

Quantity	Comment	Description	Designator	Footprint	Package / Case	Manufacturer	Manufacturer Part Number	Tolerance
14	100pF	Capacitor	C1, C2, C3, C4, C5, C6, C7, C8, C9, C11, C14, C18, C33, C34	DRCAPC1005L	0402 (1005 Metric)	Murata	GRM1555C1H101JZ01D	5 COG
7	1000pF	Capacitor	C10, C12, C13, C20, C22, C24, C31	DRCAPC1005L	0402 (1005 Metric)	Murata	GRM1555C1H102JA01D	5 COG
1	22uF	Capacitor (Semiconductor SIM Model)	C16	CAPC2012L	0805 (2012 Metric)	Taiyo Yuden	LMK212BJ226MG-T	20 X5R
1	4.7uF	GRM188R60J475KE19 D - CAPACITOR, 0603, 4.7uF, 6.3V	C17	CAPC1608L	0603 (1608 Metric)	TDK Corporation	C1608X5R1A475K	10 X5R
3	10uF	Capacitor (Semiconductor SIM Model)	C19, C21, C23	CAPC1608L	0603 (1608 Metric)	Taiyo Yuden	LMK107BJ106MALTD	20 X5R
1	180pF	Capacitor	C25	DRCAPC1005L	0402 (1005 Metric)	Murata	GRM1555C1H181JA01D	5 COG
1	56pF	Capacitor	C26	DRCAPC1005L	0402 (1005 Metric)	Murata	GRM1555C1H560JD01D	5 COG
1	2.7nF	Capacitor	C27	DRCAPC1005L	0402 (1005 Metric)	Murata	GRM155R71H272KA01D	10 X7R
4	0.1uF	Capacitor	C29, C32, C42, C54	DRCAPC1005L	0402 (1005 Metric)	Murata	GRM155R71C104KA88D	10 X7R
2	3.3pF	Capacitor	C36, C59	DRCAPC1005L	0402 (1005 Metric)	TDK Corporation	C1005C0G1H3R3B	5 COG
2	2.2nF	Capacitor	C44, C46	DRCAPC1005L	402 (1005 Metric)	Murata	GRM155R71H222KA01D	10 X7R
1	3.3nF	Capacitor	C45	DRCAPC1005L	402 (1005 Metric)	Murata	GRM155R71H332KA01D	10 X7R
4	2.2uF	Capacitor (Semiconductor SIM Model)	C47, C48, C50, C51	DRCAPC1005L	0402 (1005 Metric)	TDK Corporation	C1005X5R0J225M	X5R
2	0.5pF	Capacitor	C55, C56	DRCAPC1005L	0402 (1005 Metric)	TDK Corporation	C1005C0G1H0R5C	5 COG
1	2.2pF	Capacitor	C57	DRCAPC1005L	0402 (1005 Metric)	TDK Corporation	C1005C0G1H2R2C	5 COG
1	1.2pF	Capacitor	C58	DRCAPC1005L	0402 (1005 Metric)	TDK Corporation	C1005C0G1H1R2B	5 COG
1	NSR30CM3T5G	DIODE SCHOTTKY DUJAL 30V SOT-723	D1	SOT-723	SOT-723	ON Semiconductor	NSR30CM3T5G	
1	3.3uH	Inductor, 3.3uH, 0.88A, 299mO	L1	EPL2010		Coilcraft	EPL2010-332MLB	
2	22uH	Inductor	L2, L3	0603LS	0603 (1608 Metric)	Coilcraft	0603LS-223XJLB	
2	2.7nH	Inductor	L4, L5	DRCAPC1005L	0402 (1005 Metric)	Coilcraft	0402HP-2N7XJLU	
2	15nH	Inductor	L6, L7	DRCAPC1005L	0402 (1005 Metric)	Coilcraft	0402HP-15NXJLB	
1	CLP-104-02-F-D	Header, 4-Pin, Dual row	P1	CLP-104-02-XXX-D-A		Samtec	CLP-104-02-F-D	
1	FTS-104-03-L-DV	Header, 4-Pin, Dual row	P2	FTSH-104-02-L-DV		Samtec	FTS-104-03-L-DV	
1	NE664M04	NPN General Purpose Amplifier	Q1	NEC_M04				
1	VMMK-2403	2-4 GHz Amp RFIC LNA E-PHEMT 4GHZ 0402	Q2	VMMK-2403	0402 (1005 Metric) - 1.00mm L x 0.50mm W x 0.25mm H	Avago Technologies US Inc.	VMMK-2403-BLKG	
1	2SA2029T2LR	TRANSISTOR PNP 50V 0.15A VMT3	Q3	SOT-723	VMT3	Rohm Semiconductor	2SA2029T2LR	
1	DMG1012UW-7	MOSFET N-CH 20V 1A SOT323	Q4	SOT-323	SOT-323-3	Diodes Inc	DMG1012UW-7	
1	51	Resistor	R20	DRCAPC1005L	0402 (1005 Metric)	Panasonic - ECG	ERJ-2RKF51R1X	1%

