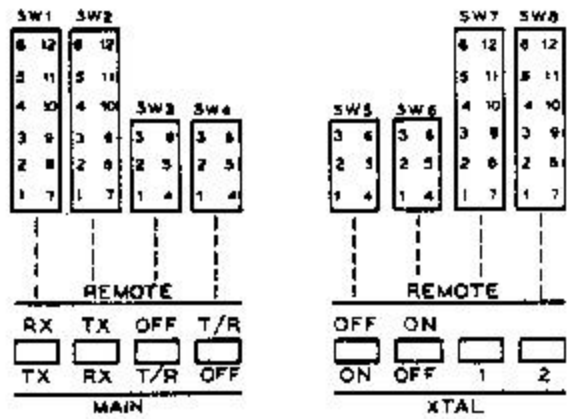
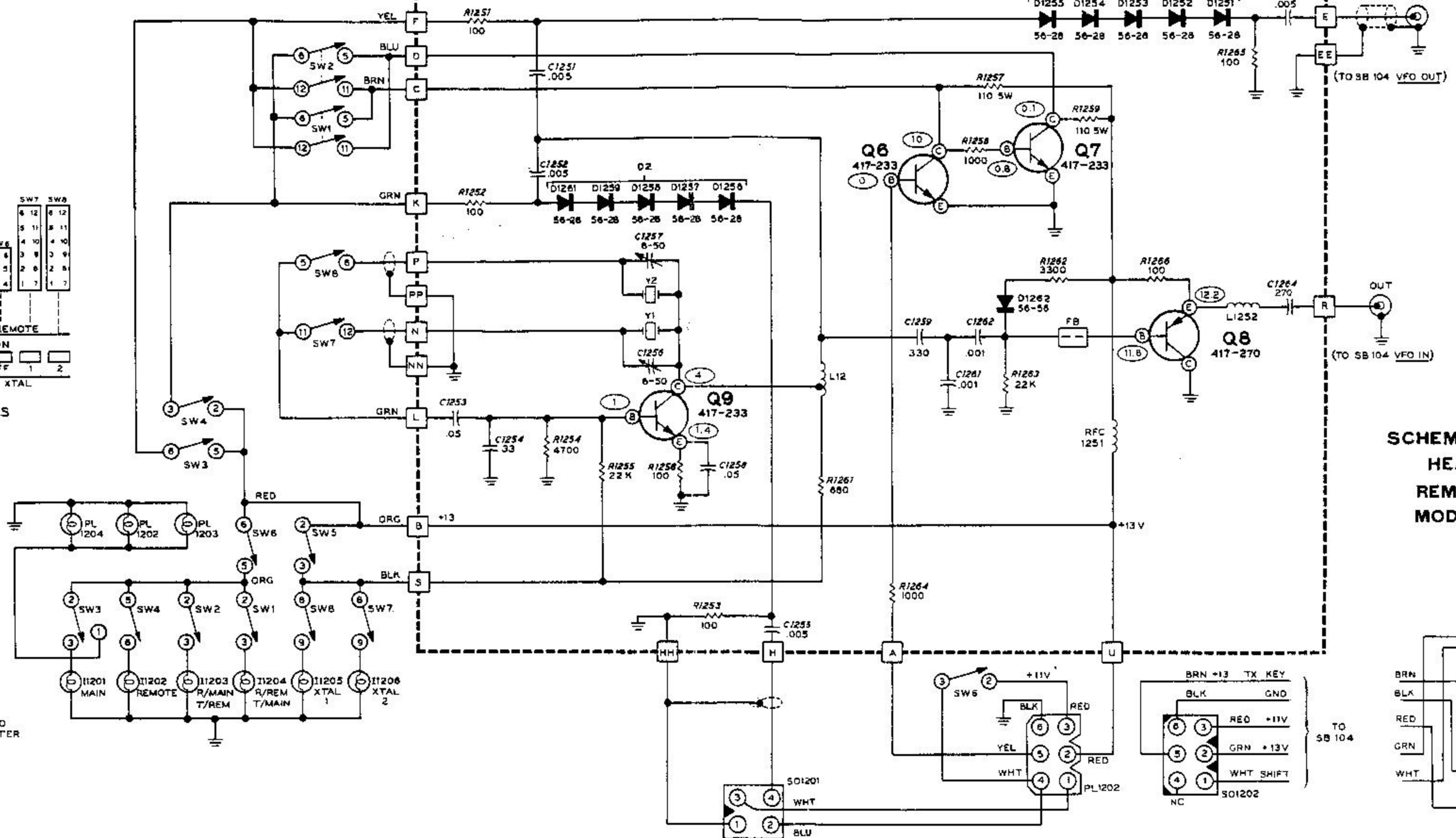
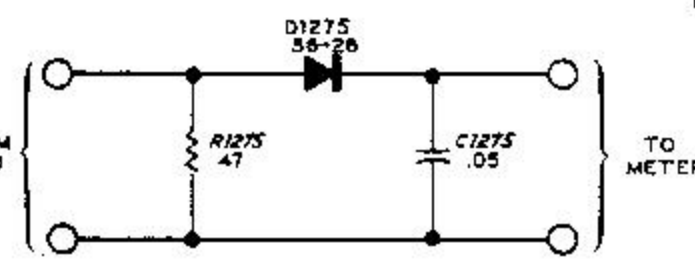


