_+/-5%_50V_0.063W_M_+/-200ppm	MANUFACTURER SELECTION	RESISTOR, THICK FILM, 100, -5%/+5%, 0.063W, 50V, -55DEGC/+155DEGC, 0402, SMD	0402
SW1 SW2 SW3	3	1188E-1K2-V	1188E-1K2-V-TR	DIPTRONICS	SWITCH, TACT, 0.05A@250VAC, 0.05A@12VDC, 0.05A, 250V, SMD	
U1	1	CC1310 F128RGZT	CC1310F128RGZT	TEXAS INSTRUMENTS	IC, MICROCONTROLLER, 128kB, 1.8V TO 3.8V, VQFN48-EP, SMD	VQFN48-EP
U4	1	MX25R8035FZUILO	MX25R8035FZUILO	MACRONIX	IC, MEMORY, FLASH, SERIAL, 8Mbit, 1.65V TO 3.6V, USON8, SMD	USON8
U5	1	TM4C1294NCPDTT3R	TM4C1294NCPDTT3R	TEXAS INSTRUMENTS	IC, MICROPROCESSOR, TIVA C SERIES MICROCONTROLLER, ARM CRTEX-M4, 2.97V TO 3.63V, TQFP128, SMD	TQFP128
U6	1	LM4040 B25IDCK	LM4040B25IDCKR	TEXAS INSTRUMENTS	IC, ANALOG, PRECISION MICROPOWER SHUNT VOLTAGE REFERENCE, 2.5V, SC70-5, SMD	SC70-5

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U7	1	TPS79601DR	TPS79601DRBR	TEXAS INSTRUMENTS	IC, ANALOG, ULTRALOW-NOISE, HIGH PSRR, FAST, RF, 1A LOW-DROPOUT LINEAR REGULATORS, VIN:2.7V TO 5.5V, VOUT:1.2V TO 5.5V, SON8, SMD	SON8
U8 U9 U10	3	SN74AVC4T245RSV	SN74AVC4T245RSVR	TEXAS INSTRUMENTS	IC, DIGITAL, LOGIC, 4bit DUAL-SUPPLY BUS TRANSCEIVER 3 STATE OUTPUT, 1.2V TO 3.6V, UQFN16, SMD	UQFN16
Y1	1	32.768kHz	FC-135 32.7680KA-AG0	EPSON	CRYSTAL, RESONATOR, 32.768kHz, -20PPM/+20PPM, -40DEGC/+85DEGC, SMD	
Y2	1	24MHz	TSX-3225 24.0000MF15X-AC3	EPSON	CRYSTAL, CRYSTAL OSCILLATOR, 24MHz, -15PPM/DEGC/+15PPM/DEGC, -40DEGC/+85DEGC, SMD	
Y3	1	16MHz	NX3225GA-16.000M-STD-CRG-1	NIHON DEMPA KOGYO	CRYSTAL, OSCILLATOR, 16MHz, -30PPM/DEGC/+30PPM/DEGC, -40DEGC/+85DEGC, SMD	

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