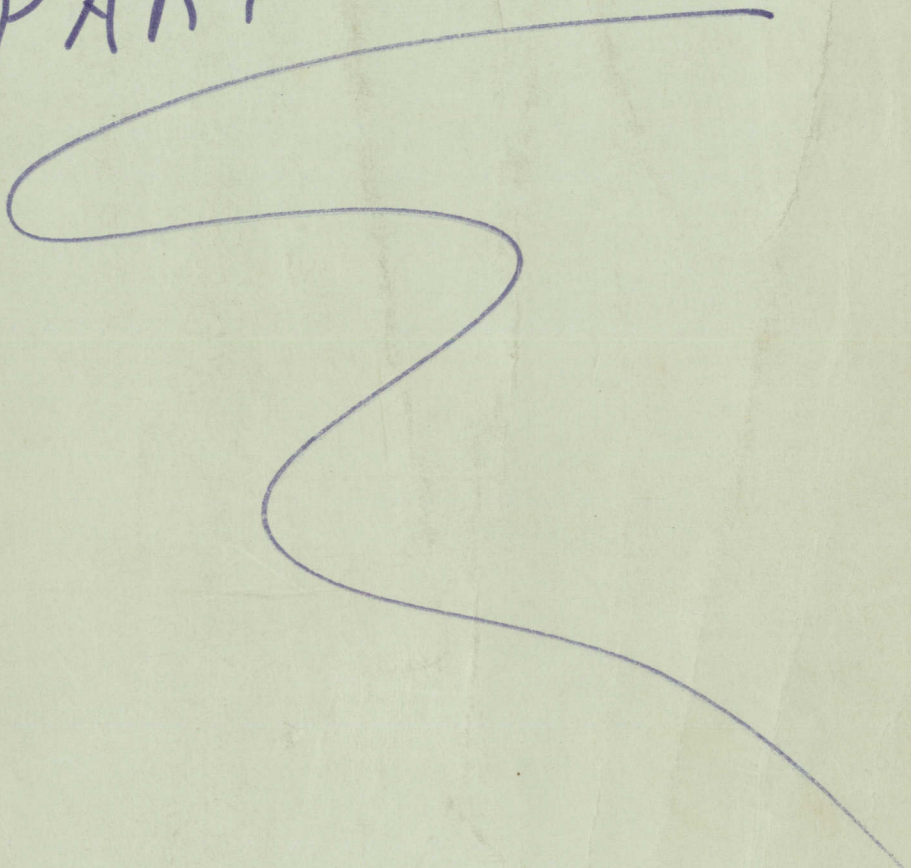


MMX-()

PARTS LIST.



SECTION 6

PARTS LIST

6-1. INTRODUCTION

The parts list presented in this section is a cross-reference list of parts identified by a reference designation and TMC part number. In most cases, parts appearing on schematic diagrams are assigned reference designations in accordance with MIL-STD-16. Wherever practicable, the reference designation is marked on the equipment, close to the part it identifies. In most cases, mechanical and electro-mechanical parts have TMC part numbers stamped on them.

To expedite delivery when ordering any part, specify the following:

- a. Reference symbol.
- b. Description as indicated in parts list.
- c. TMC part number.
- d. Model and serial numbers of the equipment containing the part being replaced; this can be obtained from the equipment nameplate.

For replacement parts not covered by warranty (refer to warranty sheet in front of manual), address all purchase orders to:

The Technical Materiel Corporation
Attention: Sales Department
700 Fenimore Road
Mamaroneck, New York

<u>Assembly or Sub-Assembly</u>	<u>Page</u>
Mixer Divider, Dual (A-4475)✓	6-2
Step Generator A (A-4478)	6-13
Mixer Final (A-4479)✓	6-24
Spectrum Generator (A-4480)✓	6-30
Mixer Divider ½ BD (A-4487)✓	6-38
Comb Filter A (A-4500)✓	6-44
Comb Filter B (A-4501)✓	6-50
R. F. Output (A-4502)✓	6-56
Step Generator B (A-4504)✓	6-59
Transistor (A-4505) 1A4X1000K	6-65
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Filter (A-4507)✓	6-90
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Switch Assembly Bracket (BMA 101)	6-121
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Resistor, board, Assembly (A4593)	6-132

MIXER DIVIDER
A-4475

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C2201	Capacitor, Fixed, Ceramic, 1000 uuf, GMV, 500 WVDC	CC100-29
C2202 thru C2205	Same as C2201	
C2206	Capacitor, Fixed, Mica, 220 uuf, $\pm 2\%$, 500 WVDC	CM111F221G5S
C2207	Same as C2201	
C2208	Capacitor, Fixed, Mica, 1200 uuf, $\pm \frac{1}{2}\%$, 500 WVDC	CM11SF122D5S
C2209	Not used	
C2210	Not used	
C2211	Same as C2206	
C2212	Same as C2206	
C2213	Capacitor, Fixed, Mica, 5 uuf, $\pm 10\%$, 500 WVDC	CM111C050K5S
C2214 thru C2217	Same as C2201	
C2218	Same as C2206	
C2219	Same as C2213	
C2220	Same as C2201	
C2221	Same as C2206	
C2222 thru C2225	Same as C2201	
C2226	Capacitor, Fixed, Mica, 180 uuf, $\pm 2\%$, 500 WVDC	CM111F181G5S
C227	Not used	
C2228	Same as C2201	
C2229	Capacitor, Fixed, Mica, 1500 uuf, $\pm \frac{1}{2}\%$, 500 WVDC	CM112F152D5S
C2230	Same as C2229	
C2231	Capacitor, Fixed, Mica, 130 uuf, $\pm 2\%$, 500 WVDC	CM111F131J5S

MIXER DIVIDER
A-4475

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C2232	Capacitor, Fixed, Mica, 12 uuf, $\pm 5\%$, 500 WVDC	CM111C120J5S
C2233	Same as C2231	
C2234 thru C2236	Same as C2201	
C2237	Same as C2231	
C2238	Same as C2201	
C2239	Same as C2231	
C2240	Same as C2232	
C2241 thru C2244	Same as C2201	
C2245	Same as C2231	
C2246 thru C2249	Same as C2201	
C2250	Capacitor, Fixed, Mica, .01 uf, $\pm 20\%$, 500 WVDC	CC100-41
C2251	Same as C2250	
C2252	Same as C2250	
C2253	Same as C2208	
C2254 thru C2262	Not used	
C2263	Same as C2208	
C2264 thru C2269	Same as C2201	
C2270	Same as C2206	
C2271	Same as C2201	

MIXER DIVIDER
A-4475

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C2272	Same as C2206	
C2273	Same as C2213	
C2274	Same as C2206	
C2275 thru C2278	Same as C2201	
C2279	Same as C2206	
C2280	Same as C2206	
C2280	Same as C2213	
C2281	Same as C2201	
C2282	Same as C2206	
C2283 thru C2286	Same as C2201	
C2287	Same as C2226	
C2288	Same as C2201	
C2289	Not used	
C2290	Same as C2229	
C2291	Same as C2229	
C2292	Same as C2231	
C2293	Same as C2232	
C2294	Same as C2231	
C2295 thru C2297	Same as C2201	
C2298	Same as C2231	
C2299	Same as C2201	

MIXER DIVIDER
A-4475

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C2300	Same as C2231	
C2301	Same as C2232	
C2302 thru C2305	Same as C2201	
C2306	Same as C2231	
C2307 thru C2311	Same as C2201	
C2312 thru C2314	Same as C2250	
C2315	Same as C2208	
CR2201	Semiconductor Device Diode	DD139
CR2202 thru CR2204	Same as CR2201	
CR2205	Semiconductor, Device Diode	1N752
CR2210	Same as CR2205	
L1	Coil, Radio Frequency, fixed, 8.2 uh, $\pm 10\%$, molded case	CL275-8R2
L2	Coil, Radio Frequency, fixed, 120 uh, $\pm 10\%$, molded case	CL275-121
L3	Coil, Radio Frequency, fixed, 220 uh, $\pm 10\%$, molded case	CL275221
L4	Coil, Radio Frequency, fixed, 15 uh, $\pm 10\%$, molded case	CL275-150
L5	Same as L2	
L6	Same as L1	
L7	Same as L2	

MIXER DIVIDER
A-4475

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
L8	Same as L3	
L9	Same as L4	
Q1	Transistor	2N3646
Q2 thru Q14	Same as Q1	
R1	Resistor, Fixed, Composition, 390 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF391J
R2	Resistor, Fixed, Composition, 56 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF560J
R3	Resistor, Fixed, Composition, 1500 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF152J
R4	Resistor, Fixed, Composition, 8200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF822J
R5	Resistor, Fixed, Composition, 680 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF681J
R6	Resistor, Fixed, Composition, 330 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF331J
R7	Resistor, Fixed, Composition, 15 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF150J
R8	Resistor, Fixed, Composition, 120 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF121J
R9	Resistor, Variable, Composition, 500 ohms, $\pm 30\%$, 0.5 watts	RV124-1-501
R10	Resistor, Fixed, Composition, 1000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF102J
R11	Same as R1	
R12	Resistor, Fixed, Composition, 27000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF273J
R13	Resistor, Fixed, Composition, 3300 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF332J
R14	Resistor, Fixed, Composition, 470 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF471J
R15	Same as R7	
R16	Same as R6	
R17	Same as R5	
R18	Resistor, Fixed, Composition, 4700 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF472J

MIXER DIVIDER
A-4475

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R19	Resistor, Fixed, Composition, 10000 ohms, ±5%, ¼ watt	RC07GF103J
R20	Same as R5	
R21	Same as R6	
R22	Resistor, Fixed, Composition, 47 ohms, ±5%, ¼watt	RC07GF470J
R23	Same as R9	
R24	Resistor, Fixed, Composition, 6800 ohms, ±5%, ¼ watt	RC07GF682J
R25	Same as R13	
R26	Same as R12	
R27	Same as R10	
R28	Same as R7	
R29	Resistor, Fixed, Composition, 560 ohms, ±5%, ¼watt	RC07GF561J
R30	Same as R24	
R31	Resistor, Fixed, Composition, 270 ohms, ±5%, ¼watt	RC07GF271J
R32	Same as R13	
R33	Resistor, Fixed, Composition, 18000 ohms, ±5%, ¼ watt	RC07GF183J
R34	Same as R10	
R35	Same as R7	
R36	Same as R29	
R37	Resistor, Fixed, Composition, 220 ohms, ±5%, ¼watt	RC07GF221J
R38	Resistor, Fixed, Composition, 100000 ohms, ±5%, ¼ watt	RC07GF104J
R39	Same as R38	

MIXER DIVIDER
A-4475

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R40	Resistor, Fixed, Composition, 2200 ohms, ±5%, ¼ watt	RC07GF222J
R41	Same as R19	
R42	Resistor, Fixed, Composition, 3900 ohms, ±5%, ¼ watt	RC07GF392J
R43	Resistor, Fixed, Composition, 100 ohms, ±5%, ½ watt	RC20GF101J
R44	Same as R40	
R45	Same as R5	
R46	Same as R8	
R47	Same as R1	
R48	Same as R2	
R49	Same as R3	
R50	Same as R4	
R51	Same as R5	
R52	Same as R7	
R53	Same as R6	
R54	Same as R9	
R55	Same as R10	
R56	Same as R1	
R57	Same as R13	
R58	Same as R12	
R59	Same as R10	
R60	Same as R7	
R61	Same as R14	

MIXER DIVIDER
A-4475

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R62	Same as R6	
R63	Same as R5	
R64	Same as R18	
R65	Same as R19	
R66	Same as R5	
R67	Same as R6	
R68	Same as R22	
R69	Same as R9	
R70	Same as R24	
R71	Same as R13	
R72	Same as R12	
R73	Same as R10	
R74	Same as R7	
R75	Same as R29	
R76	Same as R24	
R77	Same as R31	
R78	Same as R13	
R79	Same as R33	
R80	Same as R10	
R81	Same as R7	
R82	Same as R29	
R83	Resistor, Fixed, Composition, 220 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC20GF221J
R84	Same as R38	
R85	Same as R38	

MIXER DIVIDER
A-4475

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R86	Same as R40	
R87	Same as R19	
R88	Same as R42	
R89	Same as R43	
R90	Same as R40	
R91	Same as R5	
R92 thru R94	Same as R10	
R95	Resistor, Fixed, Composition, 18 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF180J
R96	Same as R29	
R97	Same as R29	
R98	Same as R10	
R99	Same as R10	
R100	Same as R29	
R101	Same as R29	
R102	Same as R29	
T1	Transformer, Radio Frequency, tuned	TT285-4
T2	Transformer, Radio Frequency, tuned	TT285-2
T3 thru T5	Same as T2	
T6	Transformer, Radio Frequency, tuned	TT285-17
T7	Transformer, Radio Frequency, tuned	TT285-3
T8	Same as T1	
T9	Same as T7	

MIXER DIVIDER
A-4475

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
T10 thru T12	Same as T1	
T13 thru T16	Same as T2	
T17	Same as T6	
T18	Same as T7	
T19	Same as T1	
T20	Same as T7	
T21	Same as T1	
T22	Same as T1	
Z1	Network, Decade Counter	NW134
Z2	Same as Z1	

STEP GENERATOR A A-4478

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Ceramic, 1,000 uuf, GMV, 500 WVDC	CC100-29
C2 thru C5	Same as C1	
C6	Capacitor, Fixed, Mica, 120 uuf, $\pm 2\%$, 500 WVDC	CM111F121G5S
C7 thru C9	Same as C1	
C10	Capacitor, Fixed, Mica, 150 uuf, $\pm 1\%$, 500 WVDC	CM111F151F5S
C11	Capacitor, Fixed, Mica, 5 uuf, $\pm 10\%$, 500 WVDC	CM111C050K5S
C12	Same as C10	
C13	Capacitor, Fixed, Ceramic, 20,000 uuf, $+80-20\%$, 25 WVDC	CC100-40
C14 thru C17	Same as C1	
C18	Same as C10	
C19	Same as C11	
C20	Same as C10	
C21 thru C24	Same as C1	
C25	Same as C10	
C26	Same as C11	
C27	Same as C10	
C28 thru C30	Same as C1	
C31	Capacitor, Fixed, Mica, 47 uuf, $\pm 2\%$, 500 WVDC	CM111E470G5S

STEP GENERATOR A A-4478

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C32	Same as C1	
C33	Same as C1	
C34	Same as C13	
C35	Capacitor, Fixed, Ceramic, .1 uf, +80-20%, 100 WVDC	CC100-28
C36 thru C39	Same as C35	
C40	Capacitor, Fixed, Mica, 620 uuf, $\pm 1/2\%$, 500 WVDC	CM111F621D5S
C41 thru C43	Same as C40	
C44	Same as C10	
C45	Same as C11	
C46	Same as C10	
C47	Same as C13	
C48 thru C51	Same as C1	
C52	Same as C10	
C53	Same as C11	
C54	Same as C10	
C55 thru C58	Same as C1	
C59	Same as C10	
C60	Same as C11	
C61	Same as C10	

STEP GENERATOR A A-4478

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C62 thru C65	Same as C1	
C66	Same as C31	
C67	Same as C13	
C68	Same as C1	
C69	Same as C35	
C70 thru C72	Not Used	
C73 thru C77	Same as C1	
C78	Same as C10	
C79 thru C81	Same as C1	
C82	Same as C6	
C83	Same as C11	
C84	Same as C6	
C85	Same as C13	
C86 thru C89	Same as C1	
C90	Same as C6	
C91	Same as C11	
C92	Same as C6	
C93 thru C96	Same as C1	

STEP GENERATOR A A-4478

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C97	Same as C6	
C98	Same as C11	
C99	Same as C6	
C100 thru C103	Same as C1	
C104	Capacitor, Fixed, Mica, 68 uuf, $\pm 1\%$, 500 WVDC	CM111E680J5S
C105	Same as C1	
C106	Same as C13	
C107	Same as C6	
C108	Same as C11	
C109	Same as C6	
C110	Same as C13	
C111 thru C114	Same as C1	
C115	Same as C6	
C116	Same as C11	
C117	Same as C6	
C118 thru C121	Same as C1	
C122	Same as C6	
C123	Same as C11	
C124	Same as C6	
C125 thru C127	Same as C1	