1	300	Resistor	R1	DRCAPC1005L	0402 (1005 Metric)	Panasonic - ECG	ERJ-2RKF3000X	1%
2	100	Resistor	R2, R9	DRCAPC1005L	0402 (1005 Metric)	Panasonic - ECG	ERA-W33J101X	1%
5	1K	Resistor	R3, R6, R7, R14, R21	DRCAPC1005L	0402 (1005 Metric)	Stackpole Electronics Inc	RMCF0402FT1K00	1%
1	4.7k	Resistor	R4	DRCAPC1005L	0402 (1005 Metric)	Panasonic - ECG	ERJ-2RKF4701X	1%
1	1.8k	Resistor	R5	DRCAPC1005L	0402 (1005 Metric)	Vishay	CRCW04021K80FKED	1%
1	620	Resistor	R8	DRCAPC1005L	0402 (1005 Metric)	Panasonic - ECG	ERJ-2RKF6200X	1%
1	9.1K	Resistor	R10	DRCAPC1005L	0402 (1005 Metric)	Panasonic - ECG	ERJ-2RKF9101X	1%
3	10K	Resistor	R11, R12, R19	DRCAPC1005L	0402 (1005 Metric)	Panasonic - ECG	ERJ-2RKF1002X	1%
1	22	Resistor	R13	DRCAPC1005L	0402 (1005 Metric)	Vishay	CRCW040222R0FKED	1%
3	220	Resistor	R15, R16, R22	DRCAPC1005L	0402 (1005 Metric)	Vishay	CRCW0402220R0FKED	1%
1	10	Resistor	R17	DRCAPC1005L	0402 (1005 Metric)	Vishay	CRCW040210R0FKED	1%
1	2K	Resistor	R18	DRCAPC1005L	0402 (1005 Metric)	Panasonic - ECG	ERJ-2RKF2001X	1%
1	51.1	Resistor	R20	DRCAPC1005L	0402 (1005 Metric)	Panasonic - ECG	ERJ-2RKF51R1X	1%
1	ADRF6702		U1	QFN50P600X600-40VL_Dr	40-LFCSP	Analog Devices Inc	ADRF6702ACPZ-R7	
1	TPS63002DRCR	TEXAS INSTRUMENTS - TPS63002DRCR - IC, BUCK-BOOST CONVERTER, SON-10	U2	QFN10PWRPACK		TEXAS INSTRUMENTS	TPS63002DRCR	
1	40MHZ TCXO	OSCILLATOR TCXO 40.000MHZ SMD	U5	XTAL-04-2.5X2.0	SMD 2.50mm x 2.00mm	AVX Corporation	KT2520Y40000ECV28TBA	
1	CY8C21223-24LGXI	IC MCU 4K FLASH 256B SRAM 16UQFN 1Kbit, 400KHz, 2.5V, I2C Serial EEPROM, 5-Pin SC70, Industrial Temperature, Tape and Reel	U8	QFN50P300X300-16PSOC	16-UQFN, 16-µQFN	Cypress Semiconductor Corp	CY8C21223-24LGXI	
1	24LC01BT-I/LT		U9	SC70-LT5_N		Microchip Technology	24LC01BT-I/LT	

1 Assembly

Description	Designator	Manufacturer	Mfg Part Number	Equivalent OK	Cost
Boron Nitride Heat Sink Grease installed on top of U1 to shield	U1	ITW Chemtronics	CW7250	Equivalent OK Yes (-40 to +85C rated)	?
RTV bead (1 location)	1/8" RTV bead top board, on R2			Yes	?
RF Shield	Hand solder to bottom board			Yes (10 mil thickness)	\$1.95
Barcode Label	Shield Barcode Label	Sypes Canyon	SCC-01Label	No	\$5

Process

Description
Manufacture board assemblies - perform all standard mfg quality checks
Snap apart, remove snap-stubs (especially from top board)
Apply RTV bead on bottom board (approx 1/8") on corner of U2closest to C41 to avoid getting RTV on L1 inductor coil
Insert top board assembly into bottom board assembly. Ensure RTV bead on bottom board touches top board.
Apply RTV bead (approx 1/8" bead) on R2. Avoid getting any RTV on L2 or L3 inductor coils or U1 pins
Apply Heatsink Grease on U1.
Install shield over top board assembly, soldering shield to bottom board assembly. Heatsink grease and RTV should contact inside-top of shield.
install Barcode label on top of shield
Finished assembled units to be 100% tested through ZeMo test fixture (supplied by Sypes Canyon). Test time per device ~ 45 seconds.