

Item	Class	Mfg.Part Number	Mfg.	Qty*	Qty**	Description	Circuit Reference	Alternate Mfg.	Alt. Mfg Part #	Comments
1	Resistor	MCR01MZSJ302	Rohm	7	7	1K Ohm, +/-5%, 0402	R1,R32,R62,R115,R116,R125,R129	KOA		
2	Resistor	MCR01MZSJ302	Rohm	1	1	3K Ohm, +/-5%, 0402	R2	KOA		
3	Resistor	MCR01MZSJ362	Rohm	1	1	5.6K Ohm, +/-5%, 0402	R3	KOA		
4	Resistor	MCR01MZSJ105	Rohm	2	2	1M Ohm, +/-5%, 0402	R4, R57	KOA		
5	Resistor	MCR01MZSJ474	Rohm	1	1	470K Ohm, +/-5%, 0402	R246	KOA		
6	Resistor	MCR01MZSJ472	Rohm	4	4	4.7K Ohm, +/-5%, 0402	R6,R103,R247,R252	KOA		
7	Resistor	MCR01MZSJ204	Rohm	1	1	200K Ohm, +/-5%, 0402	R5			
8	Resistor	MCR01MZSJ153	Rohm	2	2	150K, +/- 5%, 0402	R7,R143	KOA		
9	Resistor	MCR01MZSJ104	Rohm	12	12	100K Ohm, +/-5%, 0402	R8,R17,R20,R42,R46,R49,R56,R128,R144,R153,R248,R263	KOA		Removed R57
10	Resistor	MCR01MZSF1211	Rohm	2	2	1.21K Ohm, +/-1%, 0402	R9,R11	KOA		Observe 1% Tolerance
11	Resistor	MCR01MZSF3321	Rohm	2	2	3.32K Ohm, +/-1%, 0402	R10,R12	KOA		Observe 1% Tolerance
12	Resistor	MCR01MZSJ180	Rohm	1	1	18 Ohm, +/-5%, 0402	R13	KOA		
13	Resistor	MCR01MZSJ000	Rohm	4	5	0 Ohm, +/-5%, 0402	R14,R21,R28,R30,R59	KOA		Pop R59 For External GPS Antenna
14	Resistor	MCR01MZSJ100	Rohm	2	2	10 Ohm, +/-5%, 0402	R18,R111	KOA		
15	Resistor	MCR01MZSJ513	Rohm	1	1	51K Ohm, +/-5%, 0402	R24	KOA		
16	Resistor	MCR01MZSJ471	Rohm	2	2	470 Ohm, +/-5%, 0402	R25,R210	KOA		
17	Resistor	MCR01MZSJ123	Rohm	2	2	12K Ohm, +/-5%, 0402	R27,R207	KOA		
18	Resistor	MCR01MZSJ150	Rohm	2	2	150 Ohm, +/-5%, 0402	R33, R58			
19	Resistor	MCR01MZSJ222	Rohm	7	7	2.2K Ohm, +/-5%, 0402	R35,R37,R38,R40,R41,R104,R105	KOA		
20	Resistor	MCR01MZSJ680	Rohm	4	4	68 Ohm, +/-5%, 0402	R36,R39,R102,R209	KOA		
21	Resistor	MCR01MZSJ103	Rohm	11	11	10K Ohm, +/-5%, 0402	R23,R43,R44,R47,R50,R51,R54,R63,R132,R253,R254	KOA		Removed R34, R48, and R133
22	Resistor	MCR01MZSF1303	Rohm	1	1	130K Ohm, +/-1%, 0402	R45	KOA		Observe 1% Tolerance
23	Resistor	MCR01MZSJ202	Rohm	1	1	2K Ohm, +/-5%, 0402	R52	KOA		
24	Resistor	MCR01MZSJ201	Rohm	1	1	200 Ohm, +/-5%, 0402	R53	KOA		
25	Resistor	MCR01MZSJ360	Rohm	1	1	36 Ohm, +/-5%, 0402	R55	KOA		
26	Resistor	MCR01MZSJ564	Rohm	2	2	560K Ohm, +/-5%, 0402	R126,R131	KOA		
27	Resistor	MCR01MZSJ623	Rohm	1	1	62K Ohm, +/-5%, 0402	R136	KOA		
28	Resistor	MCR01MZSJ150	Rohm	1	1	15 Ohm, +/-5%, 0402	R138	KOA		
29	Resistor	MCR01MZSJ101	Rohm	6	6	100 Ohm, +/-5%, 0402	R22,R34,R60,R61,R201,R260	KOA		Added R34
30	Resistor	MCR01MZSJ223	Rohm	2	2	22K Ohm, +/-5%, 0402	R64,R206	KOA		Added R64, Removed R217
31	Resistor	MCR01MZSJ620	Rohm	1	1	62 Ohm, +/-5%, 0402	R245	KOA		