STEP GENERATOR A A-4478

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C128	Same as C104	
C129	Same as C1	
C130	Same as C13	
C131	Same as C1	
C132	Capacitor, Fixed, Ceramic, 100 uuf, GMV, 500 WVDC	CC100-30
C133	Same as C1	
CR1	Semiconductor, Device, Diode	DD139
CR2 thru CR4	Same as CR1	
CR5	Semiconductor, Device, Diode	IN914
CR6 thru CR12	Same as CR5	
L1	Coil, Radio Frequency, Fixed, 120 uh, $\pm 10\%$, molded case	CL275-121
L2 thru L5	Same as L1	
L6	Coil, Radio Frequency, fixed, 2200 uh, $\pm 10\%$, molded case	CL275-222
L7	Same as L6	
L8	Coil, Radio Frequency, fixed, 12 uh, $\pm 10\%$, molded case	CL275-120
L9	Same as L8	
L10 thru L20	Same as L1	
Q1	Transistor	2N3646

STEP GENERATOR A A-4478

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
Q2 thru Q15	Same as Q1	
R1	Resistor, Variable, Composition, 100 ohms, $\pm 30\%$, 0.5 watts	RV124-1-101
R2	Resistor, Fixed, Composition, 8200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF822J
R3	Resistor, Fixed, Composition, 1000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF102J
R4	Resistor, Fixed, Composition, 330 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF331J
R5	Resistor, Fixed, Composition, 47 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF470J
R6	Resistor, Fixed, Composition, 68 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF680J
R7	Resistor, Variable, Composition, 500 ohms, $\pm 30\%$, 0.5 watts	RV124-1-501
R8	Resistor, Fixed, Composition, 100 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF101J
R9	Same as R8	
R10	Same as R2	
R11	Same as R3	
R12	Same as R4	
R13	Resistor, Fixed, Composition, 1800 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF182J
R14	Resistor, Fixed, Composition, 15 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF150J
R15	Resistor, Fixed, Composition, 180 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF181J
R16	Same as R2	
R17	Same as R3	
R18	Same as R4	
R19	Same as R13	

STEP GENERATOR A A-4478

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R20	Resistor, Fixed, Composition, 22 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF220J
R21	Resistor, Fixed, Composition, 120 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF121J
R22	Resistor, Fixed, Composition, 12000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF123J
R23	Same as R13	
R24	Resistor, Fixed, Composition, 820 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF821J
R25	Same as R8	
R26	Resistor, Fixed, Composition, 27 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF270J
R27	Same as R15	
R28	Same as R1	
R29	Same as R4	
R30	Same as R2	
R31	Same as R3	
R32	Same as R6	
R33	Same as R21	
R34	Same as R21	
R35	Same as R2	
R36	Same as R3	
R37	Same as R4	
R38	Same as R13	
R39	Same as R14	
R40	Same as R15	
R41	Same as R2	
R42	Same as R3	

STEP GENERATOR A A-4478

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
.R43	Same as R4	
R44	Same as R13	
R45	Same as R20	
R46	Same as R21	
R47	Same as R22	
R48	Same as R13	
R49	Same as R24	
R50	Same as R8	
R51	Same as R26	
R52	Same as R15	
R53	Resistor, Fixed, Composition, 10 ohms, ±5%, ¼ watt	RC07GF100J
R54	Not used	
thru R60		
R61	Same as R1	
R62	Same as R2	
R63	Same as R3	
R64	Same as R4	
R65	Same as R5	
R66	Same as R6	
R67	Same as R7	
R68	Same as R8	
R69	Same as R8	
R70	Same as R2	
R71	Same as R3	

STEP GENERATOR A A-4478

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R72	Same as R4	
R73	Same as R13	
R74	Same as R14	
R75	Same as R15	
R76	Same as R2	
R77	Same as R3	
R78	Same as R4	
R79	Same as R13	
R80	Same as R20	
R81	Same as R21	
R82	Same as R22	
R83	Same as R13	
R84	Same as R24	
R85	Same as R8	
R86	Same as R26	
R87	Same as R15	
R88	Same as R2	
R89	Same as R3	
R90	Same as R4	
R91	Same as R13	
R92	Same as R14	
R93	Same as R15	
R94	Same as R2	
R95	Same as R3	

STEP GENERATOR A A-4478

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R96	Same as R4	
R97	Same as R13	
R98	Same as R20	
R99	Same as R21	
R100	Same as R22	
R101	Same as R13	
R102	Same as R24	
R103	Same as R8	
R104	Same as R26	
R105	Same as R15	
R106 thru R108	Same as R21	
R109 thru R112	Same as R8	
T1	Transformer, Radio Frequency, tuned	TT287-19
T2	Transformer, Radio Frequency, tuned	TT287-5
T3	Transformer, Radio Frequency, tuned	TT287-3
T4	Transformer, Radio Frequency, tuned	TT287-4
T5	Same as T3	
T6	Same as T4	
T7	Same as T3	
T8	Transformer, Radio Frequency, tuned	TT287-20
T9	Transformer, Radio Frequency, fixed	TZ221
T10	Same as T2	

STEP GENERATOR A A-4478

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
T11	Same as T3	
T12	Same as T4	
T13	Same as T3	
T14	Same as T4	
T15	Same as T3	
T16	Same as T8	
T17	Same as T1	
T18	Transformer, Radio Frequency, tuned,	TT287-15
T19	Transformer, Radio Frequency, tuned	TT287-13
T20	Transformer, Radio Frequency, tuned	TT287-14
T21	Same as T19	
T22	Same as T20	
T23	Same as T19	
T24	Same as T8	
T25	Same as T18	
T26	Same as T19	
T27	Same as T20	
T28	Same as T19	
T29	Same as T20	
T30	Same as T19	
T31	Same as T8	

MIXER FINAL A-4479

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Ceramic, 1,000 uuf, GMV, 500 WVDC	CC100-29
C2	Same as C1	
C3	Capacitor, Fixed, Mica, 220 uuf, ±2%, 500 WVDC	CM111F221G5S
C4 thru C7	Same as C1	
C8	Capacitor, Fixed, Mica, 1,200 uuf, ±5%, 500 WVDC	CM112F122J5S
C9	Not used	
C10	Same as C3	
C11	Capacitor, Fixed, Mica, 5 uuf, ±10%, 500 WVDC	CM111C050K5S
C12	Same as C3	
C13	Same as C1	
C14	Same as C1	
C15	Capacitor, Fixed, Mica, 270 uuf, ±1%, 500 WVDC	CM111F271F5S
C16	Same as C11	
C17	Same as C3	
C18	Same as C1	
C19	Same as C1	
C20	Same as C3	
C21	Same as C1	
C22	Capacitor, Fixed, Mica, 1,500 uuf, ±½%, 500 WVDC	CM112F152DS
C23	Same as C22	
C24	Capacitor, Fixed, Mica, 130 uuf, ±2%, 500 WVDC	CM111F131G5S
C25	Capacitor, Fixed, Mica, 12 uuf, ±5%, 500 WVDC	CM111C120J5S
C26	Same as C24	
C27	Same as C1	

MIXER FINAL A-4479

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C28	Same as C24	
C29	Same as C1	
C30	Same as C24	
C31	Same as C25	
C32	Same as C1	
C33	Same as C1	
C34	Not used	
C35	Same as C1	
C36	Capacitor, Variable, Ceramic, 9 to 35 uuf, 100 WVDC	CV112-2
C37	Capacitor, Fixed, Ceramic, 20000 uuf, +80-20%, 25 WVDC	CC100-40
C38 thru C44	Same as C37	
C45	Capacitor, Fixed, Mica, 200 uuf, ±5%, 500 WVDC	CM111F201J5S
C46	Same as C1	
C47	Same as C1	
C48	Same as C36	
C49 thru C51	Same as C1	
C52	Same as C45	
C53	Same as C25	
C54	Same as C1	
C55	Same as C1	
C56	Same as C11	
C57	Same as C3	

MIXER FINAL A-4479

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C58 thru C61	Same as C1	
CR1	Semiconductor, Device, Diode	DD139
CR2 thru CR4	Same as CR1	
CR5	Semiconductor Device, Diode	1N4864
CR6	Same as CR5	
CR7	Same as CR5	
L1	Not used	
L2	Coil, Radio Frequency, fixed, 8.2 uh, $\pm 10\%$, molded case	CL275-8.2
L3	Coil, Radio Frequency, fixed, 120 uh, $\pm 10\%$, molded case	CL275-121
L4 thru L12	Same as L3	
Q1	Transistor	2N3646
Q2 thru Q6	Same as Q1	
R1	Resistor, Fixed, Composition, 390 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF391J
R2	Resistor, Fixed, Composition, 56 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF560J
R3	Resistor, Fixed, Composition, 8200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF822J
R4	Resistor, Fixed, Composition, 2200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF222J
R5	Same as R1	
R6	Resistor, Fixed, Composition, 220 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF221J
R7	Resistor, Variable, Composition, 500 ohms, $\pm 30\%$, 0.5 watts	RV124-1-501
R8	Same as R6	

MIXER FINAL A-4479

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R9	Resistor, Fixed, Composition, 120 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF121J
R10	Resistor, Fixed, Composition, 1,800 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF182J
R11	Resistor, Fixed, Composition, 10000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF103J
R12	Resistor, Fixed, Composition, 15 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF150J
R13	Resistor, Fixed, Composition, 1000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF102J
R14	Resistor, Fixed, Composition, 4700 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF472J
R15	Same as R11	
R16	Same as R1	
R17	Resistor, Fixed, Composition, 8.2 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF8R2J
R18	Same as R7	
R19	Resistor, Fixed, Composition, 330 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF331J
R20	Resistor, Fixed, Composition, 470 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF471J
R21	Resistor, Fixed, Composition, 47 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF470J
R22	Resistor, Fixed, Composition, 6800 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF682J
R23	Resistor, Fixed, Composition, 3300 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF332J
R24	Resistor, Fixed, Composition, 12000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF123J
R25	Resistor, Fixed, Composition, 560 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF561J
R26	Same as R22	
R27	Resistor, Fixed, Composition, 270 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF271J
R28	Same as R22	
R29	Resistor, Fixed, Composition, 33 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF330J
R30	Same as R19	
R31	Resistor, Fixed, Composition, 1 meg ohm, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF105J
R32	Resistor, Fixed, Composition, 47000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF473J
R33	Same as R6	

MIXER FINAL A-4479

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R34	Same as R31	
R35	Resistor, Fixed, Composition: 680 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF681J
R36	Same as R13	
R37	Same as R14	
R38	Same as R19	
R39	Same as R12	
R40	Resistor, Fixed, Composition, 22 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF220J
R41	Same as R29	
R42 thru R44	Same as R6	
R45	Same as R27	
R46	Same as R24	
R47	Same as R24	
R48	Resistor, Fixed, Composition, 1200 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF122J
R49	Resistor, Fixed, Composition, 180 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF181J
T1	Transformer, Radio Frequency, tuned	TT285-4
T2	Transformer, Radio Frequency, tuned	TT285-2
T3	Same as T2	
T4	Same as T2	
T5	Transformer, Radio Frequency, tuned	TT285-6
T6	Same as T2	
T7	Transformer, Radio Frequency, tuned	TT285-3
T8	Same as T1	
T9	Same as T7	
T10	Same as T1	

MIXER FINAL A-4479

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
T11	Transformer, Radio Frequency, tuned	TT285-7
T12	Transformer, Radio Frequency, tuned	TT285-18
T13	Same as T1	

SPECTRUM GENERATOR A-4480

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Ceramic, 20000 uuf, +60-40%, 150 WVDC	CC100-35
C2	Capacitor, Fixed, Mica, 2700 uuf, $\pm\frac{1}{2}\%$, 500 WVDC	CM112F272D5S
C3	Same as C1	
C4	Same as C1	
C5	Capacitor, Fixed, Ceramic, 100 uuf, GMV, 500 WVDC	CC100-30
C6	Capacitor, Fixed, Ceramic, 10000 uuf, GMV, 500 WVDC	CC100-16
C7	Same as C6	
C8	Same as C6	
C9	Capacitor Fixed, Mica, 20 uuf, $\pm 2\%$, 500 WVDC	CM111C200J5S
C10	Same as C6	
C11	Same as C6	
C12	Capacitor, Variable, Ceramic, 9 to 35 uuf, 100 WVDC	CV112-2
C13	Capacitor, Fixed, Ceramic, 1000 uuf, GMV, 500 WVDC	CC100-29
C14	Same as C6	
C15	Capacitor, Fixed, Mica, 320 uuf, $\pm\frac{1}{2}\%$, 500 WVDC	CM11F321D5S
C16 thru C18	Same as C6	
C19	Same as C15	
C20	Same as C6	
C21	Same as C13	
C22	Same as C6	
C23	Not used	
C24 thru C33	Not used	
C34	Same as C6	

SPECTRUM GENERATOR A-4480

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C35	Same as C13	
C36	Same as C12	
C37	Same as C6	
C38	Same as C6	
C39	Capacitor, Fixed, Mica, 220 uuf, $\pm 2\%$, 500 WVDC	CM111F221G5S
C40	Same as C6	
C41	Same as C13	
C42	Same as C6	
C43	Same as C39	
C44 thru C48	Same as C6	
C49	Same as C13	
C50	Same as C12	
C51	Same as C6	
C52	Same as C6	
C53	Capacitor, Fixed Mica, 270 uuf, $\pm 1\%$, 500 WVDC	CM111F271F5S
C54	Same as C13	
C55	Same as C6	
C56	Same as C12	
C57	Same as C53	
C58 thru C62	Same as C6	
C63	Same as C12	
C64	Same as C12	

SPECTRUM GENERATOR A-4480

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C65	Same as C6	
C66 thru C68	Capacitor, Fixed, Ceramic, 200,000 uuf, +80-20%, 25 WVDC	CC100-33
C69	Capacitor, Fixed, Mica, 180 uuf, ±2%, 500 WVDC	CM11F181G5S
C70	Same as C6	
C71	Same as C6	
C72	Same as C13	
C73	Same as C12	
C74	Same as C6	
C75	Capacitor, Fixed, Mica, 430 uuf, ±2%, 500 WVDC	CM11F431G5S
C76	Same as C6	
C77	Same as C6	
C78	Same as C13	
C79	Not used	
C80	Same as C12	
C81	Same as C75	
C82 thru C84	Same as C13	
C85	Capacitor, Fixed, Mica, 82 uuf, ±2%, 500 WVDC	CM111E820F5S
C86	Capacitor, Variable, Ceramic, 15-60 uuf, 100 WVDC	CV112-6
C87	Same as C13	
C88	Capacitor, Fixed, Mica, 100 uuf, ±10%, 500 WVDC	CM11F101J5S
C89	Same as C86	
C90	Same as C13	

SPECTRUM GENERATOR A-4480

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
CR1	Semiconductor, Device, Diode, Silicon	IN750
Q1 thru Q5	Transistor	2N3646
Q6, Q7	Not used	
Q8 thru Q19	Same as Q1	
R1	Resistor, Fixed, Composition, 330 ohms, 5%, $\frac{1}{4}$ watt	RC07GF331J
R2	Resistor, Fixed, Composition, 8200 ohms, 5%, $\frac{1}{4}$ watt	RC07GF822J
R3	Resistor, Fixed, Composition, 1000 ohms, 5%, $\frac{1}{4}$ watt	RC07GF102J
R4	Resistor, Fixed, Composition, 47 ohms, 5%, $\frac{1}{4}$ watt	RC07GF470J
R5	Same as R3	
R6	Resistor, Fixed, Composition, 33000 ohms, 5%, $\frac{1}{4}$ watt	RC07GF333J
R7	Same as R3	
R8	Resistor, Fixed, Composition, 10000 ohms, 5%, $\frac{1}{4}$ watt	RC07GF103J
R9	Same as R4	
R10	Same as R8	
R11	Resistor, Fixed, Composition, 180 ohms, 5%, $\frac{1}{4}$ watt	RC07GF181J
R12	Same as R3	
R13	Resistor, Fixed, Composition, 560 ohms, 5%, $\frac{1}{4}$ watt	RC07GF561J
R14	Resistor, Fixed, Composition, 470000 ohms, 5%, $\frac{1}{4}$ watt	RC07GF474J
R15	Same as R2	
R16	Same as R3	
R17	Resistor, Fixed, Composition, 15000 ohms, 5%, $\frac{1}{4}$ watt	RC07GF153J

