

Rev # & Date	Summary of Changes
Rev (0) 02/26/2003	Original Draft Made from Mar_Rad_RF_2_23_03.sch
Rev (1) 2/27/03	Added Manufacturers, part nos., and descriptions, added gaps in item no. for future additions.
Rev (2) 2/28/03	Added Changes to coils and item 23 from K. Vetter 3/3/03
Rev (3) 3/4/03	Changed C63 from ITEM8 to 21. Changed ITEM12's Part. Moved L6, L10, L11 to ITEM63
Rev (4) 03/28/03	Moved R25 from ITEM87 to ITEM101. Chg'd part number for ITEM10 & ITEM11. Delete ITEM147 & move U27 to ITEM146 & correct part num. Chg part number for ITEM141. Add ITEMS 160 & 161.
Rev (5) 04/07/03	Corrected ITEM127 part num. ITEM12 changed to 0805. Delete R53 (ITEM97). Delete ITEM50 (coax points). Delete ITEM 60 & chg L1 to ITEM65. Chg part of L2 (ITEM61). Chg description to read just "inductor". Added ITEMS 46 - 48.
Rev (6) 04/16/03	Correct ITEM11 part num. Added C120, C121, C134-C151, C153 - C155 to ITEM3. Add C152 to ITEM12. Add C122-C133 to ITEM10. Add ITEM148 (U29)
Rev (7) 04/30/03	Completed part num for ITEM148. Added ITEM190&191 for reference. Updated LUD table. Deleted text for ITEMS no longer used (even by 'do not install' parts) Moved ITEM162 to VDR_Chassis_BOM_Rev01.xls
Rev (8) 05/06/03	Corrected C122: moved from ITEM10 to ITEM24. Corrected Ref Des for ITEM48 (from E16 to E18). Added missing ITEMS 49 & 50 (E16).
Rev (9) 10/14/03	Moved L17 & L20 from item 63 to item 64. Changed item 81 to 120 ohm 1% 2512, one watt resistor. Changed items:3/-3; 6/-1;9/+2; 10/-8; 11/-1; 13/-1; 17/-1; 16/+1;18/-1; 23/-1; 24/-3; 27/+4; 31/-1; 39/+1; 40/-3; 46/-1; 47/-1; 62/-2; 63/-1; 64/-2; 82/-1; 83/-2; 85/+1; 86/-1; 88/-1; 89/-2; 91/-3; 93/-4; 94/-2; 95/-1; 97/-1; 98/-1; 99/-1; 100/-1; 101/-1; 102/-4. Changed item value 5/5.1pF; 9/1500pF; 10/NPO; 11/5600pF; 12/50V-0603; 17/20pF-0603; 45/upp9401; 96/820 ohm. New items; 25 through 43, and 103 through 119. Changed items: 120/-1; 122/-1; 123/-2; 124/-1; 129/-1; 130/-1; 131/-1; 132/-1; 135/-1; 145/-2; 146/TT6724D1-159M; 147/-1. New items; 149 through 152.
Rev (10) 10/28/03	Changed items: 16/-1, 23/+2, 27/+1, 39/+5, 46/-1, 49/-1, 50/-1, 83/+3; New items; 44, 67
Rev (11) 11/03/03	Changed item:38, 44. New item: 18
Rev (12) 01/20/04	Item 150: changed manufacturer Part Number to TI's number. Item 127: Chg part number
Rev (13) 02/09/04	High gain RF PCB. Added some missing capacitor part numbers. Changed item 5, 8, 7,10, 66, 96, 119
Rev (14) 10/11/04	Lowered second stage gain back to Rev 12, and other minor changes. Changed items 5,6,7,8,10,12 13, 66, 86. Added items 19, 20, 82, 97, 98, 99, 106,112, 119
Rev (15) 11/10/04	Corrected part no. items:5, 6, 7, 9, 20, 38, 67, 83, 85, 86, 90, 91. Changed item 80, 96, 3/-2, 10/-4, 8/-1, 83/-2, 86/-2, 11/-2, 121/-1, 141/-1 qty and deleted item 97, 119. Added items 52 to 55.