32	Resistor	MCR01MZSJ510	Rohm	1	1	51 Ohm, +/-5%, 0402	R255	KOA		
33	Capacitor	MCH155AN4R7C	Rohm	2	2	4.7pF_0402_NPO_50V	C1,C4			
34	Capacitor	MCH155AN150J	Rohm	1	1	15pF_0402_NPO_50V	C2			
35	Capacitor		Rohm	0	0	T.B.D. 0603_NPO_50V	C3	KOA		
36	Capacitor	MCH153FN104ZK	Rohm	21	20	100nF_0402_X7R_16V	C5,C24,C28,C47,C55,C56,C59,C63,C64,C69,C74,C76,C114,C118,C129,C131,C136,C137,C204,C259,C278	KOA		No-Pop C55 For External GPS Antenna
37	Capacitor	MCH153CN223K	Rohm	5	5	22nF_0402_X7R_50V	C6,C12,C13,C25,C73			
38	Capacitor	MCH155CN102KK	Rohm	14	14	1nF_0402_X7R_50V	C7,C22,C23,C39,C40,C50,C58,C60,C253,C261,C265,C266,C268,C276	KOA		Added C266
39	Capacitor	MCH155A101JK	Rohm	13	12	100pF_0402_NPO_50V	C8,C10,C17,C21,C35,C49,C52,C71,C75,C77,C140,C251,C260	KOA		No-Pop C75 For External GPS Antenna
40	Capacitor	MCH184CN334K	Rohm	2	2	330nF_0603_X5R_10V	C11,C14	KOA		Removed C27
41	Capacitor	JMK105BJ334KV-F	Taiyo Yuden	1	1	330nF_0402_X5R_10V	C27			
42	Capacitor	JMK105BJ105KV-F	Taiyo Yuden	16	16	1.0uF_0402_X5R_6.3V	C15,C16,C18,C19,C62,C65,C66,C120,C121,C123,C124,C126,C127,C135,C206,C211	Murata	GRM155R60J105KE19D	Added C15, C16
43	Capacitor	MCH214CN225KP	Rohm	4	4	2.2uF_0805_X7R_10V	C20,C67,C128,C130	KOA		
44	Capacitor	MCH155AN181J	Rohm	1	1	180pF_0402_NPO_50V	C26			
45	Capacitor	MCH153CN103KK	Rohm	3	2	10nF_0402_X7R_16V	C29,C68,C70	KOA		No-Pop C70 For External GPS Antenna
46	Capacitor	MCH155CN472K	Rohm	2	2	4.7nF_0402_X7R_50V	C30,C32			
47	Capacitor	C0402X7R160-123KNP	Venkel	2	2	12nF_0402_X7R_16V	C31,C33	KOA		
48	Capacitor	HPC0402A1R5AXXT1	Vishay	1	1	1.5pF_0402_NPO_25V_+/-0.05pF	C43			
49	Capacitor	MCH155CN332KK	Rohm	1	1	3.3nF_0402_X7R_50V	C46	KOA		
50	Capacitor	TCFGP0J106M8R (P case)	Rohm	2	2	10uF_0805 Tant_6.3V	C51,C203	KOA		
51	Capacitor	TCFGA0J226M8R (A case)	Rohm	1	1	22uF_1206 Tant_6.3V	C53	KOA		
52	Capacitor	MCH155CN470JK	Rohm	3	0	47pF_0402_NPO_50V	C54,C57,C61	KOA		No-Pop C54, C57, C61 For Ext. GPS Antenna
53	Capacitor	MCH183AN027	Rohm	1	0	TBD_0603_NPO_50V	C72	KOA		No-Pop C72 For External GPS Antenna
54	Capacitor	MCH214CN475KP	Rohm	3	3	4.7uF_0805_X5R_10V	C105,C106,C107	KOA		
55	Capacitor	MCH155A220JK	Rohm	1	1	22pF_0402_NPO_50V	C117	KOA		
56	Capacitor	MCH153CN473K	Rohm	2	2	47nF_0402_X7R_16V	C125,C132	KOA		

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57	Capacitor	MCH155CN330JK	Rohm	6	6	33pF_0402_NP0_50V	C205,C207,C252,C258,C264,C275	KOA		
58	Capacitor	MCH155A050CK	Rohm	1	1	5pF_0402_NP0_50V	C215	KOA		
59	Capacitor	MCH155A040CK	Rohm	1	1	4pF_0402_NP0_50V	C262	KOA		
60	Capacitor	MCH155A080DK	Rohm	3	3	8pF_0402_NP0_50V	C263,C277,C289	KOA		