SPECTRUM GENERATOR A-4480

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R18	Resistor, Fixed, Composition, 3300 ohms, 5%, ¼ watt	RC07GF332J
R19	Resistor, Fixed, Composition, 270 ohms, 5%, ¼ watt	RC07GF271J
R20 thru R26	Not used	
R27	Same as R14	
R28	Same as R13	
R29	Same as R3	
R30	Same as R2	
R31	Same as R17	
R32	Same as R18	
R33	Same as R19	
R34	Same as R14	
R35	Same as R3	
R36	Same as R2	
R37	Same as R13	
R38	Same as R17	
R39	Same as R18	
R40	Same as R19	
R41	Resistor, Fixed, Composition, 4700 ohms, 5%, ¼ watt	RC07GF472J
R42	Resistor, Fixed, Composition, 100000 ohms, 5%, ¼ watt	RC07GF104J
R43	Same as R42	
R44	Same as R8	
R45	Resistor, Fixed, Composition, 2200 ohms, 5%, ¼ watt	RC07GF222J
R46	Resistor, Fixed, Composition, 3900 ohms, 5%, ¼ watt	RC07GF392J

SPECTRUM GENERATOR A-4480

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R47	Same as R45	
R48	Resistor, Fixed, Composition, 180 ohms, $\pm 5\%$, 1 watt	RC32GF181J
R49	Same as R8	
R50	Same as R46	
R51 and R52	Same as R3	
R53	Same as R14	
R54	Same as R13	
R55	Same as R3	
R56	Same as R2	
R57	Same as R17	
R58	Same as R18	
R59	Resistor, Fixed, Composition, 390 ohms, 5%, $\frac{1}{4}$ watt	RC07GF391J
R60	Resistor, Variable, Composition, 5000 ohms, $\pm 30\%$, 5 watts	RV124-1-502
R61	Same as R11	
R62 thru R64	Resistor, Fixed, Composition, 100 ohms, 5%, $\frac{1}{4}$ watt	RC07GF101J
R65	Not used	
R66	Same as R62	
R67	Resistor, Fixed, Composition, 27 ohms, 5%, $\frac{1}{4}$ watt	RC07GF270J
R68	Same as R62	
R69	Same as R8	
R70	Same as R8	

SPECTRUM GENERATOR A-4480

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R71	Resistor, Fixed, Composition, 2700 ohms, 5%, 1/4watt	RC07GF272J
R72	Same as R41	
R73 thru R75	Same as R4	
T1	Transformer, Radio Frequency, tuned	TT286-2
T2	Transformer, Radio Frequency, tuned	TT286-16
T3	Transformer, Radio Frequency , tuned	TT286-15
T4	Not used	
T6	Same as T2	
T7	Same as T3	
T8	Same as T2	
T9	Same as T3	
T10	Transformer, Radio Frequency, tuned	TT286-14
T11	Transformer, Radio Frequency, tuned	TT286-13
T12	Transformer, Radio Frequency, tuned	TZ222
TP3	Terminal Stud.	TE0-127-2
TP5	Same as TP3	
TP6	Same as TP3	
P8	Same as TP3	
TP9	Same as TP3	
L1 thru L3	Coil, Radio Frequency, Fixed, 120 uh, ±10%	CL275-121
L4,L5	Not used	

SPECTRUM GENERATOR A-4480

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
L6 thru L14	Same as L1	
L15	Coil, Radio Frequency, fixed, 12 uh, ±10%	CL275-120
L16	Same as L1	
L17	Same as L1	
L18	Coil, 40 MC	CL419
L19	Same as L1	
Y1	Crystal, Unit, Quartz, 12 MHZ	CR109-124
Y2	Crystal, Unit, Quartz, 14 MHZ	CR109-138
Y3	Crystal, Unit, Quartz, 8.0 MHZ	CR109-104
Y4	Not used	
Y5	Crystal, Unit, Quartz, 13.0 MHZ	CR109-134
Z1	NW Decade Counter	NW135

MIXER DIVIDER ½ BD A-4487

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Ceramic, 100 uuf, GMV, 500 WVDC	CC10029
C2 thru C5	Same as C1	
C6	Capacitor, Fixed, Mica, 220 uuf, ±5%, 500 WVDC	CM111F221J5S
C7	Not used	
C8	Not used	
C9	Capacitor, Fixed, Mica, 1200 uuf, ±1%, 500 WVDC	CM112F122F5S
C10	Same as C6	
C11	Capacitor, Fixed, Mica, 5 uuf, ±5%, 500 WVDC	CM111C050J5S
C12	Same as C6	
C13 thru C16	Same as C1	
C17	Same as C6	
C18	Same as C11	
C19	Same as C6	
C20 thru C23	Same as C1	
C24	Capacitor, Fixed, Mica, 180 uuf, ±2%, 500 WVDC	CM111F181G5S
C25	Capacitor, Fixed, Mica, 1500 uuf, ±1%, 500 WVDC	CM112F152F5S
C26	Same as C25	
C27	Capacitor, Fixed, Mica, 130 uuf, ±5%, 500 WVDC	CM111F131J5S
C28	Capacitor, Fixed, Mica, 12 uuf, ±10%, 500 WVDC	CM111C120K5S
C29 thru C31	Same as C1	

MIXER DIVIDER 1/2 BD A-4487

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C32	Same as C27	
C33	Same as C1	
C34	Same as C28	
C35	Same as C27	
C36 thru C40	Same as C1	
C41	Same as C27	
C42 thru C44	Same as C1	
C45	Capacitor, Fixed, Ceramic, 20,000 uuf, +80-20%, 25 WVDC	CC100-40
C46	Same as C1	
C47	Same as C45	
C48	Same as C9	
C49	Not used	
C50	Same as C1	
C51	Same as C1	
C52	Same as C27	
C53	Not used	
C54 thru C57	Same as C1	
CR1	Semiconductor, Device, Diode	DD139
CR2 thru CR4	Same as CR1	
CR5	Semiconductor, Device, Diode	1N752

MIXER DIVIDER ½ BD A-4487

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
L1	Not used	
L2	Coil, Radio Frequency, fixed, 8.2 uh, ±10%, molded case	CL275-8R2
L3	Coil, Radio Frequency, fixed, 120 uh, ±10%, molded case	CL275-121
L4	Coil, Radio Frequency, fixed, 220 uh, ±10%, molded case	CL275-221
L5	Coil, Radio, Frequency, fixed, 15 uh, ±10%, molded case	CL275-150
L6	Same as L3	
Q1	Transistor	2N3646
Q2 thru Q7	Same as Q1	
R1	Resistor, Fixed, Composition, 390 ohms, ±5%, ¼ watt	RC07GF391J
R2	Resistor, Fixed, Composition, 56 ohms, ±5%, ¼watt	RC07GF560J
R3	Resistor, Fixed, Composition, 1500 ohms, ±5%, ¼ watt	RC07GF152J
R4	Resistor, Fixed, Composition, 8200 ohms, ±5%, ¼ watt	RC07GF822J
R5	Resistor, Fixed, Composition, 680 ohms, ±5%, ¼ watt	RC07GF681J
R6	Not used	
R7	Resistor, Variable, Composition, 500 ohms, ±30%, 0.5 watts	RV124-1-501
R8	Resistor, Fixed, Composition, 120 ohms, ±5%, ¼watt	RC07GF121J
R9	Same as R1	
R10	Resistor, Fixed, Composition, 3300 ohms, ±5%, ¼ watt	RC07GF332J

MIXER DIVIDER 1/2 BD A-4487

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R11	Resistor, Fixed, Composition, 27000 ohms, ±5%, 1/4 watt	RC07GF273J
R12	Resistor, Fixed, Composition, 1000 ohms, ±5%, 1/4 watt	RC07GF102J
R13	Resistor, Fixed, Composition, 15 ohms, ±5%, 1/4 watt	RC07GF150J
R14	Resistor, Fixed, Composition, 470 ohms, ±5%, 1/4 watt	RC07GF471J
R15	Resistor, Fixed, Composition, 330 ohms, ±5%, 1/4 watt	RC07GF331J
R16	Resistor, Fixed, Composition, 4700 ohms, ±5%, 1/4 watt	RC07GF472J
R17	Resistor, Fixed, Composition, 10000 ohms, ±5%, 1/4 watt	RC07GF103J
R18	Not used	
R19	Same as R5	
R20	Not used	
R21	Not used	
R22	Resistor, Fixed, Composition, 47 ohms, ±5%, 1/4 watt	RC07GF470J
R23	Same as R7	
R24	Resistor, Fixed, Composition, 6800 ohms, ±5%, 1/4 watt	RC07GF682J
R25	Not used	
R26	Same as R10	
R27	Same as R11	
R28	Same as R12	
R29	Same as R13	
R30	Resistor, Fixed, Composition, 560 ohms, ±5%, 1/4 watt	RC07GF561J

MIXER DIVIDER $\frac{1}{2}$ BD A-4487

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R31	Not used	
R32	Same as R24	
R33	Resistor, Fixed, Composition, 270 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF271J
R34	Same as R13	
R35	Same as R11	
R36	Same as R10	
R37	Same as R12	
R38	Same as R15	
R39	Same as R30	
R40	Resistor, Fixed, Composition, 220 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF221J
R41	Resistor, Fixed, Composition, 100,000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF104J
R42	Same as R41	
R43	Same as R17	
R44	Resistor, Fixed, Composition, 2200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF222J
R45	Resistor, Fixed, Composition, 3900 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF392J
R46	Same as R44	
R47	Resistor, Fixed, Composition, 100 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF101J
R48	Same as R5	
R49	Same as R13	
R50	Same as R5	

MIXER DIVIDER $\frac{1}{2}$ BD A-4487

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R51	Same as R15	
R52	Same as R30	
R53	Same as R30	
R54	Same as R12	
R55	Resistor, Fixed, Composition, 18 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF180J
R56	Same as R12	
R57	Same as R12	
T1	Transformer, Radio Frequency, tuned	TT285-4
T2	Transformer, Radio Frequency, tuned	TT285-2
T3 thru T5	Same as T2	
T6	Transformer, Radio Frequency, Tuned	TT285-17
T7	Transformer, Radio Frequency, Tuned	TT285-3
T8	Same as T1	
T9	Same as T7	
T10	Same as T8	
T11	Same as T1	
TP1 thru TP10	Term Stud	TE0127-2
Z1	Network, Frequency Divider	NW134

COMB FILTER A A-4500

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Ceramic, 20,000 uuf, +60-40%, 150 WVDC	CC100-35
C2	Capacitor, Fixed, Mica, 1,800 uuf, ±2%, 500 WVDC	CM112F182G
C3	Capacitor, Fixed, Ceramic, 1,000 uuf, GMV, 500 WVDC	CC100-29
C4	Capacitor, Fixed, Ceramic, 10,000 uuf, GMV, 500 WVDC	CC100-16
C5 thru C7	Same as C1	
C8	Same as C2	
C9	Same as C1	
C10	Capacitor, Variable, Ceramic, 9 to 35 uuf, 100 WVDC	CV112-2
C11	Same as C10	
C12	Same as C1	
C13	Same as C1	
C14	Same as C2	
C15	Same as C1	
C16	Same as C1	
C17	Same as C2	
C18	Same as C1	
C19	Same as C4	
C20	Same as C3	
C21	Same as C4	
C22	Same as C10	
C23	Same as C1	
C24	Same as C1	
C25	Capacitor, Fixed, Mica, 2400 uuf, ±2%, 500 WVDC	CM112F242G5S

COMB FILTER A A-4500

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C26	Same as C1	
C27	Same as C25	
C28	Same as C1	
C29	Same as C3	
C30	Same as C4	
C31	Same as C4	
C32	Same as C10	
C33	Same as C1	
C34	Same as C1	
C35	Capacitor, Fixed, Mica, 2700 uuf, $\pm 1\%$, 500 WVDC	CM112F272F5S
C36 thru C38	Same as C1	
C39	Same as C3	
C40	Same as C35	
C41	Same as C4	
C42	Same as C4	
C43	Same as C10	
C44	Same as C1	
C45	Same as C1	
C46	Same as C35	
C47	Same as C1	
C48	Same as C1	
C49	Same as C35	
C50	Same as C1	
C51	Same as C3	

COMB FILTER A A-4500

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C52	Same as C4	
C53	Same as C4	
C54	Same as C10	
C55	Same as C1	
C56	Same as C1	
C57	Capacitor, Fixed, Mica, 3900 uuf, ±2%, 300 WVDC	CM112F392G3S
C58	Same as C1	
C59	Same as C1	
C60	Same as C57	
C61	Same as C1	
C62	Same as C3	
C63 thru C65	Same as C4	
C66	Same as C1	
L1	Coil, Radio Frequency, fixed, 120 uh, ±10% molded case	CL275-121
L2 thru L12	Same as L1	
Q1	Transistor	2N3646
Q2 thru Q12	Same as Q1	
R1	Resistor, Fixed, Composition, 15,000 ohms, ±5%, ½ watt	RC07GF153J
R2	Resistor, Fixed, Composition, 3,300 ohms, ±5%, ½ watt	RC07GF332J
R3	Resistor, Variable, Composition, 500 ohms, ±30%, 0.5 watts	RV124-1-501

COMB FILTER A A-4500

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R4	Resistor, Fixed, Composition: 1,000 ohms, ±5%, ¼ watt	RC07GF102J
R5	Resistor, Fixed, Composition, 8,200 ohms, ±5%, ¼ watt	RC07GF822J
R6	Resistor, Fixed, Composition, 470000 ohms, ±5%, ¼ watt	RC07GF474J
R7	Resistor, Fixed, Composition, 560 ohms, ±5%, ¼ watt	RC07GF561J
R8	Same as R7	
R9	Same as R6	
R10	Same as R5	
R11	Same as R4	
R12	Same as R1	
R13	Same as R2	
R14	Same as R3	
R15	Same as R7	
R16	Same as R6	
R17	Same as R5	
R18	Same as R4	
R19	Same as R1	
R20	Same as R2	
R21	Same as R3	
R22	Same as R7	
R23	Same as R6	
R24	Same as R5	
R25	Same as R4	
R26	Same as R1	

COMB FILTER A A-4500

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R27	Same as R2	
R28	Same as R3	
R29	Same as R7	
R30	Same as R6	
R31	Same as R5	
R32	Same as R4	
R33	Same as R1	
R34	Same as R2	
R35	Same as R3	
R36	Same as R7	
R37	Same as R6	
R38	Same as R5	
R39	Same as R4	
R40	Same as R1	
R41	Same as R2	
R42	Same as R3	
T1	Transformer, Radio Frequency, tuned	TT286-8
T2	Same as T1	
T3	Transformer, Radio Frequency, tuned	TT286-6
T4	Same as T3	
T5	Same as T3	
T6	Same as T3	
T7	Transformer, Radio, Frequency, tuned	TT286-4
T8	Same as T7	
T9	Transformer, Radio, Frequency, tuned	TT286-2