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Item	Ref Des	Description	Qty	Package	Manufacturer	Part Number	Authorized Sub Part(s) / Mfgr.
1	C31, C32	CAP, 0.001uF , 10V, X7R, 10%	2	0603	AVX Cal-Chip	0603ZC102KAT*A GMC10X7R102K10NT	
2							
3	C2, C3, C4, C10, C11, C14, C26, C28, C29, C30, C34, C45, C50, C67, C72, C74, C75, C82, C84, C85, C93, C94, C99, C100, C111, C113, C114, C116, C120, C121, C134, C135, C136, C137, C138, C139, C140, C141, C142, C143, C144, C145, C146, C147, C148, C149, C150, C151, C153, C154, C155, C161, C162, C164	CAP, 0.1uF, 10V, X7R , 10%	54	0603	AVX Cal-Chip	0603ZC104KAT*A GMC10X7R104K10NT	
4							
5	C91	CAP, 2.7pF, 50V, NPO, 5%	1	0603	Cal-Chip	GMC10CG2R7J50NT	
6	C108	CAP, 5.6pF, 50V, NPO, 5%	1	0603	Cal-Chip	GMC10CG5R6J50NT	
7	C89	CAP, 18pF, 50V, NPO, 10%	1	0603	AVX Cal-Chip	06035A180KAT*A GMC10CG180K50NT	
8	C15, C16, C19, C25, C33, C61 C76, C92, C103, C107 C110, C160	CAP, 270pF, 50V, NPO, 10%	12	0603	AVX Cal-Chip	06035A271KAT*A GMC10CG271J50NT	
9	C17	CAP, 1500pF, 50V, X7R, 10%	1	0805	AVX Cal-Chip	06035C152KAT*A GMC10X7R152K50NT	
10	C5, C6, C7, C8, C9, C13, C18, C24, C37, C38, C39, C40, C44, C47, C66, C68, C69 C71, C73, C83, C86, C88, C95, C97, C102, C105, C126, C127,	CAP, 1200pF, 50V, X7R, 10%	33	0603	AVX Cal-Chip	06035C122KAT*A GMC10X7R122K50NT	

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	C130, C131, C158						
	C87, C90						
11							
12	C23, C70, C152, C163	CAP, 0.01uF, 50V, X7R, 10%	4	0603	AVX Cal-Chip	06035C103KAT*A GMC10X7R103K50NT	
13	C106	CAP, 47pF, 50V, NPO, 10%	1	0603	Cal-Chip	GMC10CG470J50NT	
14							
15							
16	C41	CAP, 18pF, 200V, NPO, 10%	1	0805	AVX Cal-Chip	08052A180KAT*A GMC21CG180J200NT	
17	C64	CAP, 20pF, 200V, NPO, 10%	1	0603	Cal-Chip	GMC10CG200J200NT	
18	C63	CAP, 18pF, 200V, NPO, 10%	1	0603	Cal-Chip	GMC10CG180J200NT	
19	C169	CAP, 1pF, 200V, NPO, 10%	1	0603	Cal-Chip	GMC10CG1R0J200NT	
20	C170	CAP, 3.9pF , 200V, NPO, 10%	1	0603	Cal-Chip	GMC10CG3R9J200NT	
21							
22							
23	C1, C12, C35, C112, C115, C122, C167, C168	Cap, 47uF,16V, Tantalum, 20%	8	7343	Kemet Cal-Chip	T491D476M016AS TCMIC476DT	
24							
25							
27	C55, C56, C57, C62, C78	CAP, 6.8 uF, 16V, TANTALUM	5	3528	Kemet Cal-Chip	T491B685M016AS TCMIC685BT	

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28	C36, C42, C46, C159	CAP, 0.1uF, 25V, X7R	4	0805	Cal-Chip	GMC21X7R104K25NT	
29							
30							
31							
32	C60	CAP, 0.01uF, 630V, X7R, 10%	1	1210	CAL CHIP	CHV1210N1K0103KXT	
33	C43, C58	CAP, 15pF, 500V, NPO, 10%	2	0805	Cal-Chip	CHV0805N500150JCT	
34	C53	CAP, 2.2pF, 500V, NPO, 10%	1	0805	Cal-Chip	CHV0805N5002R2CCT	
35	C52	CAP, 33pF, 500V, NPO, 10%	1	0805	Cal-Chip	CHV0805N500330JCT	
36	C51	CAP, 7.5pF, 500V, NPO, 10%	1	0805	Cal-Chip	CHV0805N5007R5CCT	
37	C49	CAP, 12pF, 500V, NPO, 10%	1	0805	Cal-Chip	CHV0805N500120JCT	
38	C54	CAP, 120pF, 200V, NPO, 10%	1	0805	Cal-Chip	GMC21CG121K200NT	
39	C27, C48, C65, C77, C119, C123	CAP, 100 uF, 16V, Low ESR, TANTAL	6	7343H	Kemet	T494X107M016AS	
40							
41	C22	CAP, 0.082uF	1	0805	Cal-Chip	GMC21X7R823K25NT	
42	C20	CAP, 1800pF	1	0805	Cal-Chip	GMC21X7R182K25NT	
43	C21	CAP, 470pF	1	0805	Cal-Chip	GMC21X7R471K50NT	
44	C79, C80, C81, C117, C118, C124, C124, C125, C132, C133, C157, C165, C166	CAP, 1uF	12	1206	Johanson Dielectrics	160R18W105KV4*	
45	D1, D2, D3, D4	Diode	4		Microsemi	UPP9401	
47							