# SWITCH CIRCUIT BOARD

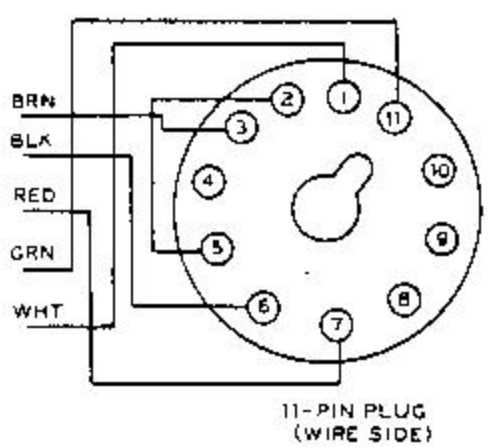


FRONT PANEL SWITCHES (TOP VIEW)



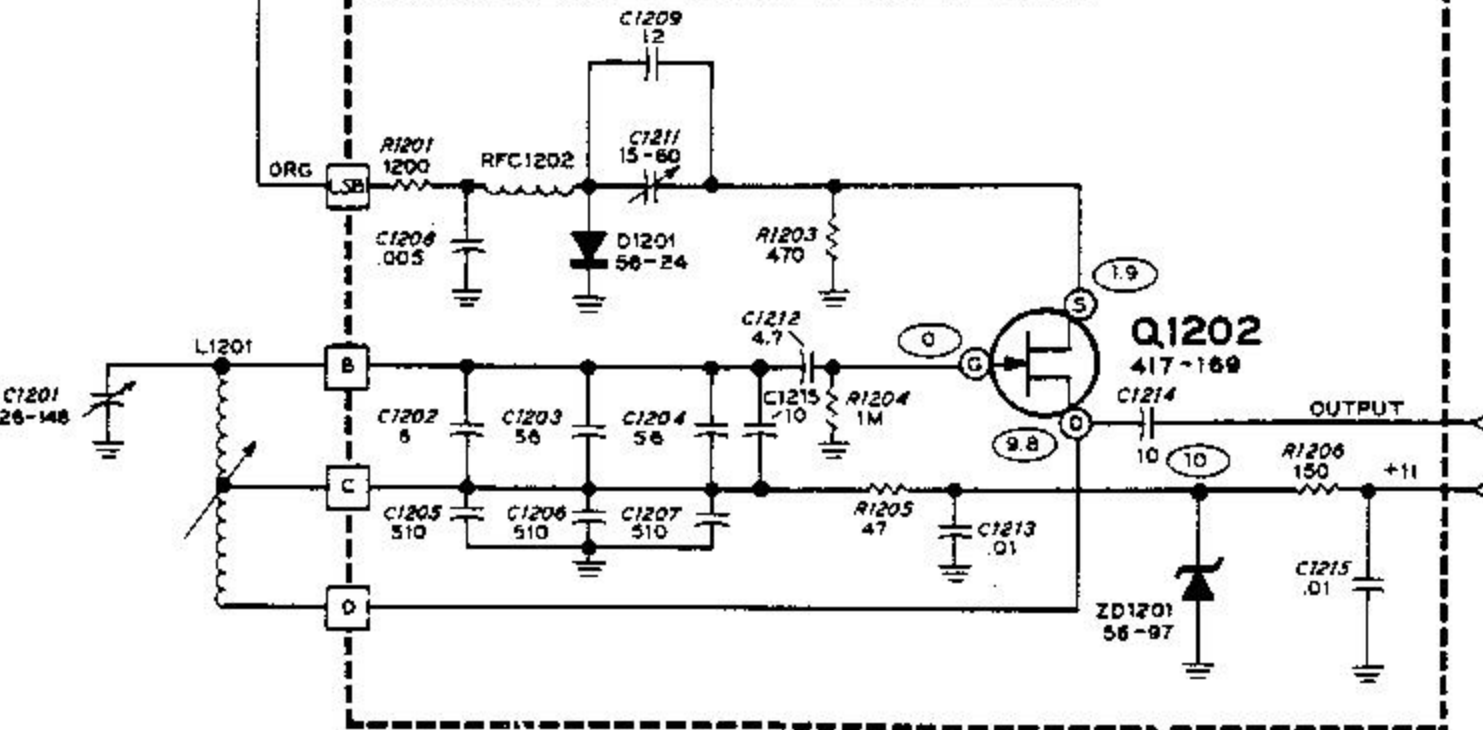
TEST CIRCUIT