COMB FILTER A A-4500

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
T10	Same as T9	
T11	Same as T9	
T12	Same as T9	
XY1	Socket, Crystal, clip type, 2 cadmium plated contacts, 3/64" X 5/32" tail slots	TS167-1
XY2 thru XY6	Same as XY1	
Y1	Crystal unit quartz, frequency 1.8 MHZ	CR109-100
Y2	Crystal unit quartz, frequency 1.6 MHZ	CR109-98
Y3	Crystal unit quartz, frequency 1.4 MHZ	CR109-96
Y4	Crystal unit quartz, frequency 1.2 MHZ	CR109-94
Y5	Crystal unit quartz, frequency 1.0 MHZ	CR109-92
Y6	Crystal unit quartz, frequency .8 MHZ	CR109-90

COMB FILTER B A-4501

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Ceramic, 20000 uuf, +60-40%, 150 WVDC	CC100-35
C2	Capacitor, Fixed, Mica, 1,600 uuf, ±2%, 500 WVDC	CM112F162G5S
C3	Capacitor, Fixed, Ceramic, 1,000 uuf, GMV, 500 WVDC	CC100-29
C4	Capacitor, Fixed, Ceramic, 10000 uuf, GMV, 500 WVDC	CC100-16
C5 thru C7	Same as C1	
C8	Same as C2	
C9	Same as C1	
C10	Capacitor, Variable, Ceramic, 9 to 35 uuf, 100 WVDC	CV112-2
C11	Same as C10	
C12	Same as C1	
C13	Same as C1	
C14	Capacitor, Fixed, Mica, 2000 uuf, ±2%, 500 WVDC	CM112F202G5S
C15	Same as C1	
C16	Same as C1	
C17	Same as C14	
C18	Same as C1	
C19	Same as C4	
C20	Same as C3	
C21	Same as C4	
C22	Same as C10	
C23	Same as C1	
C24	Same as C1	
C25	Capacitor, Fixed, Mica, 2200 uuf, ±1%, 500 WVDC	CM112F222F5S

COMB FILTER B A-4501

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C26	Same as C1	
C27	Same as C25	
C28	Same as C1	
C29	Same as C3	
C30	Same as C4	
C31	Same as C4	
C32	Same as C10	
C33	Same as C1	
C34	Same as C1	
C35	Same as C25	
C36 thru C38	Same as C1	
C39	Same as C3	
C40	Same as C25	
C41	Same as C4	
C42	Same as C4	
C43	Same as C10	
C44	Same as C1	
C45	Same as C1	
C46	Capacitor, Fixed, Ceramic, 3300 uuf, ±2%, 500 WVDC	CM112332F5S
C47	Same as C1	
C48	Same as C1	
C49	Same as C46	
C50	Same as C1	
C51	Same as C3	

COMB FILTER B A-4501

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C52	Same as C4	
C53	Same as C4	
C54	Same as C10	
C55	Same as C1	
C56	Same as C1	
C57	Same as C46	
C58	Same as C1	
C59	Same as C1	
C60	Same as C46	
C61	Same as C1	
C62	Same as C3	
C63 thru C65	Same as C4	
C66	Same as C1	
L1	Coil, Radio Frequency, fixed, 120 uh, ±10%, molded case	CL275-121
L2 thru L12	Same as L1	
Q1	Transistor	
Q2 thru Q12	Same as Q1	
R1	Resistor, Fixed Composition, 15000 ohms, ±5%, ½ watt	RC07GF153J
R2	Resistor, Fixed Composition, 3300 ohms, ±5%, ½ watt	RC07GF332J
R3	Resistor, Variable Composition, 500 ohms, ±30%, 0.5 watts	RV124-1-501
R4	Resistor, Fixed, Composition, 1,000 ohms, ±5%, ½ watt	RC07GF102J

COMB FILTER B A-4501

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R5	Resistor, Fixed, Composition, 8200 ohms, ±5%, ¼ watt	RC07GF822J
R6	Resistor, Fixed, Composition, 470000 ohms, ±5%, ¼ watt	RC07GF474J
R7	Resistor, Fixed, Composition, 560 ohms, ±5%, ¼ watt	RC07GF561J
R8	Same as R7	
R9	Same as R6	
R10	Same as R5	
R11	Same as R4	
R12	Same as R1	
R13	Same as R2	
R14	Same as R3	
R15	Same as R7	
R16	Same as R6	
R17	Same as R5	
R18	Same as R4	
R19	Same as R1	
R20	Same as R2	
R21	Same as R3	
R22	Same as R7	
R23	Same as R6	
R24	Same as R5	
R25	Same as R4	
R26	Same as R1	
R27	Same as R2	
R28	Same as R3	

COMB FILTER B A-4501

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R29	Same as R7	
R30	Same as R6	
R31	Same as R5	
R32	Same as R4	
R33	Same as R1	
R34	Same as R2	
R35	Same as R3	
R36	Same as R7	
R37	Same as R6	
R38	Same as R5	
R39	Same as R4	
R40	Same as R1	
R41	Same as R2	
R42	Same as R3	
T1	Transformer, Radio Frequency, tuned,	TT286-8
T2	Same as T1	
T3	Same as T1	
T4	Same as T1	
T5	Transformer, Radio Frequency, tuned	TT286-6
T6	Same as T5	
T7	Transformer, Radio Frequency, tuned	TT286-4
T8	Same as T7	
T9	Same as T7	
T10	Same as T7	
T11	Transformer, Radio Frequency, tuned	TT286-1

COMB FILTER B A-4501

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
T12	Same as T11	
XY1	Socket, Crystal,	TS167-1
XY2 thru XY6	Same as XY1	
Y1	Crystal, unit quartz, frequency 1.9 MHZ	CR109-101
Y2	Crystal, unit quartz, frequency 1.7 MHZ	CR109-99
Y3	Crystal, unit quartz, frequency 1.5 MHZ	CR109-97
Y4	Crystal, unit quartz, frequency 1.3 MHZ	CR109-95
Y5	Crystal, unit quartz, frequency 1.1 MHZ	CR109-93
Y6	Crystal, unit quartz, frequency .8 MHZ	CR109-91

RF OUTPUT A-4502

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Plastic: 0.82 uf, ±5%, 60 WVDC	CN114R82-5J
C2	Capacitor, Fixed, Ceramic: 10,000 uuf, GMV, 500 WVDC	CC100-16
C3	Same as C2	
C4	Same as C1	
C5 Thru C17	Same as C2	
C18	Capacitor, Fixed, Mica: 620 uuf, ±½%, 500 WVDC 500 WVDC	CM111F621D5S
C19	Capacitor, Fixed, Electrolytic: 50 uf, -10+150% at 120 cps at 25 degrees C; 50 WVDC; polarized.	CE105-50-50
C20	Same as C2	
C21 thru C30	Not used	
C31 thru C34	Same as C2	
C35	Capacitor, Fixed, Ceramic: 1,000 uuf, GMV, 500 WVDC	CC100-29
C36	Same as C2	
C37	Same as C35	
C38	Same as C2	
CR1	Semiconductor Device, Diode	IN4864
CR2	Semiconductor Device, Diode.	IN100
CR3	Same as CR2	
L1	Coil, Radio Frequency: 120 uh, ±10%, molded case.	CL240-120
L2 thru L8	Same as L1	

RF OUTPUT A-4502

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
L9 thru L12	Not Used	
L13	Coil, Radio Frequency: fixed, 120 uh, ±10%, molded case	CL275-121
L14 thru L22	Same as L13	
L23	Coil, Radio Frequency: fixed, 212 uh, ±10%, molded case	CL275-2R2
Q1	Transistor	2N3297
Q2	Transistor	2N3296
Q3	Same as Q2	
R1	Resistor, Variable, Composition: 10,000 ohms, ±30%, 0.5 watts	RV124-1-103
R2	Same as R1.	
R3	Resistor, Fixed, Composition: 22 ohms, ±5%, ½ watt	RC20GF220J
R4	Resistor, Variable, Composition: 2,000 ohms, ±30%, ½ watt	RV124-1-202
R5	Resistor, Fixed, Composition: 5600 ohms, ±5%, ½ watt	RC20GF562J
R6	Resistor, Fixed, Composition: 3300 ohms, ±5%, ½ watt	RC0GF332J
R7	Resistor, Fixed, Composition: 1,000 ohms, ±5%, 1watt	RC32GF102J
R8	Same as R3.	
R9	Resistor, Fixed, Composition: 1,000 ohms, ±5%, ½ watt	RC20GF102J
R10	Resistor, Fixed, Composition: 100 ohms, ±5%, ½ watt	RC20GF101J
R11	Resistor, Fixed, Composition: 47 ohms, ±5%, ¼ watt	RC0GF470J
R12	Same as R9	

RF OUTPUT A-4502

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R13	Resistor, Fixed, Composition: 10 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC20GF100J
R14	Same as R10	
R15	Resistor, Fixed, Composition: 2200 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC20GF222J
R16	Not used	
R17	Same as R9	
R18	Resistor, Fixed, Composition: 220 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC20GF221J
R19	Resistor, Fixed, Composition: 47000 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC20GF473J
R20	Not used	
R21	Resistor, Fixed, Composition: 43,000 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC20GF433J
T1	Transformer, Radio Frequency: fixed,	TZ220
T2	Transformer, Radio Frequency: fixed,	TZ219
T3	Same as T2.	

STEP GENERATOR B A-4504

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Mica, 470 uuf, $\pm 5\%$, 500 WVDC	CM111F471J5S
C2	Capacitor, Fixed, Ceramic, 1,000 uuf, GMV, 500 WVDC	CC100-29
C3	Capacitor, Variable, Ceramic, 15 to 60 uuf, 100 WVDC	CV112-5
C4 thru C8	Same as C2	
C9	Same as C3	
C10	Same as C2	
C11	Capacitor, Fixed, Ceramic, 100 uuf, GMV, 500 WVDC	CC100-30
C12	Same as C2	
C13	Capacitor, Fixed, Ceramic, 470 uuf, $\pm 10\%$, 500 WVDC	CC100-7
C14	Same as C2	
C15	Same as C11	
C16 thru C18	Same as C2	
C19	Same as C3	
C20	Same as C2	
C21	Same as C11	
C22 thru C24	Same as C2	
C26 thru C29	Same as C2	
C30	Same as C3	
C31	Same as C2	
C32	Same as C11	
C33	Same as C2	

STEP GENERATOR B A-4504

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C34	Same as C13	
C35	Same as C2	
C36	Same as C11	
C37 thru C40	Same as C2	
C41	Same as C3	
C42	Same as C11	
C43	Same as C2	
C44	Same as C2	
C45	Capacitor, Variable, Ceramic, 9 to 35 uuf, 100 WVDC	CV112-2
C46 thru C48	Same as C2	
C49	Same as C45	
C50 thru C52	Same as C2	
C53	Same as C11	
C54	Same as C2	
C55	Same as C13	
C56	Same as C2	
C57	Same as C11	
C58 thru C61	Same as C2	
C62	Same as C45	
C63 thru C66	Same as C11	

STEP GENERATOR B A-4504

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C67	Capacitor, Fixed, Mica, 82 uuf, ±5%, 500 WVDC	CM111F820J5S
C68	Same as C1	
FL1	Filter, Bandpass	FX280
FL2	Filter, Bandpass	FX281
FL3	Filter, Bandpass	FX282
L1	Coil, Radio Frequency, fixed, 120 uh, ±10%, molded case	CL275-121
L2	Same as L1	
L3	Same as L1	
L4	Coil, Radio Frequency, fixed, 47 uh, ±10%, molded case	CL275-470
L5	Same as L1	
L6	Coil, Radio Frequency, fixed, 10 uh, ±10%, molded case	CL275-100
L7 thru L10	Same as L1	
L11	Same as L4	
L12	Same as L1	
L13	Same as L6	
L14 thru L17	Same as L1	
L18	Same as L4	
L19	Same as L1	
L20	Same as L6	
L21	Same as L1	
L22	Coil, Radio Frequency, fixed, 0.47 uh, ±10%, molded case	CL275-OR47

STEP GENERATOR B A-4504

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
Q1	Transistor	2N3646
Q2 thru Q9	Same as Q1	
R1	Resistor, Fixed, Composition, 68 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF680J
R2	Resistor, Fixed, Composition, 3,900 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF392J
R3	Resistor, Fixed, Composition, 39000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF393J
R4	Resistor, Fixed, Composition, 5600 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF562J
R5	Resistor, Fixed, Composition, 330 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF331J
R6	Resistor, Fixed, Composition, 8200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF822J
R7	Resistor, Fixed, Composition, 1000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF102J
R8	Resistor, Fixed, Composition, 150 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF151J
R9	Resistor, Fixed, Composition, 10 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF100J
R10	Resisotr, Fixed, Composition, 47 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF470J
R11	Same as R7	
R12	Same as R6	
R13	Same as R8	
R14	Same as R9	
R15	Same as R5	
R16	Same as R1	
R17	Same as R2	
R18	Same as R3	
R19	Same as R4	
R20	Same as R5	
R21	Same as R6	
R22	Same as R7	

STEP GENERATOR B A-4504

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R23	Same as R8	
R24	Same as R9	
R25	Same as R10	
R26	Same as R7	
R27	Same as R6	
R28	Same as R8	
R29	Same as R9	
R30	Same as R5	
R31	Same as R1	
R32	Same as R2	
R33	Same as R3	
R34	Same as R4	
R35	Same as R5	
R36	Same as R6	
R37	Same as R7	
R38	Same as R8	
R39	Same as R9	
R40	Same as R10	
R41	Same as R7	
R42	Same as R6	
R43	Same as R8	
R44	Same as R9	
R45	Same as R5	
R46 thru R48	Same as R10	

STEP GENERATOR B A-4504

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
<p>T1</p> <p>T2 thru T9</p>	<p>Transformer, Radio Frequency, fixed,</p> <p>Same as T1</p>	<p>TX215-12</p>

TRANSLATOR A-4505

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Ceramic, 1000 uuf, GMV, 500 WVDC	CC100-29
C2	Capacitor, Fixed, Mica, 18 uuf, ±5%, 500 WVDC	CM111C180J5S
C3	Same as C1	
C4	Capacitor, Fixed, Ceramic, 100000 uuf, +80-20%, 100 WVDC	CC100-28
C5 thru C7	Same as C1	
C8	Same as C4	
C9	Same as C2	
C10	Capacitor, Fixed, Mica, 22 uuf, ±5%, 500 WVDC	CM111C220J5S
C11 thru C13	Same as C1	
C14	Same as C2	
C15	Capacitor, Fixed, Ceramic, 200000 uuf, =80-20%, 25 WVDC	CC100-33
C16 thru C37	See Separate Parts List A-4600	
C38	Capacitor, Fixed, Ceramic, 100 uuf, GMV, 500 WVDC	CC100-30
C39	Capacitor, Fixed, Mica, 51 uuf, ±2%, 500 WVDC	CM111E510G5S
C40	Not used	
C41	Not used	
C42	Capacitor, Variable, Ceramic, 2 to 8 uuf, 200 WVDC	CV112-4
C43	Capacitor, Fixed, Mica, 47 uuf, ±2%, 500 WVDC	CM111E470G5S
C44	Same as C38	
C45	Same as C39	

TRANSLATOR A-4505

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C46	Same as C38	
C47	Same as C43	
C48	Same as C42	
C49	Same as C38	
C50	Same as C1	
C51	Same as C39	
C52	Same as C38	
C53	Same as C43	
C54	Same as C42	
C55	Same as C38	
C56	Same as C38	
C56	Same as C38	
C57	Same as C39	
C58	Same as C38	
C59	Capacitor, Fixed, Mica, 75 uuf, $\pm 5\%$, 500 WVDC	CM111E750J5S
C60	Capacitor, Variable, Ceramic, 9 to 35 uuf, 100 WVDC	CV112-2
C61	Same as C38	
C62	Same as C38	
C63	Same as C10	
C64	Capacitor, Fixed, Mica, 68 uuf, $\pm 1\%$, 500 WVDC	CM111E680F5S
C65	Capacitor, Fixed, Mica, 33 uuf, $\pm 2\%$, 500 WVDC	CM111E330G5S
C66	Capacitor, Fixed, Ceramic, 20000 uuf, +80-20%, 25 WVDC	CC100-40
C67	Same as C15	