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48	E18, E17	Electrical Tab, mounting	2	SM	GNS	custom	
49	E5	RF Shield, Fence	1	SM	BMI Inc.	BMI-S-203-F	
50	E5	RF Shield, Cover	1		BMI Inc.	BMI-S-203-C	
51	J3	Socket, 75 pos, Five 15-Row, 0.2mm	1	N/A	Samtec	YTQ-115-01-L-5	
52	E6, E7	RF Shield, Fence	2	SM	BMI Inc.	BMI-S-204-F	
53	E6, E7	RF Shield, Cover	2		BMI Inc.	BMI-S-204-C	
54	E1	RF Shield, Fence	1	SM	BMI Inc.	BMI-S-205-F	
55	E1	RF Shield, Cover	1		BMI Inc.	BMI-S-205-C	
60							
61	L2	inductor, 33nH, 2%	1	N/A	CoilCraft	1812SMS-33NG	
62	L3, L13,	inductor, 270nH, 2%	2	0805	CoilCraft	0805CS_271XJBG	
63	L10, L11, L15, L18	inductor, 307nH, 2%	4	N/A	Coilcraft	132-16SMG	
64	L17, L20	inductor, 82nH, 2%	2	N/A	Coilcraft	1812SMS-82NG	
65	L1, L4, L12	inductor, 47nH, 2%	3	N/A	Coilcraft	1812SMS-47NG	
66	L16	inductor, 120nH, 2%	1	N/A	Coilcraft	1812SMS-R12NG	
67	L5	inductor, 6.8uH, 15%, 2.7A	1		Dale/Vishay	IHSM48256.8uh+/-15%	
68	L19	inductor, 39nH, 2%	1	N/A	Coilcraft	1812SMS-39NG	
75	Q1, Q2	Transistor, MMBT2222A	2	SOT23	ON-SEMI	MMBT2222A	
76	Q3	Transisor, FZT790ATA	1	sot223	Zetex	FZT790ATA	

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80	R2, R53, R64	RES, 10, 0.06W, 5%	3	0603	CAL CHIP	RM06J100CT	
81	R12	RES, 120, 5%, 1 WATT	1	2512	PANASONIC	ERJ1TYJ1210	
82	R15	RES, 130, 5%, 1 WATT	1	2512	PANASONIC	ERJ1TYJ1310	
83	R38, R39, R44, R51	RES, 10K, 0.06W, 5%	4	0603	CAL CHIP	RM06J103CT	
84							
85	R1, R5	RES, 22, 0.06W, 5%	2	0603	CAL CHIP	RM06J220CT	
86	R42, R43, R46, R47	RES, 47, 0.06W, 5%	4	0603	CAL CHIP	RM06J470CT	
87							
88							
89							
90	R11, R16	RES, 100K, 0.06W, 5%	2	0603	CAL CHIP	RM06J104CT	
91	R7, R9	RES, 120, 0.06W, 5%	2	0603	CAL CHIP	RM06J121CT	
92							
93							
94							
95							
96	R55, R52	RES, 820, 0.06W, 5%	2	0603	CAL CHIP	RM06J821CT	
98	R66, R67	RES, 95.3, 0.06W, 1%	2	0603	CAL CHIP	RM06F95R3CT	
99	R65	RES, 71.5, 0.06W, 1%	1	0603	CAL CHIP	RM06F71R5CT	