**SCHEMATIC OF THE HEATHKIT® REMOTE VFO MODEL SB-644**

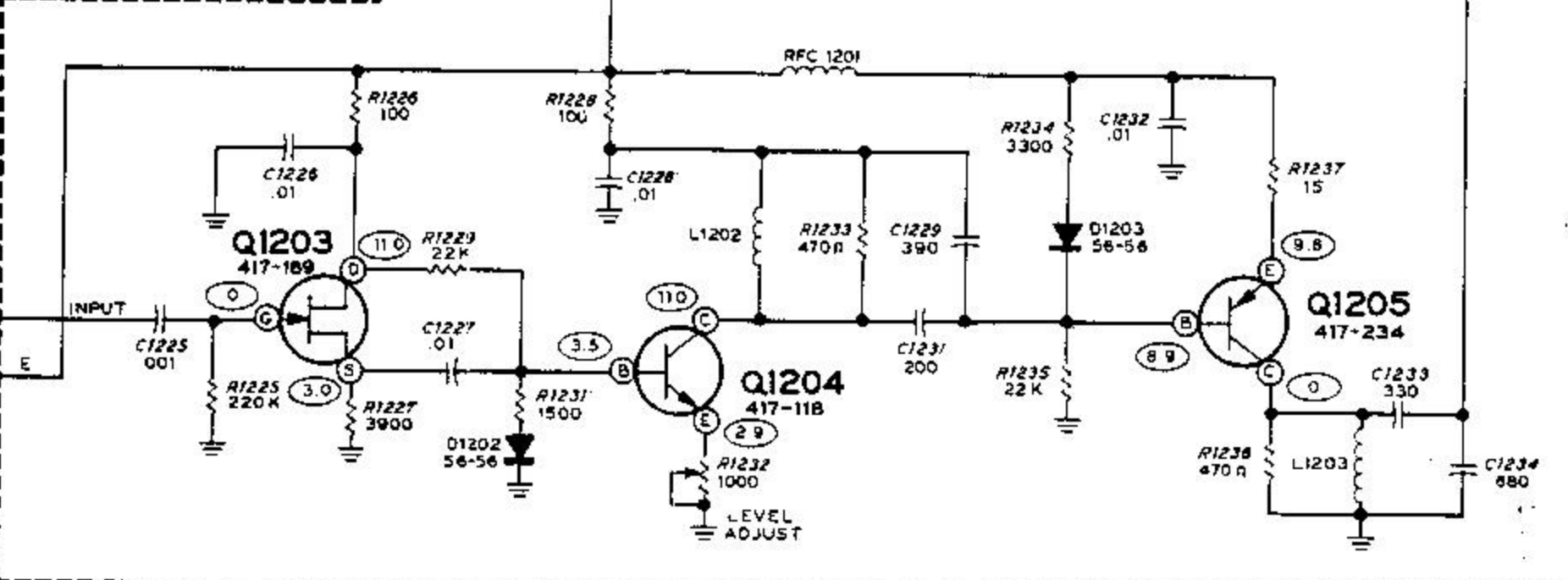


11-PIN PLUG (WIRE SIDE)

# OSCILLATOR CIRCUIT BOARD