TRANSLATOR A-4505

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C68	Capacitor, Fixed, Ceramic, 2200 uuf, GMV, 500 WVDC	CC100-11
C69	Same as C66	
C70	Same as C66	
C71	Same as C4	
C72	Capacitor, Fixed, Mica, 510 uuf, $\pm 2\%$, 500 WVDC	CM111F511G5S
C73	Capacitor, Fixed, Mica, 120 uuf, $\pm 2\%$, 500 WVDC	CM111F121G5S
C74	Capacitor, Fixed, Mica, 560 uuf, $\pm 1\%$, 500 WVDC	CM111F561F5S
C75	Capacitor, Fixed, Mica, 430 uuf, $\pm 2\%$, 500 WVDC	CM111F431G5S
C76	Capacitor, Fixed, Mica, 360 uuf, $\pm 2\%$, 500 WVDC	CM111F361G5S
C77	Same as C4	
C78 thru C80	Same as C1	
C81	Capacitor, Fixed, Mica, 130 uuf, $\pm 2\%$, 500 WVDC	CM111F131G5S
C82	Same as C1	
C83	Capacitor, Fixed, Mica, 390 uuf, $\pm 1\%$, 500 WVDC	CM111F391F5S
C84	Same as C66	
C85	Capacitor, Fixed, Mica, 750 uuf, $\pm 20\%$, 500 WVDC	CM111F751G5S
C86	Same as C83	
C87	Capacitor, Fixed, Mica, 110 uuf, $\pm 5\%$, 500 WVDC	CM111F111J5S
C88	Capacitor, Fixed, Mica, 5 uuf, $\pm 10\%$, 500 WVDC	CM111C050K5S
C89	Same as C87	
C90	Same as C1	
C91	Same as C1	
C92	Same as C87	

TRANSLATOR A-4505

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C93	Same as C87	
C94	Same as C88	
C95	Same as C1	
C96	Same as C1	
C97	Same as C87	
C98	Same as C87	
C99	Same as C88	
C100	Same as C87	
C101 thru C106	Same as C1	
C107	Same as C87	
C108	Same as C87	
C109	Same as C88	
C110 thru C113	Same as C1	
C114	Same as C87	
C115	Same as C1	
C116	Same as C1	
C117	Same as C38	
C118	Capacitor, Fixed, Electrolytic, 10 MF, -10+150%, 250 WVDC	CE105-10-25
C119	Sam as C38	
CR1	See Seperate Parts List A-4600	
CR2	See Seperate Parts List A-4600	

TRANSLATOR A-4505

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
CR3	Semiconductor, Device, Diode	DD137
CR4	Semiconductor, Device, Diode	DD138
CR5	Same as CR4	
CR6	Semiconductor, Device, Diode	IN914
CR7	Same as CR6	
CR8	Semiconductor, Device, Diode	IN4864
CR9	Same as CR8	
CR10	Same as CR6	
L1	Coil, Radio Frequency, fixed, 8.2 uh, $\pm 10\%$, molded case	CL275-8R2
L2	Same as L1	
L3	Same as L1	
L4 thru L9	See Separate Parts List A-4600	
L10	Coil, Radio Frequency, fixed, 1.0 uh, $\pm 10\%$, Molded case	CL275-1R0
L11 thru L13	Same as L10	
L14	Coil, Radio Frequency, fixed, .077 uh, $\pm 4\%$	CL412-23
L15	Coil, Radio Frequency, fixed, 22 uh, $\pm 10\%$, molded case	CL275-220
L16	Same as L10	
L17	Coil, Radio Frequency, fixed, 0.39 uh, $\pm 10\%$, molded	CL2750R39
L18	Same as L10	
L19	Coil, Radio Frequency, fixed, 0.82 uh, $\pm 10\%$, molded case	CL275-0R82

TRANSLATOR A-4505

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
L20	Coil, Radio Frequency, fixed, 120 uh, ±10%, molded case	CL275-121
L21	Same as L20	
L22	Same as L20	
L23	Coil, Radio Frequency, fixed, .63 uh, ±4%	CL412-24
L24	Coil, Radio Frequency, fixed, .36 uh, ±4%	CL412-25
L25	Same as L20	
L26	Same as L20	
L27	Same as L1	
L28	Same as L1	
L29	Same as L15	
L30	Same as L15	
L131 thru L34	Same as L20	
Q1	Transistor	2N3646
Q2	Same as Q1	
Q3	Same as Q1	
Q4 thru Q6	See Separate Parts List A-4600	
Q7	Transistor	2N3600
Q8 thru Q11	Same as Q7	
Q12 thru Q19	Same as Q1	

TRANSLATOR A-4505

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R1	Resistor, Fixed, Composition, 47 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF470J
R2	Resistor, Fixed, Composition, 47000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF473J
R3	Resistor, Fixed, Composition, 100000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF104J
R4	Resistor, Fixed, Composition, 33 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF330J
R5	Resistor, Fixed, Composition, 100 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF101J
R6	Same as R1	
R7	Resistor, Fixed, Composition, 1000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF102J
R8	Same as R2	
R9	Same as R4	
R10	Same as R3	
R11	Same as R5	
R12	Same as R1	
R13	Same as R7	
R14	Same as R2	
R15	Same as R4	
R16	Same as R3	
R17	Same as R5	
R18	Same as R7	
R19 thru R36	See Separate Parts List A-4600	
R37	Resistor, Fixed, Composition, 8200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF822J
R38	Same as R7	

TRANSLATOR A-4505

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R39	Same as R5	
R40	See Separate Parts List A-4600	
R41	Resistor, Fixed, Composition, 39 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF390J
R42	Resistor, Fixed, Composition, 560 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF561J
R43	Same as R7	
R44	Resistor, Fixed, Composition, 150 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF151J
R45	Same as R41	
R46	Resistor, Fixed, Composition, 6800 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF682J
R47	Resistor, Fixed, Composition, 330 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF331J
R48	Resistor, Fixed, Composition, 5600 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF562J
R59	Same as R7	
R50	Same as R44	
R51	Same as R41	
R52	Resistor, Fixed, Composition, 220 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF221J
R53	Resistor, Fixed, Composition, 4700 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF472J
R54	Same as R7	
R55	Same as R44	
R56	Same as R41	
R57	Resistor, Fixed, Composition, 120 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF121J
R58	Same as R1	
R59	Same as R1	
R60	Resistor, Fixed, Composition, 3300 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF332J
R61	Same as R37	

TRANSLATOR A-4505

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R62	Same as R44	
R63	Resistor, Fixed, Composition, 8.2 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF8R2J
R64	Same as R1	
R65	Same as R1	
R66	Same as R2	
R67	Same as R3	
R68	Same as R7	
R69	Resistor, Fixed, Composition, 10 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF100J
R70	Not used	
R71	Resistor, Variable, Composition, 500 ohms, $\pm 30\%$, 0.5 watts	RV124-1-501
R72	Same as R57	
R73	Same as R52	
R74	Resistor, Fixed, Composition, 390 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF391J
R75	Same as R52	
R76	Resistor, Fixed, Composition, 18000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF183J
R77	Same as R7	
R78	Resistor, Fixed, Composition, 27000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF273J
R79	Resistor, Fixed, Composition, 22 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF220J
R80	Same as R3	
R81	Same as R1	
R82	Same as R7	
R83	Same as R74	

TRANSLATOR A-4505

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R84	Same as R76	
R85	Resistor, Fixed, Composition, 56000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF563J
R86	Resistor, Fixed, Composition, 10000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF103J
R87	Same as R2	
R88	Same as R1	
R89	Resistor, Fixed, Composition, 820 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF821J
R90	Resistor, Fixed, Composition, 68000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF683J
R91	Resistor, Fixed, Composition, 820000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF824J
R92	Resistor, Fixed, Composition, 330000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF334J
R93	Resistor, Fixed, Composition, 220000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF224J
R94	Same as R74	
R95	Same as R86	
R96	Same as R53	
R97	Resistor, Fixed, Composition, 470 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF471J
R98	Same as R76	
R99	Same as R3	
R100	Same as R79	
R101	Same as R78	
R102	Same as R7	
R103	Same as R1	
R104	Same as R74	

TRANSLATOR A-4505

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R105	Same as R76	
R106	Same as R85	
R107	Same as R86	
R108	Same as R2	
R109	Same as R1	
R110	Same as R89	
R111	Same as R90	
R112	Same as R1	
R113	Same as R1	
R114	Same as R57	
R115 thru R117	See Separate Parts List A-4600	
R118	Same as R1	
R119	Same as R52	
R120	Resistor, Fixed, Composition, 82 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF820J
T1	Transformer, Radio Frequency, tuned	TT285-10
T2	Same as T1	
T3	Same as R1	
T4 thru T7	See Separate Parts List A-4600	
T8	Transformer, Radio Frequency, fixed	TZ215-1
T9	Same as T8	
T10	Same as T8	
T11	Transformer, Radio Frequency, fixed,	TZ220

TRANSLATOR A-4505

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
T12	Transformer, Radio Frequency, Tuned	TT285-4
T13	Transformer, Radio Frequency, tuned	TT285-2
T14	Transformer, Pulse	TF228U13
T15 thru T23	Same as T13	

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Mica, 100 uuf, $\pm 1\%$, 500 WVDC	CM111F101F5S
C2	Capacitor, Fixed, Ceramic, 1000 uuf, GMV, 500 WVDC	CC100-29
C3	Capacitor, Fixed, Mica, 18 uuf, $\pm 5\%$, 500 WVDC	CM111C180J5S
C4	Capacitor, Fixed, Mica, 130 uuf, $\pm 5\%$, 500 WVDC	CM111F131J5S
C5	Capacitor, Fixed, Mica, 27 uuf, $\pm 5\%$, 500 WVDC	CM111E270J5S
C6	Capacitor, Fixed, Mica, 91 uuf, $\pm 5\%$, 500 WVDC	CM111F910J5S
C7	Capacitor, Fixed, Ceramic, 100 uuf, GMV, 500 WVDC	CC100-30
C8	Same as C7	
C9	Same as C7	
C10	Capacitor, Variable, Ceramic, 2.5 to 11 uuf, 200 WVDC	CV112-3
C11	Same as C7	
C12	Capacitor, Fixed, Mica, 36 uuf, $\pm 5\%$, 500 WVDC	CM111E360J5S
C13 thru C15	Same as C7	
C16	Same as C10	
C17 thru C21	Same as C7	
C22	Same as C10	
C23 thru C26	Same as C7	
C27	Capacitor, Fixed, Mica, 10 uuf, $\pm 5\%$, 500 WVDC	CM111C100J5S
C28	Capacitor, Variable, Ceramic, 5.5 to 18 uuf 200 WVDC	CV112-1
C29	Same as C7	

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C30	Same as C2	
C31	Capacitor, Fixed, Mica, 82 uuf, $\pm 1\%$, 500 WVDC	CM111E820F5S
C32	Same as C27	
C33	Capacitor, Fixed, Mica, 110 uuf, $\pm 5\%$, 500 WVDC	CM111F111J5S
C34	Same as C5	
C35	Capacitor, Fixed, Mica, 75 uuf, $\pm 5\%$, 500 WVDC	CM111E750J5S
C36 thru C38	Same as C7	
C39	Same as C10	
C40	Same as C7	
C41	Same as C12	
C42 thru C44	Same as C7	
C45	Same as C10	
C46 thru C50	Same as C7	
C51	Same as C10	
C52 thru C54	Same as C7	
C55	Same as C27	
C56	Same as C28	
C57	Same as C7	
C58	Same as C7	
C59	Same as C2	

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C60	Same as C31	
C61	Same as C27	
C62	Same as C33	
C63	Same as C34	
C64	Same as C35	
C65 thru C67	Same as C7	
C68	Same as C10	
C69	Same as C7	
C70	Same as C12	
C71 thru C73	Same as C7	
C74	Not used	
C75	Same as C10	
C76 thru C80	Same as C7	
C81	Same as C10	
C82 thru C85	Same as C7	
C86	Same as C27	
C87	Same as C28	
C88 thru C91	Same as C7	

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C92 thru C96	Same as C2	
C97	Capacitor, Fixed, Mica, 180 uuf, $\pm 2\%$, 500 WVDC	CM111F181G5S
C98	Same as C2	
C99	Capacitor, Fixed, Mica, 620 uuf, $\pm 1\%$, 500 WVDC	CM111F621D5S
C100	Same as C99	
C101	Capacitor, Variable, Ceramic, 9 to 35 uuf, 100 WVDC	CV112-2
C102 thru C104	Same as C2	
C105	Same as C6	
C106	Capacitor, Fixed, Mica, 5 uuf, $\pm 10\%$, 500 WVDC	CM111C050K5S
C107	Same as C6	
C108 thru C111	Same as C2	
C112	Same as C6	
C113	Same as C2	
C114	Same as C6	
C115	Same as C106	
C116 thru C118	Same as C2	
C119	Same as C6	
C120	Same as C106	
C121	Same as C6	

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C122 thru C124	Same as C2	
C125	Same as C12	
C126 thru C128	Same as C2	
C129	Same as C6	
C130	Same as C106	
C131	Same as C6	
C132 thru C135	Same as C2	
C136	Same as C6	
C137	Same as C106	
C138	Same as C6	
C139 thru C142	Same as C2	
C143	Same as C6	
C144	Same as C6	
C145	Same as C106	
C146 thru C148	Same as C2	
C149	Same as C12	
C150	Same as C2	
C151	Same as C2	
CR1	Semiconductor, Device, Diode	DD139

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
CR2	Same as CR1	
CR3	Semiconductor, Device, Diode,	1N627
CR4	Same as CR3	
L1	Coil, Radio Frequency, fixed, .128 uh, $\pm 10\%$	CL412-41
L2	Coil, Radio Frequency, fixed, .11 uh, $\pm 10\%$	CL412-36
L3	Coil, Radio Frequency, fixed, 0.82 uh, $\pm 10\%$, molded case	CL275-0R82
L4 thru C7	Same as L3	
C8	Coil, Radio Frequency, fixed, .205 uh, $\pm 4\%$	CL412-38
L9	Same as L3	
L10	Same as L2	
L11	Coil, Radio Frequency, fixed, .085 uh, $\pm 4\%$	CL412-37
L12 thru L16	Same as L3	
L17	Coil, Radio Frequency, fixed, .205 uh, $\pm 4\%$,	CL412-39
L18	Same as L3	
L19	Same as L2	
L20	Same as L11	
L21 thru L25	Same as L3	
L26	Coil, Radio Frequency, fixed, .155 uh, $\pm 4\%$	CL412-40
L27	Same as L3	
L28	Same as L3	

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
L29	Coil, Radio Frequency, fixed, 129 uh, $\pm 10\%$, molded case	CL275-121
L30	Same as L29	
L31	Coil, Radio Frequency, fixed, 12 uh, $\pm 10\%$, molded case	CL275-120
L32 thru L40	Same as L29	
Q1	Transistor	2N3600
Q2 thru Q13	Same as Q1	
Q14	Transistor	2N3646
Q15 thru Q20	Same as Q14	
R1	Resistor, Fixed, Composition, 56 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF560J
R2	Resistor, Fixed, Composition, 1000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF102J
R3	Resistor, Fixed, Composition, 8200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF822J
R4	Resistor, Fixed, Composition, 2200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF222J
R5	Resistor, Fixed, Composition, 18 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF180J
R6	Resistor, Fixed, Composition, 220 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF221J
R7	Resistor, Fixed, Composition, 12 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF120J
R8	Same as R2	
R11	Resistor, Fixed, Composition, 22 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF220J
R12	Same as R6	
R13	Same as R7	