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100							
101							
102							
103	R6, R54, R56, R62, R63	RES, 470, 0.06W, 5%	5	0603	CAL CHIP	RM06J471CT	
104	R3, R4,	RES, 1.50K, 0.06W, 5%	2	0603	CAL CHIP	RM06J152CT	
105	R57	RES, 12, 0.06W, 5%	1	0603	CAL CHIP	RM06J120CT	
106	R27, R33	RES, 316, 0.06W, 1%	2	0603	CAL CHIP	RM06F3160CT	
107	R20	RES, 6.8K, 0.06W, 5%	1	0603	CAL CHIP	RM06J682CT	
108	R19	RES, 3.9K, 0.06W, 5%	1	0603	CAL CHIP	RM06J392CT	
109	R18	RES, 1.8K, 0.06W, 5%	1	0603	CAL CHIP	RM06J182CT	
110	R24	RES, 0 ohm	1	0603	CAL CHIP	RM06J000CT	
111	R21,R22, R35, R36 R45 R61	RES, 2.0K, 0.06W, 5%	6	0603	CAL CHIP	RM06J202CT	
112	R25, R26, R34, R59	RES, 59, 0.06W, 1%	4	0603	CAL CHIP	RM06F59R0CT	
113	R8	RES, 33, 0.06W, 5%	1	0603	CAL CHIP	RM06J330CT	
114	R28, R29, R31, R32	RES, 39, 0.06W, 5%	4	0603	CAL CHIP	RM06J390CT	
115	R10	RES, 560, 0.06W, 5%	1	0603	CAL CHIP	RM06J561CT	
116	R13	RES, 27, 0.06W, 5%	1	0603	CAL CHIP	RM06J270CT	
117	R17	RES, 1K, 0.06W, 5%	1	0603	CAL CHIP	RM06J102CT	
118	R60	RES, 82, 0.06W, 5%	1	0603	CAL CHIP	RM06J820CT	
119							

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120	U13	IC, directional coupler	1	N/A	Anaren	11302-20	
121	U28, U35	IC, 1 bit digital attenuator	2	SOT-5	Skyworks	AA103-72	
122							
123							
124							
125	U4	IC, Voltage Ctl Osc, 575-675MHz	1	N/A	Z-Communications	CLV0625L	
126	U7	IC, Freq. Synthesizer	1	28 pin	Conexant	CX72301-11	
127	U1	IC, 71.5 MHz oscillator	1	N/A	Crystek	t.b.d.	
128	U26, U33	IC, High Dynamic Range FET	2	N/A	WJ Communications	FH1	
129							
130							
131							
132							
133	U15	IC, RF-Detecting Controller, 2.5 GHz	1	8 uMAX	Maxim	MAX4002EUA	
134	U14, U31	IC, RF-Detector, 100 Mhz to 2.5 GHz	2	8 uMAX	Maxim	MAX4003EUA	
135							
136	U2	IC, LVDS line driver, dual	1	SOT23-8	Maxim	MAX9110EKA-T	
137	U5	IC, LVDS receiver	1	SC70-6	Maxim	MAX9130EXT-T	
138	U3, U6	IC, Prescaler, 1.1GHz	2	SO-8	On Semi	MC12093D*	
139	U37	IC, LDO Voltage Reg, 3.3V, 1A	1	SOT223	Micrel	MIC39100-3.3BS	

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140	U36	IC, LDO Voltage Reg, 5.0V, 1A	1	SOT223	Micrel	MIC39100-5.0BS	
141	U25, U30	IC, Dual inverter,schmidt trigger input, with open drain	2	SC70	TI	SN74LVC2G06DCKT	
142							
143	U9	IC, Power amplifier module	1	N/A	Toshiba	S-AV6	
144	U8	IC, Amplifier	1	N/A	Sirenza Microdevices	SGA-7489	
145							
146	U27, U29	Filter	2	N/A	Temwell	TT6724D1-159M	
147							
148	U39	IC, LDO Voltage Reg, 150mA	1	SOT23-5	Maxim	MAX8867EUK50-T	
149	U11	IC, DAC	1	SOT23-8	Maxim	MAX5222EKA-T	
150	U41	IC, Dual,schmidt trigger input	1	SC70	TI	SN74LVC2G17DCK*	
151	U12	IC, Ultra-Small, Audio Power Amp	1	SOT23-8	Maxim	MAX4368EKA-T	
152	U18	IC, 2-Channel, Serial 8-Bit ADC	1	SOT23-8	Maxim	MAX1117EKA	
160		Ground Fingers	1	N/A	Tecknit	5X-55700	
161		Ground Fingers	1	N/A	Tecknit	5X-52400	
190		Baseboard	1		GNS	404-7600-001	
191		Schematic	Ref		GNS	600-7600	

NOTE 1: * in part number is in place of packaging type.

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- 2: GNS authorizes any packaging, compatible with PWB footprint, available to insure best price, proper quantity, and requested delivery date.
3. A " X" in part number indicates that digit can be any value.
4. N/A = Not Available