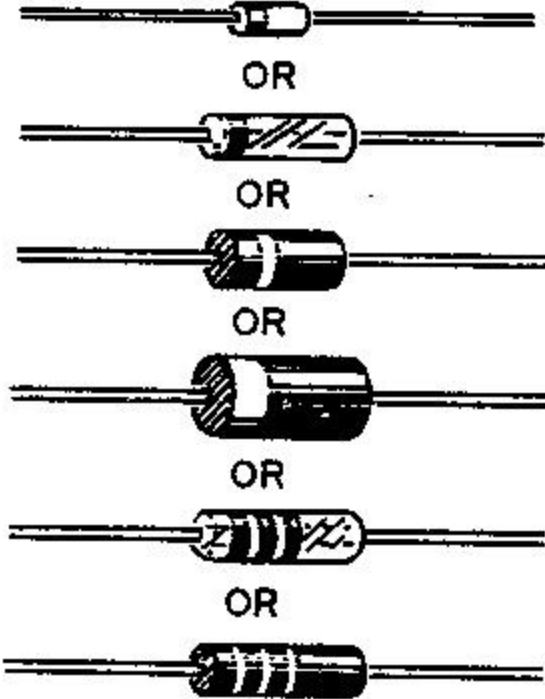
# BUFFER CIRCUIT BOARD



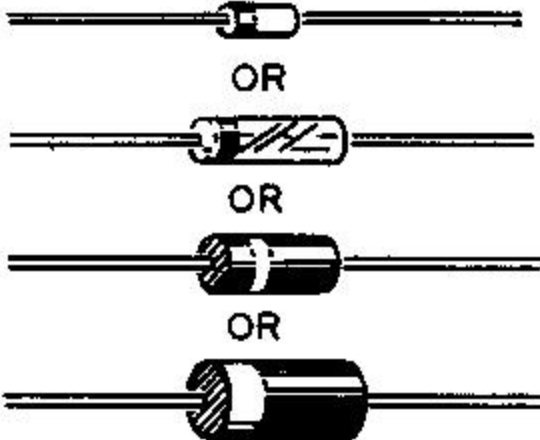
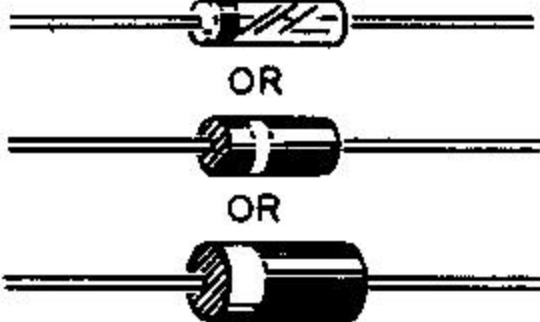