61	Inductor	0402CS-3N9XGBW	Coilcraft	2	1	3.9nH, Wirewound Inductor_0402, 2%	L1, L10	IGS	F0402CT3N9B	No-Pop L10 For External GPS Antenna
62	Inductor	0402CS-XNXXJW	Coilcraft	1	1	1.7nH, Wirewound Inductor_0402, 5%	L2	IGS		
63	Inductor	0402CS-2N4XJW	Coilcraft	1	0	2.2nH Inductor_0402_+/-5%	L4	IGS		No-Pop L4 For External GPS Antenna
64	Inductor	0402CS-68XKBW	Coilcraft	1	1	68nH, Wirewound Inductor_0402, 10%	L5	IGS	FN0402CT68NK	
65	Inductor	HK1005470J-T	Taiyo Yuden	3	2	47nH Inductor_0402_+/-5%	L3,L6,L9			No-Pop L9 For External GPS Antenna
66	Inductor	0402CS-2N0XGBW	Coilcraft	2	2	2.0nH, Wirewound Inductor_0402_+/-2%	L7, L8	IGS	FN0402CT2N0S	
67	Inductor		Coilcraft	1	0	T.B.D., Wirewound Inductor_0402_+/-5%	L11			No-Pop L11 For External GPS Antenna
68	Inductor	HK10058R2J-T	Taiyo Yuden	1	1	8.2nH Inductor_0402_+/-5%	L200			
69	Inductor	0402CS-12XKBW	Coilcraft	1	1	12nH, Wirewound Inductor_0402, 10%	L201	IGS	F0402CT12NK	
70	Inductor	HK1005100J-T	Taiyo Yuden	1	1	10nH Inductor_0402_+/-5%	L211			
71	Inductor	0603CS-8N2XJBW	Coilcraft	1	1	8.2nH, Wirewound Inductor_0603	L212	IGS	F0603CT8N2J	
72	Inductor	HK10052R2J-T	Taiyo Yuden	1	1	2.2nH Inductor_0402_+/-0.3nH	L213			
73	Diode	SMBJ5V0A	Fairchild	1	1	Suppressor, Voltage, 600W, DO-214AA	D1	Diodes	SMBJ5.0A	
74	Diode	S3D	Fairchild	1	1	Rectifier, General Purpose, 3A, DO-214AB	D2	Vishay	RS3D	
75	Diode	BAS16	Fairchild	1	1	Rectifier, Small Signal, SOT-23	D3	Philips	BAS16	
76	Diode	AZ23C16DICT	Diodes	1	1	Diode, Zener,16V, 300mW, SOT-23	D6	Zetex	BZX84C16XCT	
77	Diode	BAS31	Fairchild	1	1	Diode, SOT-23	D5			
78	Diode	BAT62-02W	Infineon	1	1	Low Barrier Silicon RF Schottky Diode_SCD80	D201			
79	LED	HSMF-C155	Agilent	3	3	Bi-Color LED	LED100,LED101,LED102	Lite-On	LIST-C155JCKT	
80	Transistor	IRLM5103	IR	1	1	FET, P-Channel, 30V, SOT-346	TR1	Rohm	RSR015P03	
81	Transistor	UMT3904	Rohm	7	7	NPN Transistor, Switching, SOT-323	TR2,TR100,TR101,TR104,TR105,TR106,TR107			Removed TR3
82	IC	HMHA281	Fairchild	1	1	Optocoupler, SMT, 4-Pin, Half Pitch	TR4			
83	Transistor	AT32032	Agilent	1	1	RF Transistor, Low Noise, SOT-323	TR200			
84	IC	XC6401GG37MR	Torex	3	3	3.0V LDO Regulator_SOT-26W	IC1,IC4,IC105			
85	IC	VOG1752N30USF	Samsung	1	1	Rx VCO, 1752MHz	IC2	Murata	MQK300B1G75	
86	IC	CP2101	SiliconLabs	1	1	USB to UART Bridge, MLP-28	IC3	N/A		
87	IC	LT1460KCS3-3	LinearTech	1	1	Voltage Reference, Micropower, 3.0V, SOT23	IC5	TI		
88	IC	HN58X24256FPI	Hitachi	1	1	256K Bit Serial EEPROM_150 mil_SOP_8-pin	IC100	Rohm	BR24C256F-E2	EEPROM To Be Specified By Greg T.