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R14	Same as R2	
R15	Same as R3	
R16	Same as R10	
R17	Resistor, Fixed, Composition, 10 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF100J
R18	Same as R6	
R19	Same as R7	
R20	Resistor, Fixed, Composition, 1500 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF152J
R21	Same as R3	
R22	Same as R10	
R23	Same as R17	
R24	Resistor, Fixed, Composition, 180 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF181J
R25	Same as R1	
R26	Same as R2	
R27	Same as R3	
R28	Same as R4	
R29	Same as R17	
R30	Same as R6	
R31	Resistor, Fixed, Composition, 68 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF680J
R32	Same as R2	
R33	Same as R3	
R34	Same as R10	
R35	Same as R11	
R36	Same as R6	
R37	Resistor, Fixed, Composition, 47 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF470J

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R38	Same as R2	
R39	Same as R3	
R40	Same as R10	
R41	Same as R17	
R42	Same as R6	
R43	Same as R37	
R44	Same as R20	
R45	Same as R3	
R46	Same as R10	
R47	Same as R17	
R48	Same as R24	
R49	Same as R1	
R50	Same as R2	
R51	Same as R3	
R52	Same as R4	
R53	Same as R17	
R54	Same as R6	
R55	Same as R31	
R56	Same as R2	
R57	Same as R3	
R58	Same as R10	
R59	Same as R11	
R60	Same as R6	
R61	Same as R37	

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R62	Same as R2	
R63	Same as R3	
R64	Same as R10	
R65	Same as R17	
R66	Same as R6	
R67	Same as R37	
R68	Same as R2	
R70	Same as R10	
R71	Same as R17	
R72	Same as R24	
R73	Resistor, Fixed, Composition, 3300 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF332J
R74	Same as R20	
R75	Same as R10	
R76	Resistor, Fixed, Composition, 6.8 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF6R8J
R77	Same as R10	
R78	Resistor, Variable, Composition, 100 ohms, $\pm 30\%$,	RV124-1-101
R79	Same as R2	
R80	Same as R3	
R81	Resistor, Fixed, Composition, 330 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF331J
R82	Resistor, Fixed, Composition, 4.7 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF4R7J
R83	Same as R24	
R84	Same as R78	
R85	Resistor, Fixed, Composition, 120 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF121J
R86	Same as R5	

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R87	Resistor, Fixed, Composition, 100 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF101J
R88	Same as R87	
R89	Same as R2	
R90	Same as R3	
R91	Same as R81	
R92	Resistor, Fixed, Composition, 1200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF122J
R93	Resistor, Fixed, Composition, 15 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF150J
R94	Same as R24	
R95	Same as R2	
R96	Same as R3	
R97	Same as R81	
R98	Same as R92	
R99	Same as R11	
R100	Same as R85	
R101	Same as R2	
R102	Resistor, Fixed, Composition, 6800 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF682J
R103	Same as R92	
R104	Resistor, Fixed, Composition, 820 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF821J
R105	Resistor, Fixed, Composition, 27 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF270J
R106	Same as R5	
R107	Same as R2	
R108	Same as R3	
R109	Same as R81	
R110	Same as R93	

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R111	Same as R24	
R112	Same as R2	
R113	Same as R3	
R114	Same as R81	
R115	Same as R92	
R116	Same as R11	
R117	Same as R85	
R118	Same as R2	
R119	Same as R102	
R120	Same as R92	
R121	Same as R104	
R122	Same as R105	
R123	Same as R24	
R124	Same as R92	
T1	Transformer, Radio Frequency, fixed	TZ215-6
T2	Same as T1	
T3	Same as T1	
T4	Transformer, Radio Frequency, fixed	TZ215-8
T5	Same as T4	
T6	Same as T4	
T7	Transformer, Radio Frequency, fixed	TZ215-10
T8	Same as T7	
T9	Same as T7	
T10	Transformer, Radio Frequency, fixed	TZ215-11

STEP GENERATOR C A-4506

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
T11	Transformer, Radio Frequency, fixed	TT287-19
T12	Transformer, Radio Frequency, fixed	TT287-9
T13	Transformer, Radio Frequency, fixed	TT287-12
T14	Transformer, Radio Frequency, fixed	TT287-10
T15	Same as T13	
T16	Same as T14	
T17	Same as T13	
T18	Transformer, Radio Frequency, Fixed	TT287-21
T19	Same as T12	
T20	Same as T13	
T21	Same as T14	
T22	Same as T13	
T23	Same as T14	
T24	Same as T13	
T25	Same as T18	
Y1	Crystal, Unit Quartz, 12 MHZ	CR109-124

FILTER A-4507

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Ceramic, 10,000, GMV, 500 WVDC	CC100-16
C2	Same as C1	
C3	Capacitor, Fixed, Mica, 680 uufd, $\pm 2\%$, 500 WVDC	CM111F681G5S
C4	Capacitor, Fixed, Mica, 430 uufd, $\pm 2\%$, 500 WVDC	CM111F431G5S
C5	Capacitor, Fixed, Mica, 750 uufd, $\pm 2\%$, 500 WVDC	CM111F751G5S
C6	Capacitor, Fixed, Mica, 820 uufd, $\pm 2\%$, 500 WVDC	CM111F821G5S
C7	Capacitor, Fixed, Mica, 910 uufd, $\pm 2\%$, 500 WVDC	CM111F911G5S
C8	Capacitor, Fixed, Mica, 560 uufd, $\pm 1\%$, 500 WVDC	CM111F561F5S
C9	Capacitor, Fixed, Mica, 510 uufd, $\pm 2\%$, 500 WVDC	CM111F511G5S
C10	Capacitor, Fixed, Mica, 1000 uufd, $\pm 1\%$, 500 WVDC	CM111F102F5S
C11	Same as C10	
C12	Capacitor, Fixed, Mica, 200 uufd, $\pm 2\%$, 500 WVDC	CM111F201G5S
C13	Same as C5	
C14	Same as C5	
C15	Same as C1	
C16	Same as C5	
C17	Capacitor, Fixed, Mica, 390 uufd, $\pm 2\%$, 500 WVDC	CM111F391G5S
C18	Capacitor, Fixed, Mica, 1100 uufd, $\pm 1\frac{1}{2}\%$, 500 WVDC	CM112F112D5S
C19	Same as C8	
C20	Capacitor, Fixed, Mica, 1300 uufd, $\pm 1\%$, 500 WVDC	CM112F132F5S
C21	Capacitor, Fixed, Mica, 110 uufd, $\pm 5\%$, 500 WVDC	CM111F111J5S
C22	Same as C7	
C23	Same as C1	
C24	Capacitor, Fixed, Mica, 360 uufd, $\pm 2\%$, 500 WVDC	CM111F361G5S

FILTER A-4507

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C25	Capacitor, Fixed, Mica, 330 uufd, $\pm 2\%$, 500 WVDC	CM111F331G5S
C26	Capacitor, Variable, Ceramic, 15-60 uufd, 100 WVDC	CV112-5
C27	Same as C8	
C28	Capacitor, Fixed, Mica, 470 uufd, $\pm 1\%$, 500 WVDC	CM111F471F5S
C29	Same as C26	
C30	Capacitor, Fixed, Mica, 620 uufd, $\pm 1\%$, 500 WVDC	CM111F621F5S
C31	Capacitor, Fixed, Mica, 36 uufd, $\pm 5\%$, 500 WVDC	CM111E360J5S
C32	Same as C26	
C33	Same as C9	
C34	Same as C1	
C35	Capacitor, Fixed, Mica, 220 uufd, $\pm 2\%$, 500 WVDC	CM111F221G5S
C36	Capacitor, Fixed, Mica, 150 uufd, $\pm 1\%$, 500 WVDC	CM111F151F5S
C37	Same as C26	
C38	Same as C25	
C39	Same as C35	
C40	Same as C26	
C41	Same as C17	
C42	Capacitor, Fixed, Mica, 24 uufd, $\pm 5\%$, 500 WVDC	CM111C240J5S
C43	Capacitor, Variable, Ceramic, 9-35 uufd, 100 WVDC	CV112-2
C44	Capacitor, Fixed, Mica, 330 uufd, $\pm 2\%$, 500 WVDC	CM111F301G5S
C45	Same as C1	
C46	Capacitor, Fixed, Mica, 130 uufd, $\pm 2\%$, 500 WVDC	CM111F131G5S
C47	Capacitor, Fixed, Mica, 560 uufd, $\pm 5\%$, 500 WVDC	CM111E560J5S
C48	Same as C26	

FILTER A-4507

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C49	Same as C35	
C50	Capacitor, Fixed, Mica, 100 uufd, $\pm 1\%$, 500 WVDC	CM111F101F5S
C51	Same as C26	
C52	Capacitor, Fixed, Mica, 240 uufd, $\pm 2\%$, 500 WVDC	CM111F241G5S
C53	Capacitor, Fixed, Mica	CM111C050K5S
C54	Same as C43	
C55	Capacitor, Fixed, Mica, 180 uufd, $\pm 2\%$, 500 WVDC	CM111F181G5S
C56	Same as C1	
C57	Same as C46	
C58	Same as C55	
C59	Capacitor, Fixed, Mica 120 uufd, $\pm 2\%$, 500 WVDC	CM111F121G5S
C60	Capacitor, Variable, Ceramic, 2-8 uufd, 200 WVDC	CV112-4
C61	Same as C26	
K1	Relay, Armature	RL143-4
K2	Same as K1	
K3	Same as K1	
K4	Same as K1	
K5	Same as K1	
K6	Same as K1	
L1	Coil, R.F., Fixed, 2.69 uh, $\pm 4\%$,	CL412-2
L2	Coil, R.F., Fixed, 2.49 uh, $\pm 4\%$,	CL412-3
L3	Coil, R.F., Fixed, 3.80 uh, $\pm 4\%$,	CL412-1
L4	Coil, R.F., Fixed, 1.78 uh, $\pm 4\%$,	CL412-5
L5	Coil, R.F., Fixed, 1.68 uh, $\pm 4\%$,	CL412-6
L6	Coil, R.F., Fixed, 2.41 uh, $\pm 4\%$,	CL412-4

FILTER A-4507

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
L7	Coil, R.F., Fixed, .85 uh, $\pm 4\%$,	CL412-8
L8	Coil, R.F., Fixed, .76 uh, $\pm 4\%$,	CL412-10
L9	Coil, R.F., Fixed, 1.32 uh, $\pm 4\%$	CL412-7
L10	Coil, R.F., Fixed, .52 uh, $\pm 4\%$,	CL412-11
L11	Coil, R.F., Fixed, .47 uh, $\pm 4\%$,	CL412-13
L12	Coil, R.F., Fixed, .78 uh, $\pm 4\%$,	CL412-9
L13	Coil, R.F., Fixed, .34 uh, $\pm 4\%$,	CL412-14
L14	Coil, R.F., Fixed, .31 uh, $\pm 4\%$,	CL412-15
L15	Coil, R.F., Fixed, .48 uh, $\pm 4\%$,	CL412-12
L16	Coil, R.F., Fixed, 120 uh, $\pm 10\%$,	CL275-121
L17	Same as L16	
L18	Same as L16	
L19	Same as L16	
L20	Same as L16	
L21	Same as L16	
L22	Same as L16	
L23	Coil, R.F., Fixed, .21 uh, $\pm 4\%$	CL412-16
L24	Coil, R.F., Fixed, .19 uh, $\pm 4\%$	CL412-17

PC BD A POWER SUPPLY A-4512

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Electrolytic, 200 mfd, 50 WVDC	CE105-200-50
C2	Same as C1	
C3	Capacitor, Fixed, Electrolytic, 150 mfd, 75 WVDC	CE105-150-75
C4	Same as C3	
CR1	Rectifier, Semiconductor, Device	DD130-200-40

PC BD B POWER SUPPLY A-4513

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed Electrolytic, 25 mfd, +50-15%, 50 WVDC	CE107-6
C2	Same as C1	
C3	Same as C1	
C4	Same as C1	
C5	Same as C1	
CR1	Semiconductor, Device Diode	1N100
CR2	Same as CR1	
CR3	Semiconductor, Device, Diode	1N4619
CR4	Semiconductor, Device, Diode	1N753A
CR5	Same as CR3	
CR6	Semiconductor, Device, Diode	1N972B
CR7	Same as CR4	
Q1	Transistor	2N1481
Q2	Same as Q1	
Q3	Same as Q1	
Q4	Transistor	2N3638
Q5	Same as Q1	
Q6	Same as Q4	
Q7	Same as Q1	
R1	Resistor, Fixed, Composition, 470 ohms, ±5%, ½ watt	RC07GF471J
R2	Resistor, Fixed, Composition, 1000 ohms, ±5%, ½ watt	RC07GF102J
R3	Resistor, Variable, Composition, 1000 ohms, ±30%, ½ watt	RV124-1-102
R4	Same as R2	

PC BD B POWER SUPPLY A-4513

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R6	Resistor, Fixed, Composition, 10000 ohms, ±5%, ¼watt	RC07GF103J
R7	Same as R2	
R8	Same as R3	
R9	Resistor, Fixed, Composition, 4700 ohms, ±5%, ¼watt	RC07GF472J
R10	Resistor, Fixed, Composition, 1500 ohms, ±5%, ¼watt	RC07GF152J
R11	Resistor, Fixed, Wirewound, 10 ohms, ±2%, 5 watt	RR114-10W2
R12	Same as R3	
R13	Resistor, Fixed, Composition, 6800 ohms, ±5%, ¼watt	RC07GF682J
R14	Same as R2	
R15	Same as R11	
R16	Resistor, Fixed, Composition, 4700 ohms, ±5%, ¼watt	RC07GF472J
R17	Resistor, Fixed, Composition, 150 ohms, ±5%, ¼watt	RC07GF151J
R18	Resistor, Variable, Composition	RV124-1-103
R19	Same as R17	

SIDEBAND GENERATOR A-4524

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Ceramic, 100,000 uufd, +80%-20%, 100 WVDC	CC100-28
C2	Capacitor, Fixed, Electrolytic, 75 mfd, 15 WVDC	CE105-75-15
C3	Same as C1	
C5	Capacitor, Fixed, Electrolytic, 10 mfd, 25 WVDC	CE105-10-25
C4	Capacitor, Fixed, Mica, 22 uufd, ±5%, 500 WVDC	CM111C220J5S
C6	Same as C5	
C7	Capacitor, Fixed, Ceramic, 10,000 uufd, 25 WVDC	CC100-41
C8	Capacitor, Fixed, Electrolytic, 2 mfd, 50 WVDC	CE105-2-50
C9	Same as C5	
C10	Same as C7	
C11	Capacitor, Fixed, Electrolytic, 2 uufd, 50 WVDC	CE105-2-50
C12 thru C15	Same as C5	
C16	Same as C1	
C17	Same as C5	
C18	Same as C7	
C19	Same as C1	
C20	Same as C7	
C21	Capacitor, Fixed, Electrolytic, 3900 uufd, ±1%, 30 WVDC	CM112F392F5S
C22 thru C32	Same as C1	
C33	Same as C5	
C34	Same as C5	
C35	Same as C1	

SIDEBAND GENERATOR A-4524

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C36	Same as C5	
C37	Same as C7	
C38	Same as C1	
C39	Same as C7	
C40	Same as C21	
C41 thru C48	Same as C1	
C49	Capacitor, Fixed, Electrolytic, 50 mf, 50 WVDC	CE105-50-50
C50	Capacitor, Fixed, Mica, 150 uufd, $\pm 1\%$, 500 WVDC	CM111F151F5S
C51	Same as C50	
C52	Capacitor, Variable, Ceramic, 15-60 uufd, 100 WVDC	CV112-5
C53	Same as C52	
CR1	Semiconductor, Device Diode	IN541
CR2 thru CR8	Same as CR1	
L1	Coil, Fixed, R.F., 1000 ohms, $\pm 20\%$, 135 ma	CL275-102
L2	Coil, Fixed, R.F., 220 ohms, $\pm 20\%$, 250 ma	CL275-221
L3	Coil, Fixed, R.F. 3300 ohms, $\pm 20\%$, 80 ma	CL275-332
L4	Same as L3	
Q1	Transistor, Silicon	
Q2	Transistor, Same as Q1	
Q3	Transistor, Same as Q1	
Q4	Transistor, Same as Q1	
Q5	Transistor, Same as Q1	
Q6	Transistor, Same as Q1	