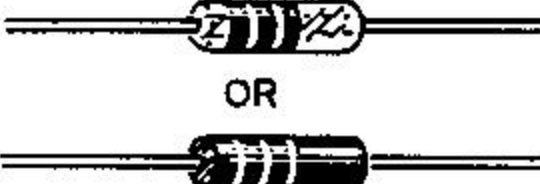


**NOTES:**

1. ALL RESISTORS ARE 1/2-WATT, 10% TOLERANCE UNLESS OTHERWISE MARKED.
2. CAPACITORS LESS THAN 1 ARE IN μF (MICROFARADS). ALL OTHER CAPACITORS ARE IN pF (PICOFARADS) UNLESS OTHERWISE MARKED.
3. ○ THIS SYMBOL INDICATES A DC VOLTAGE MEASURED WITH A HIGH IMPEDANCE INPUT VOLTMETER FROM THE POINT INDICATED TO CHASSIS GROUND.
4. ≡ THIS SYMBOL INDICATES CHASSIS GROUND.
5. □ THIS SYMBOL INDICATES A SOLDERED CONNECTION TO A CIRCUIT BOARD.
6. REFER TO THE "CHASSIS PHOTOGRAPHS" AND "CIRCUIT BOARD X-RAY VIEWS" FOR THE PHYSICAL LOCATION OF PARTS.
7. TP = TEST POINT.
8. FB = FERRITE BEAD.

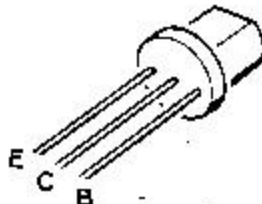
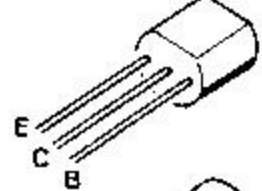
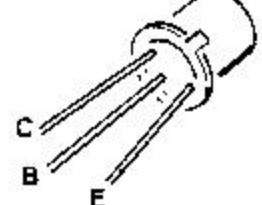
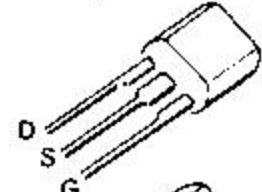
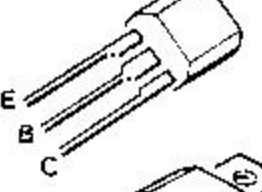
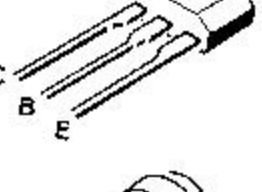
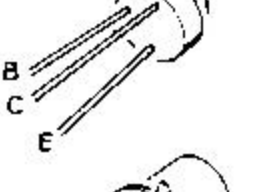
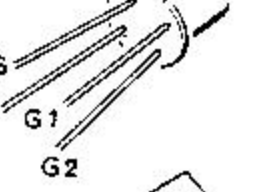
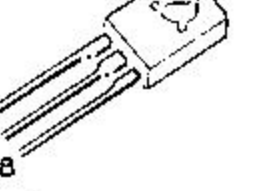

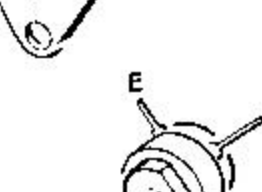
# DIODES

HEATH PART NUMBER	MAY BE REPLACED WITH	CIRCUIT COMPONENT NUMBER	IDENTIFICATION
56-6	1N710	ZD501	<p data-bbox="1319 512 1996 597">NOTE: HEATH PART NUMBERS ARE STAMPED ON MOST DIODES.</p> 
56-16	1N751	ZD101, ZD201, ZD203	
56-19	VR-9.1	ZD1, ZD202	
56-20	1N295	D801, D802, D803	
56-24	1N458	D4, D313, D314, D321, D322, D325, D326, D329, D330, D333, D334, D431, D432, D433, D434, D435, D436, D437, D438, D439, D440, D601, D602, D603, D604, D605, D606, D612, D613, D701, D702, D703, D704, D705, D706, D709, D710, D713, D714, D1201, D1255	
56-26	1N191	D426, D615, D905, D906, RF Det.	