89	IC	HD64F2317VTEBL25	Hitachi	1	1	Microcontroller_TQFP100 Flash Memory	IC101	N/A		
90	IC	AK2336A	AKM	1	1	Baseband Processor_TQFP90	IC106	N/A		
91	IC	MIC811RU	Micrel	1	1	uP Reset_SOT143	IC107	AD	ADM811RART	
92	IC	TOS1440UPJ4BEA	Samsung	1	1	TCXO_14.4 MHz	IC201	Murata		
93	IC	RF2173	RFMD	1	1	Power Amplifier_16pin LCC 4x4	IC206	N/A		
94	IC	LPV321M7	National	2	2	CMOS Op Amp Single Supply_SC70-5	IC207,U3	T.I.	LMV321DCKT	
95	IC	NT2906GI	NUMA	1	1	FM, Transceiver, Single Chip_TQFP-48	U2	N/A		
96	IC	BGA622	Infineon	2	0	Amplifier, Low Noise, SOT-343	U6, U9	N/A		No-Pop U6, U9 For External GPS Antenna
97	IC	MM74HC4050MTC	Fairchild	1	1	Hex Logic Level Converter, TSSOP-16	U7	Toshiba	TC74HC4050AFT	
98	IC	TIM-LC	ublox	1	1	Module, GPS Receiver, L1 Band	U8	N/A		
99	IC	CD4011BCSJ	Fairchild	1	1	NAND Gate, Hex, 2 Input,TSSOP-14	U10	STMicro	M74HC00TTR	
100	IC	NC7S86P5X	Fairchild	1	1	Exclusive NOR, 2 Input, SC70-5	U11	Toshiba	TC7S86FU	
101	Fuse	0434 003	Littlefuse	1	1	Fuse, 3A, Fast Acting, 0603	F1			
102	Connector	HNC 2-2.5P-6DSL	Hirose	1	1	Header, 6 Position, Locking, Right Angle	J1			
103	Connector	R209 408.012	Radiall	2	2	RF Connector, MMS Series, SMT	J2,J4	N/A		
104	Connector	54819-0511	Molex	1	1	Connector, Mini USB-B, Right Angle	J3	N/A		
105	Connector	TMM-103-01-T-S-SM-TR	Samtec	1	1	Connector, 3-Pos, Header, 2mm	J6			
106	Transformer	LDB21836M20C-001	Murata	1	1	Transformer, RF, 4:1, 836MHz, +/-12MHz	T1	TDK	HHM15 Series	
107	Switch	PTS525-S-M-08	ITT Cannon	1	1	Switch, Snap Dome	S1			
108	Mechanical	ML621S	Panasonic	1	1	Battery, Manganese Lithium Rechargeable	BATT1			
109	Mechanical	PA18-1575-010SA	Spectrum Controls	1	0	Antenna, Patch, GPS, 18mm	X2			No-Pop X2 For External GPS Antenna
110	Mechanical	SF1186B-2	RFM	1	0	Filter, SAW, GPS, 2-Pole, 1575MHz	FIL1	JRC	NSVS792	No-Pop FIL1 For External GPS Antenna
111	Mechanical	SFH881BH001	Samsung	1	1	RF Rx SAW Filter	FL200	N/A		
112	Mechanical	CER0046A	CTS	1	1	Duplexer	DUP200	Samtronics	DCF08R0836A0881G01T	
113	PCB	IDEX # 24215	IDEX	1	1	PCB, Rev "D", 6 Layer	PCB1			
114	Mechanical			1	1	Top Cover, Plastic				
115	Mechanical			1	1	Bottom Cover, Plastic				
116	Mechanical	7-V2008-251TT	Autosplice	24	24	Clip, Shield, SMT, RFI				
117	Mechanical			1	1	Top Shield, PA (Tin Plated Brass)				
118	Mechanical			1	1	Top Shield, AMPS (Tin Plated Brass)				
119	Mechanical			1	1	Bottom Shield, GPS (Tin Plated Brass)				
120	Mechanical			1	1	Bottom Shield, AKM (Tin Plated Brass)				
121	Label			1	1	FCC Label				
122	Label			1	1	Typeplate Label				
123	Label			1	1	Carton Label				
124	Testing			FR	FR	Firmware Version				
125	Testing			FR	FR	CyntrX AMP Test Program Version				

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						NO POP				
						R15,R16,R19,R24,R26,R29,R31,R120,R217,TH100,D4,Y1,U1,U4,U5,C3,C9,C34,C36,C37,C38,C41,C42,C44,C45,C48,C139,C273,C283				
				*	**	* = Internal GPS Antenna, ** = External				

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