SIDEBAND GENERATOR A-4524

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
Q7 thru Q13	Transistor, Same as Q1	
R1	Resistor, Fixed, Composition, 220 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF221J
R2	Resistor, Fixed, Composition, 4700 ohms, $\pm 5\%$,	RC07GF221J
R3	Resistor, Fixed, Composition, 10,000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF103J
R4	Resistor, Fixed, Composition, 56,000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF563J
R5	Resistor, Fixed, Composition, 100,000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF104J
R6	Same as R4	
R7	Resistor, Fixed, Composition 470,000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF474J
R8	Same as R3	
R9	Resistor, Variable, Composition, 10,000 ohms, $\pm 30\%$, $\frac{1}{2}$ watt	RV124-1-103
R10	Resistor, Fixed, Composition, 22,000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF223J
R11	Same as R3	
R12	Resistor, Fixed, Composition 1500 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF152J
R13	Resistor, Fixed, Composition 100 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF101J
R14	Resistor, Fixed, Composition, 470 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF471J
R15	Same as R10	
R16	Same as R3	
R17	Same as R12	
R18	Same as R13	
R19	Same as R14	

SIDEBAND GENERATOR A-4524

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R20	Same as R2	
R21	Resistor, Fixed, Composition, 15,000 ohms, ±5%, ¼ watt	RC07GF153J
R22	Resistor, Fixed, Composition, 1000 ohms, ±5%, ¼ watt	RC07GF102J
R23	Resistor, Fixed, Composition, 33,000 ohms, ±5%, ¼ watt	RC07GF333J
R24	Same as R21	
R25	Same as R22	
R26	Same as R22	
R27	Same as R14	
R28	Resistor, Variable, Composition, 100 ohms, ±30%, ¼ watt	RV124-1-101
R29	Same as R14	
R30	Same as R22	
R31	Same as R23	
R32	Same as R3	
R33	Same as R22	
R34	Same as R28	
R35	Same as R14	
R36	Same as R22	
R37	Same as R14	
R38	Same as R3	
R39	Resistor, Fixed, Composition, 1200 ohms, ±5%, ¼ watt	RC07GF122J
R40	Same as R3	
R41	Same as R22	

SIDEBAND GENERATOR A-4524

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R42	Same as R3	
R43	Resistor, Fixed, Composition, 27000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF273J
R44	Same as R22	
R45	Same as R22	
R46	Same as R43	
R47	Same as R3	
R48	Same as R22	
R49	Same as R23	
R50	Same as R21	
R51	Same as R22	
R52	Same as R22	
R53	Same as R14	
R54	Same as R28	
R55	Same as R14	
R56	Same as R22	
R57	Same as R23	
R58	Same as R3	
R59	Same as R22	
R60	Same as R28	
R61	Same as R14	
R62	Same as R22	
R63	Same as R39	
R64	Same as R14	
R65	Same as R3	

SIDEBAND GENERATOR A-4524

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R66	Same as R3	
R67	Same as R22	
R68	Same as R39	
R69	Same as R39	
R70	Same as R22	
R71	Same as R13	
R72	Same as R13	
T1	Transformer, R.F. Tuned	TT285-11
T2	Same as T1	
T3	Transformer, Audio Frequency	TF0359
T4	Same as T3	
TP1	Term, Stud	TE0-127-2
TP2	Same as TP1	
TP3	Same as TP1	
TP4	Same as TP1	
TP5	Same as TP1	
TP6	Same as TP1	
TP7 thru TP10	Term, Stud, Same as TP1	TE127-2

FREQUENCY SHIFT GENERATOR A-4525

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1001	Capacitor, Fixed, Ceramic, 100000 uufd, $\pm 80-20\%$, 100 WVDC	CC100-28
C1002	Capacitor, Fixed, Ceramic, 100000 uufd, $\pm 80-20\%$, 25 WVDC	CC100-41
C1003	Same as C1002	
C1004	Same as C1001	
C1005	Same as C1002	
C1006	Capacitor, Fixed, Mica, 270 uufd, $\pm 1\%$, 500 WVDC	CM111F271F5S
C1008	Same as C1002	
C1009	Same as C1002	
C1010	Same as C1002	
C1011	Same as C1002	
C1012	Capacitor, Fixed, Ceramic, 360 uufd, $\pm 2\%$, 500 WVDC	CM111F361G5S
C1013	Same as C1002	
C1014	Capacitor, Fixed, Ceramic, 1000 uufd, GMV, 500WVDC	CC100-29
C1015	Capacitor, Fixed, Ceramic, 330 uufd, $\pm 2\%$, 500 WVDC	CM111F331G5S
C1016	Same as C1014	
C1017	Same as C1014	
C1018	Same as C1001	
C1019	Same as C1002	
C1020	Same as C1002	
C1021	Same as C1002	
C1022	Capacitor, Fixed, Ceramic, 20000 uufd, $\pm 80-20\%$, 25 WVDC	CC100-40
C1023	Same as C1002	
C1024	Same as C1002	

FREQUENCY SHIFT GENERATOR A-4525

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1025	Same as C1002	
C1026	Same as C1002	
C1027	Capacitor, Fixed, Ceramic, 200,000 uufd, +80-20%, 25 WVDC	CC100-33
C1028	Same as C1022	
C1029	Capacitor, Fixed, Ceramic, 5 uufd, ±10%, 500 WVDC	CM111C050K55
C1030	Same as C1028	
C1031	Same as C1002	
C1032	Same as C1001	
C1033	Same as C1002	
CR1001	Semiconductor, Device, Diode	IN755A
CR1002	Same as CR1001	
CR1003	Semiconductor, Device, Diode	IN627
CR1004	Same as CR1003	
CR1005	Same as CR1003	
CR1006	Same as CR1003	
CR1007	Same as CR1003	
CR1008	Semiconductor, Device, Diode	IN914
CR1009	Same as CR1008	
CR1010	Semiconductor, Device, Diode	IN34A
CR1011	Same as CR1010	
CR1012	Same as CR1010	
CR1013	Same as CR1010	
CR1014	Subconductor, Device, Diode	IN754A
FL1001	Filter, Bandpass	FX268

FREQUENCY SHIFT GENERATOR A-4525

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
L1001	Coil, R.F., Fixed 1000 uhy, $\pm 10\%$, 135 ma	CL275-102
L1002	Same as L1001	
L1003	Coil, R.F., Fixed, 220 uhy, $\pm 10\%$, 250 ma	CL275-221
L1004	Coil, R.F., Fixed, 100 uhy, $\pm 10\%$, 432 ma	CL275-101
L1005	Same as L1004	
Q1001	Transistor, Silicon	2N3646
Q1002	Same as Q1001	
Q1003	Same as Q1001	
Q1004	Same as Q1001	
Q1005	Transistor	2N696
Q1006	Transistor, Silicon	2N1711
Q1007	Same as Q1006	
Q1008	Same as Q1005	
Q1009	Same as Q1005	
Q1010	Same as Q1005	
Q1012	Same as Q1001	
Q1013	Same as Q1001	
R1001	Resistor, Fixed, Composition, 22000 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF223J
R1002	Resistor, Fixed, Composition, 33000 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF333J
R1003	Resistor, Fixed, Composition, 33 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF330J
R1004	Resistor, Fixed, Composition, 560 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF561J
R1005	Resistor, Fixed, Composition, 330 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF331J
R1011	Resistor, Fixed, Composition, 15000 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF153J
R1012	Same as R1001	
R1013	Resistor, Fixed, Composition, 470 ohms, $\pm 5\%$, $\frac{1}{2}$ watt	RC07GF471J

FREQUENCY SHIFT GENERATOR A4525

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R1014	Resistor, Fixed, Composition, 680 ohms $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF681J
R1015	Resistor, Fixed, Composition, 1000 Ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF102J
R1016	Resistor, Fixed, Composition, 1500 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF152J
R1017	Same as R1011	
R1018	Same as R1001	
R1019	Same as R1013	
R1020	Resistor, Fixed, Composition, 100 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF101J
R1021	Same as R1015	
R1022	Resistor, Fixed, Composition, 220 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF221J
R1023	Resistor, Fixed, Composition, 100000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF104J
R1024	Resistor, Fixed, Composition, 10000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF103J
R1025	Resistor, Variable, WW, 1000 ohms, $\pm 30\%$, $\frac{1}{2}$ watt	RV119-3-102
R1026	Same as R1024	
R1027	Resistor, Variable, WW, 10000 ohms, $\pm 30\%$, $\frac{1}{2}$ watt	RV119-3-103
R1028	Same as R1024	
R1029	Resistor, Fixed, Composition, 47000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF473J
R1030	Same as R1029	
R1031	Same as R1029	
R1032	Same as R1029	
R1034	Resistor, Fixed, Composition, 6800 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF682J
R1035	Same as R1025	
R1036	Same as R1027	
R1037	Same as R1027	
R1038	Same as R1029	
R1039	Same as R1005	

FREQUENCY SHIFT GENERATOR A4525

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R1040	Same as R1015	
R1041	Resistor, Fixed, Composition, 2200 ohms, ±5%, ¼ watt	RC07GF222J
R1042	Same as R1041	
R1043	Same as R1015	
R1044	Same as R1016	
R1045	Same as R1013	
R1046	Same as R1041	
R1047	Same as R1024	
R1048	Resistor, Fixed, Composition, 4700 ohms, ±5%, ¼ watt	RC07GF472J
R1049	Same as R1015	
R1050	Same as R1001	
R1051	Same as R1024	
R1052	Same as R1001	
R1053	Same as R1001	
R1054	Same as R1013	
R1055	Same as R1048	
R1056	Resistor, Variable, Composition, 10000 ohms, ±30%, ½ watt	RV124-1-103
R1057	Resistor, Fixed, Composition, 3300 ohms, ±5%, ¼ watt	RC07GF332J
R1058	Resistor, Variable, Composition, 100 ohms, ±30%, ½ watt	RV124-1-101
R1060	Same as R1015	
Z1001	Network Frequency, Divider	NW137
Z1002	NW BAL MIXER	NW163
T1001	XFormer, R.F., Adj	TT285-6
T1002	Same as T1001	

FREQUENCY SHIFT GENERATOR A4525

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
T1003	XFormer, IF	TZ216
T1004	XFormer, Toriod	TZ218
TP1001	Term, Stud.	TE0127-2
TP1002 thru TP1008	Same as TP1001	

CARRIER GENERATOR A-4526

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1101	Capacitor, Fixed, Ceramic 10,000 uuf, +80%-20%	CC100-41
C1102	Capacitor, Fixed, Ceramic 100,000 uuf, +80%-20% 100 WVDC	CC100-28
C1103	Same as C1101	
C1104	Same as C1101	
C1105	Capacitor, Fixed, Mica 3900 uuf, ±1%, 500 WVDC	CM112F392F5S
C1106	Same as C1102	
C1107	Same as C1102	
C1108	Same as C1102	
C1109	Same as C1105	
C1110	Same as C1102	
C1111	Same as C1102	
C1112	Same as C1102	
C1113	Capacitor, Fixed, Electrolytic 10 uf, 25 WVDC	CE105-10-25
C1114	Same as C1101	
C1115	Same as C1102	
C1116	Same as C1102	
C1117	Same as C1113	
C1118	Same as C1113	
C1119	Capacitor, Fixed, Electrolytic, 2 uf, 50 WVDC	CE105-2-50
C1120	Same as C1119	
C1121	Same as C1101	
C1122	Capacitor, Fixed, Mica 100 uuf, ±1%, 500 WVDC	CM111F101F5S
C1123	Same as C1101	
C1125	Same as C1101	

CARRIER GENERATOR A-4526

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1126	Same as C1101	
C1127	Capacitor, Fixed, Ceramic: 1000 uuf, 500 WVDC	CC100-29
C1129	Same as C1122	
C1130	Same as C1101	
C1132	Capacitor, Fixed, Electrolytic, 125 uuf, 15 WVDC	CE105-125-15
C1133	Same as C1132	
C1134	Same as C1101	
C1135	Same as C1102	
C1136	Same as C1113	
C1137	Capacitor, Fixed, Electrolytic, 40 uuf, 15 WVDC	CE105-40-15
C1138	Capacitor, Fixed, Electrolytic, 100 uuf, 15 WVDC	CE105-100-15
C1139	Same as C1105	
C1140	Same as C1102	
C1141	Same as C1102	
C1142	Same as C1127	
C1143	Capacitor, Fixed, Ceramic 200,00 uuf, 25 WVDC	CC100-33
C1144	Same as C1143	
C1145	Same as C1143	
C1146	Capacitor, Fixed, Ceramic 20,000 uuf, 25 WVDC	CC100-40
C1147	Same as C1146	
C1148	Same as C1102	
C1149	Same as C1102	
C1150	Capacitor, Fixed, Electrolytic, 25 uuf, 25 WVDC	CE105-25-25
C1151	Capacitor, Fixed, Electrolytic, 175 uuf, 15 WVDC	CE105-175-15
C1152	Same as C1101	

CARRIER GENERATOR A-4526

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1153	Same as C1102	
C1154	Same as C1102	
CR1101	Semiconductor, Device, Diode Silicon	1N746A
CR1102	Semiconductor, Device, Diode, Silicon	1N34A
F11101	Filter Bandpass, 2.75 MHz Symmetrical	FX267
L1101	Coil, Radio Frequency, Fixed: 1000 uh, ±20%, 135 MA	CL275-102
L1102	Coil, Radio Frequency, Fixed: 220 uh, ±20%, 250 MA	CL275-221
L1103	Same as L1101	
L1104	Same as L1102	
L1105	Same as L1101	
L1106	Coil, Radio Frequency, Fixed: 330 uh, ±20%, 505 MA	CL275-331
Q1101	Transistor	2N3646
Q1102 thru Q113	Same as Q1101	
R1101	Resistor, Fixed, Composition: 10,000 ohms, ±5%, ½ watt	RC07GF103J
R1102	Resistor, Fixed, Composition: 27,000 Ohms, ±5%, ½ watt	RC07GF273J
R1103	Resistor, Fixed, Composition: 1000 ohms, ±5%, ½ watt	RC07GF102J
R1104	Same as R1103	
R1105	Resistor, Fixed, Composition: 180 ohms, ±5%, ½ watt	RC20GF181J
R1106	Resistor, Fixed, Composition: 470 ohms, ±5%, ½ watt	RC07GF471J
R1107	Same as R1106	
R1108	Resistor, Fixed, Composition: 33,000 ohms, ±5%, ½ watt	RC07GF333J

CARRIER GENERATOR A-4526

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R1109	Same as R1101	
R1110	Same as R1103	
R1111	Resistor, Fixed, Composition: 100 ohms, ±5%, ¼ watt	RC07GF101
R1112	Same as R1103	
R1113	Same as R1111	
R1114	Same as R1108	
R1115	Same as R1101	
R1116	Same as R1103	
R1117	Same as R1111	
R1118	Same as R1103	
R1119	Resistor, Fixed, Composition: 1500 ohms, ±5%, ¼ watt	RC07GF152J
R1120	Resistor, Variable, Composition: 100 ohms, ±30%, ½ watt	RV124-1-101
R1121	Same as R1106	
R1122	Same as R1103	
R1123	Same as R1103	
R1124	Same as R1102	
R1125	Same as R1101	
R1126	Same as R1103	
R1127	Resistor, Variable, Composition: 1000 ohms, ±30% ½ watt	RV124-1-102
R1128	Resistor, Fixed, Composition: 22,000 ohms, ±5%, ¼ watt	RC07GF682J
R1129	Resistor, Fixed, Composition: 6800 ohms, ±5%, ¼ watt	RC07GF682J
R1130	Resistor, Fixed, Composition: 3300 ohms, ±5%, ¼ watt	RC07GF332J