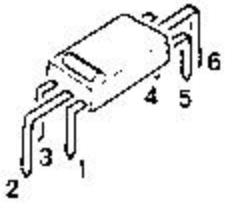
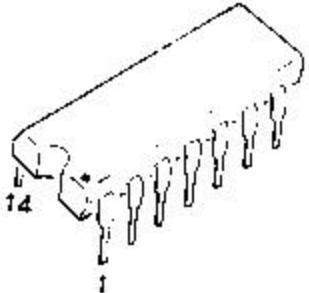
## Diodes (cont'd.)

HEATH PART NUMBER	MAY BE REPLACED WITH	CIRCUIT COMPONENT NUMBER	IDENTIFICATION
56-56	1N4149	D2, D3, D201, D202, D203, D204, D205, D301, D302, D303, D304, D305, D317, D318, D319, D320, D401, D402, D403, D404, D405, D406, D407, D408, D409, D410, D411, D412, D413, D414, D419, D420, D421, D422, D501, D502, D503, D504, D505, D511, D512, D513, D514, D707, D708, D711, D712, D1202, D1203, D1251, D1252, D1253, D1254	<p data-bbox="1312 438 1996 519">NOTE: HEATH PART NUMBERS ARE STAMPED ON MOST DIODES.</p>  <p data-bbox="1603 625 1662 655">OR</p>  <p data-bbox="1603 746 1662 776">OR</p>  <p data-bbox="1603 1017 1662 1046">OR</p>  <p data-bbox="1603 1151 1662 1181">OR</p> 
56-59	1N750A	ZD301, ZD502	
56-87	FH1100	D306, D307, D308, D309, D427, D428, D429, D430, D506, D507, D508, D509, D607, D608, D609, D611	
56-89	GD510	D614	
56-97	VR-7.5	ZD1201	
57-64	DRS-110	D315, D316, D323, D324, D327, D328, D331, D332, D335, D336, D903, D904	
57-65	1N4002	D207, D310, D311, D312, D901, D902	
57-34	1N3491	D1	

# TRANSISTORS

HEATH PART NUMBER	MAY BE REPLACED WITH	CIRCUIT COMPONENT NUMBER	BASING DIAGRAM		
417-118	2N3393	Q1204	A or B		<b>A</b>
417-154	2N2369	Q301, Q405, Q406, Q703	C		<b>B</b>
417-162	MHT9210	Q1	K		<b>C</b>
417-169	MPF105	Q1202, Q1203	D		<b>D</b>
417-172	MPS6521	Q401, Q402, Q403	E		<b>E</b>
417-201	X29A829	Q202, Q204, Q207, Q208, Q605, Q609, Q612	A or B		<b>F</b>
417-205	2N3866	Q304, Q305, Q407	C		<b>G</b>
417-233	2N3643	Q515	E or G		<b>H</b>
417-234	2N3638A	Q517, Q1205	E or G		<b>J</b>
417-235	2N4121	Q506, Q511, Q513, Q702, Q705	E or G		<b>K</b>
417-240	40673	Q501, Q701, Q704	H		<b>L</b>
417-263	SJE607	Q516	J		
417-264	SJE608	Q518	J		
417-801	MPSA20	Q101, Q102, Q201, Q203, Q205, Q206, Q209, Q210, Q302, Q303, Q502, Q503, Q504, Q505, Q507, Q508, Q509, Q512, Q514, Q601, Q602, Q603, Q604, Q606, Q607, Q608, Q611, Q613, Q801, Q802, Q1251	E		
417-830	PT6619	Q901, Q902	L		
417-831-1	CD-2664A (Set of 4 417-831)	Q951, Q952, Q953, Q954	L		

# INTEGRATED CIRCUITS

HEATH PART NUMBER	MAY BE REPLACED WITH	CIRCUIT COMPONENT NUMBER	IDENTIFICATION
442-18	MC1350P	IC301, IC501	
442-48	MFC6030	IC203	
442-71	LM3900	IC201, IC502	
443-5	SN7473N	IC101	