CARRIER GENERATOR A-4526

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R1131	Same as R1111	
R1132	Resistor, Fixed, Composition: 1200 ohms, ±5%, ½ watt	RC07GF122J
R1133	Resistor, Fixed, Composition: 4700 ohms, ±5%, ½ watt	RC07GF472J
R1134	Same as R1101	
R1135	Same as R1101	
R1136	Same as R1111	
R1137	Same as R1103	
R1138	Same as R1108	
R1139	Same as R1101	
R1141	Same as R1101	
R1142	Same as R1128	
R1143	Same as R1101	
R1144	Same as R1103	
R1145	Same as R1103	
R1146	Same as R1103	
R1147	Resistor, Variable, Composition: 10,000 ohms, ±30% ½ watt	RV124-1-103
R1148	Same as R1108	
R1149	Same as R1132	
R1150	Same as R1101	
R1152	Same as R1103	
R1154	Resistor, Fixed, Composition: 1800 ohms, ±5%, ½ watt	RC07GF182J
R1155	Same as R1101	
R1156	Same as R1130	

CARRIER GENERATOR A-4526

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R1157	Same as R1119	
R1158	Resistor, Fixed, Composition: 18 ohms, ±5%, ¼ watt	RC07GF180J
R1159	Same as R1106	
R1160	Resistor, Fixed, Composition: 270 ohms, ±5%, ¼ watt	RC07GF271J
R1162	Same as R1103	
R1163	Resistor, Fixed, Composition: 47000 ohms, ±5%, ¼ watt	RC07GF473J
R1164	Same as R1101	
R1165	Same as R1106	
R1166	Same as R1111	
R1167	Same as R1106	
R1168	Resistor, Fixed, Composition: 47 ohms, ±5%, ¼ watt	RC07GF470J
R1169	Same as R1120	
R1170	Resistor, Fixed, Composition: 8200 ohms, ±5%, ¼ watt	RC07GF822J
R1171	Same as R119	
R1172	Same as R1103	
R1173	Resistor, Fixed, Composition: 330 ohms, ±5%, ¼ watt	RC07GF331J
R1174	Same as R1106	
T1101	Transformer, Radio Frequency: Operating Frequency. 79 MHZ; "L" 100.0 Nom uh; "Q" 40 Min.	TT285-12
T1102	Transformer Radio Frequency: Operating Frequency. 79 MHZ; "L" 100.0 Nom uh; "Q" 30 Min	TT285-11
T1103	Transformer, Radio, Frequency: Operating Frequency 2.5 MHZ; "L" 33.00 Nom uh; "Q" 60 Min.	TT285-13
T1104	Transformer, Radio Frequency: Operating Frequency 2.5 MHZ; "L" 33.00 Nom uh; "Q" 35 Min.	TT285-14
T1105	Transformer, Radio Frequency: Operating Frequency MHZ, "L" 100.0 Nom uh, "Q" 35 Min.	TT285-15

CARRIER GENERATOR A-4526

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
TP1101 TP1103 thru TP1108	Terminal Stud Same as TP1101	TE127-2

120 MC GENETATOR A-4600

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C16	Cap, Fxd, Mica, 110 uufd, $\pm 5\%$, 500 WVDC	CM111F111J5S
C17	Cap, Fxd, Ceramic, 100 uufd, GMV, 500 WVDC	CC100-30
C18	Same as C17	
C19	Cap, Fxd, Mica, 47 uufd, $\pm 2\%$, 500 WVDC	CM111E470G5S
C20	Cap, Var, Cer, 2-8 uufd, 200 WVDC	CV112-4
C21 thru C24	Same as C17	
C25	Same as C19	
C26	Same as C20	
C27 thru C30	Same as C17	
C31	Same as C20	
C32	Same as C17	
C33	Same as C16	
C34	Cap, Fxd, Cer, 1000 uufd, GMV, 500 WVDC	CC100-29
C35	Same as C34	
C36	Same as C19	
C37	Cap, Var, Cer, 5.5-18 uufd, 200 WVDC	CV112-1
CR1	Sccond Device Diode	DD138
CR2	Same as CR1	
L4	Coil, Rf, Fxd, 1uh, $\pm 10\%$ molded	CL275-1R0
L5	Same as L4	
L6	Same as L4	
L7	Coil, R.F., Fxd, 0.22 uh, $\pm 20\%$, Molded	CL275-0R22
L8	Coil, R.F. Fxd, 120 uh, $\pm 10\%$, molded	CL275-121

120 MC GENERATOR A-4600

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
L9	Same as L8	
Q4	Transistor, Silicon	2N3646
Q5	Same as Q4	
Q6	Transistor	2N5179
R19	Res, Fxd, Comp, 1000 Ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF102J
R20	Res, Fxd, Comp, 8200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF822J
R21	Res, Fxd, Comp, 330 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF331J
R22	Res, Fxd, Comp, 180 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF181J
R23	Res, Fxd, Comp, 10 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF100J
R24	Same as R19	
R25	Same as R20	
R26	Same as R21	
R27	Same as R22	
R28	Same as R23	
R29	Res, Fxd, Comp, 47000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF473J
R30	Res, Fxd, Comp, 33 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF330J
R31	Res, Fxd, Comp, 100000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF104J
R32	Same as R19	
R33	Res, Fxd, Comp, 120 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF470J
R34	Same as R23	
R35	Res, Fxd, Comp, 120 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF121J
R36	Res, Var, Comp, 500 ohms, $\pm 30\%$, 200 VDC	RV124-1-501
R40	Same as R33	
R115	Same as R33	
R116	Same as R30	

120 MC GENERATOR A-4600

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R117	Same as R33	
T4	Transformer, Radio Frequency, Fixed	TZ215-4
T5	Same as T4	
T6	Transformer, Radio Frequency, Fixed	TZ215-3
T7	Transformer, Radio Frequency, Fixed	TZ215-2

FILTER A-4654

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C1	Capacitor, Fixed, Mica, 130 uufd, ±5%, 500 WVDC	CM111F131J5S
C2	Capacitor, Fixed, Mica, 180 uufd, ±2%, 500 WVDC	CM111F181G5S
C3	Capacitor, Fixed, Mica, 120 uufd, ±5%, 500 WVDC	CM111F121J5S
C4	Capacitor, Variable, Ceramic, 2-8 uufd, 200 WVDC	CV112-4
C5	Capcitor, Variable, Ceramic, 15-60 uufd, 100 WVDC	CV112-5
L1	Coil, Fixed, R.F., .21 uh, Q min 55	CL412-16

POWER SUPPLY AX652

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C301	Capacitor, Fixed, Ceramic, 100000 uufd, +80-20%, 300 WVDC	CC100-37
C302	Capacitor, Fixed, Mtlz, 1.00 mfd, ±20%, 200 WVDC	CN112A-105-M2
C303	Capacitor, Fixed, Electrolytic, 150 mfd, ±10%, 75 WVDC	CE105-150-75
C304	Capacitor, Fixed, Electrolytic, .47 mfd, ±5%,	CN114R47-5
C305 thru C309	Same as C301	
CR301	Semiconductor Device Diode	1N2484
CR302	Same as CR301	
J301	Connector, Receptacle, Male	JJ242-5P
J302	Connector, Receptacle, RF	JJ211
J303	Connector, Receptacle, Female	JJ319-6DPE
J304	Same as J303	
J305	Same as J302	
J306	Connector, Receptacle, Female	JJ242-5S
L301		CL275-121
P301		PL225-8S
R301	Resistor Fixed Composition, 47 ohms, ±5%, ½ watt	RC20GF470J
R302	Resistor Wire Wound Fixed, 5 Watt.	RW107-10
T301	Transformer	
XZ301	Socket, Electronic Tube	TS100-3
XZ302	Same as XZ301	

BMA101

SWITCH ASSEMBLY BRACKET

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
A114	Switch, Rotary Assembly	AS129
R106	Resistor, Variable, Composition, 10000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt	RV106UX8B103A
S103	Switch, Rotary, 1 Section, 30 degree throw,	SW443
S104	Same as S103	
S105	Switch, Rotary, 2 Sections, 30 degree throw,	SW441
S106	Switch, Rotary, 5 Sections, 30 degree throw,	SW440
S107	Switch, Rotary, 2 Sections, 30 degree throw,	SW442

BMA-103

FRAME ASSEMBLY

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
TB101	Assembly, Resistor, Board	A4592
TB102	Assembly, Resistor, Board	A4593

BMA105

SUB ASSEMBLY

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C101 thru C103	Capacitor, Fixed, Mica, 1000 uufd, $\pm 10\%$, 300 WVDC	CB21QB102K
C104	Capacitor, Fixed, Ceramic, 10000 uufd, GVM, 500WVDC	CC100-16
C105	Same as C104	
C106	Capacitor, Fixed, Ceramic, 1000 uufd, GMV, 500 WVDC	CC100-29
C107 thru C109	Same as C101	
C110	Same as C104	
C111	Same as C101	
C112	Same as C104	
C113	Same as C101	
C114	Same as C101	
C115	Same as C104	
C116	Same as C101	
C117	Same as C101	
C118	Same as C104	
C119	Capacitor, Fixed, Ceramic, 100,000 uufd, +80-20%, 100 WVDC	CC100-28
C120	Same as C119	
C121	Same as C119	
C127	Same as C119	
C129 thru C131	Same as C119	
C132	Capacitor, Fixed, Ceramic, 200,000 uufd, 25 WVDC	CC100-33
C133	Same as C104	

BMA105

SUB ASSEMBLY

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C134	Capacitor, Fixed, MTLZ, 1.0 mfd, ±5%, 50 WVDC	CN114-1R0-5J
C135	Same as C119	
C136	Same as C119	
C137	Same as C104	
C138	Same as C106	
C139	Same as C106	
C140	Same as C106	
C141	Same as C119	
C142	Capacitor, Fixed, Ceramic, DUAL, 2 X 10000 uufd, GVM, 1000 WVDC	CC100-23
C143	Same as C142	
C144	Same as C104	
C145	Same as C119	
C146	Same as C106	
C147	Same as C106	
C148	Same as C106	
C149	Same as C104	
C150 thru C153	Same as C106	
C154	Same as C119	
C155	Same as C106	
C156 thru C165	Same as C106	
C166 thru C177	Same as C106	

BMA105

SUB ASSEMBLY

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
C178 thru C180	Same as C106	
C181	Same as C106	
C182	Same as C106	
C183	Same as C119	
C184	Same as C104	
C187	Same as C142	
DS101	Lamp, Incandescent	B1110-7
DS102	Same as DS101	
F101	Fuse, Cartridge (230 VAC, ½ Amp)	FU102-.50
F101	Fuse, Cartridge (115 VAC, 1 Amp)	FU102-1.0
F102	Same as F101 (Spare)	
F102	Same as F101 (Spare)	
FL101	Filter	FX287
J116	Connector, Receptacle, Male	MS3102A16S5P
J117	Jack, Telephone	JJ034
J118	Jack, Telephone	JJ033
J120 thru J125	Connector, Receptacle, RF, Female	UG625/U
L101 thru L103	Coil, RF, Fixed, 120 uh, ±10%	CL240-120
L104 thru L106	Coil, RF, Fixed, 120 uh, ±10%, molded	CL275-121
L107 thru L109	Same as L101	

BMA105

SUB ASSEMBLY

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
L110	Same as L104	
L111	Same as L101	
L113 and L114	Same as L101	
L115	Same as L104	
L116	Same as L101	
L117	Same as L101	
L119 thru L121	Same as L104	
L125	Same as L104	
L126	Same as L104	
L128	Same as L104	
L129	Coil, R.F. Fixed	CL275-8R2
L130 thru L136	Same as L104	
M101	Meter	MR191-9
P305	Connector, Plug, Female	P1204
R101	Resistor, Variable, Composition, 1000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt	RV106UX8B102A
R102A,B	Resistor, Variable, Dual, Composition, Front 1000 ohms, Rear 10000 ohms, $\pm 10\%$, 2 watt	RV108-2
R103	Resistor, Variable, Composition, 100 ohms, $\pm 10\%$ $\frac{1}{2}$ watt	RV4NAYS101A
R104	Resistor, Variable, Composition, 500000 ohms, $\pm 10\%$	RV100-1
R105	Same as R104	
R107	Res, Var, Comp, 10000 ohms, $\pm 10\%$, $\frac{1}{2}$ watt	RV106UX8B103A

BMA105

SUB ASSEMBLY

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R108 thru R110	Resistor, Fixed, Wire-Wound, 1 ohm, $\pm 5\%$, .66 watts	RW126-41R0
R111	Resistor, Fixed, Composition, 1000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF102J
R112	Same as R11	
R113	Resistor, Fixed, Composition, 220 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF221J
R114	Resistor, Fixed, Composition, 300,000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF304J
R115	Resistor, Fixed, Composition, 47000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF473J
R116	Same as R115	
R117	Same as R111	
R118	Same as R111	
R119	Resistor, Fixed, Composition, 2200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF222J
R120	Resistor, Fixed, Composition, 3900 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF392J
R121	Resistor, Fixed, Composition, 100000 ohms, $\pm 5\%$ $\frac{1}{4}$ watt	RC07GF104J
R122	Same as R115	
R123	Resistor, Fixed, Composition, 2700 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF272J
R124	Resistor, Fixed, Composition, 150 ohms, $\pm 5\%$, 2 Watt	RC42GF151J
R125	Same as R124	
R126	Resistor, Fixed, Composition, 8200 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF822J
R127	Same as R119	
R128	Same as R111	
R130	Resistor, Fixed, Composition, 82 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF820J
R131	Resistor, Fixed, Composition, 68 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF680J

BMA105

SUB ASSEMBLY

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R193	Resistor, Fixed, Composition, 10000 ohms, $\pm 5\%$, $\frac{1}{4}$ watt	RC07GF103J
S108	Switch, Toggle, SPDT	ST103-11-62
S109	Same as S108	
S110	Switch, Rotary	SW447
S111	Switch, Rotary	SW446
S112	Switch, Toggle, SPDT	ST22N
S113	Same as S112	
S115	Switch, Rotary	S2445
TB103 thru TB105	Term., Board-Barrier	TM100-6
XDS101	Light, Indicator, White Lens	TS153-5
XDS102	Light, Indicator, Red Lens	TS153-1
XF101	Fuse Holder	FH104-3
XF102	Same as XF101	
Z305	Heat, Sink, Assembly	BMA173

BMA-173

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
P306	CONN, RECP, MALE	PL225-8P
Q301	TRANSISTOR, SILICON, NPN	2N1488
Q302	Same as Q301	
Q303	Same as Q301	

AX-676

CHASSIS, ASSEMBLY MAIN

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
J101	Connector, Receptacle, Female	JJ319A15DFE
J102	Same as J101	
J103	Same as J101	
J104	Same as J101	
J105	Same as J101	
J106	Same as J101	
J107	Same as J101	
J108	Same as J101	
J109	Same as J101	
J110	Same as J101	
J111	Same as J101	
J112	Same as J101	
J113	Same as J101	
J114	Same as J101	
J115	Same as J101	

A-4592

RESISTOR BOARD ASSEMBLY

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R129	Resistor, Fixed, Composition, 100 ohms, ±5%, ¼ Watt	RC07GF101J
R130	Resistor, Fixed, Composition, 470 ohms, ±5%, ¼ Watt	RC07GF471J
R132 thru R135	Same as R130	
R138 thru R142	Same as R130	
R144 thru R148	Same as R130	
R150 thru R154	Same as R130	
R156 thru R160	Same as R130	

A-4593

RESISTOR BOARD ASSEMBLY

REF SYMBOL	DESCRIPTION	TMC PART NUMBER
R161	Resistor, Fixed Composition, 100 ohms, $\pm 5\%$, $\frac{1}{4}$ Watt	RC07GF101J
R162	Resistor, Fixed Composition, 470 ohms, $\pm 5\%$, $\frac{1}{4}$ Watt	RC07GF471J
R164 thru R168	Same as R162	
R170 thru R174	Same as R162	
R176 thru R180	Same as R162	
R182 thru R186	Same as R162	
R188 thru R192	Same as R162	