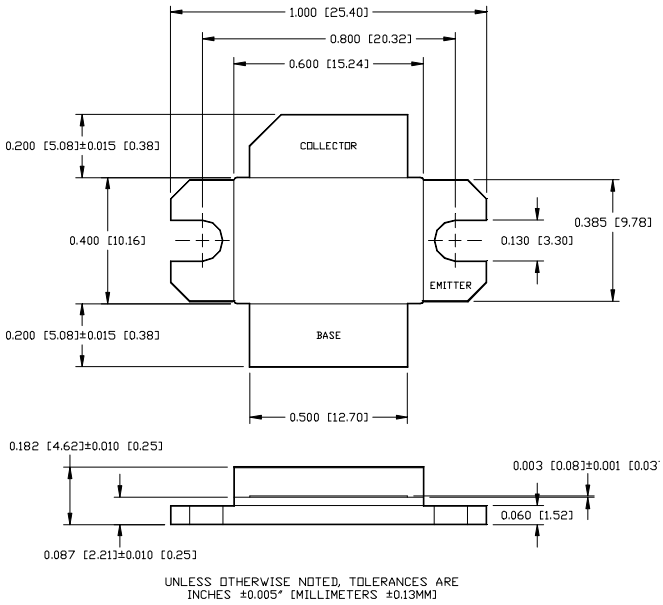
M/A-COM PHI, INC.

PH1920-60
WIRELESS POWER TRANSISTOR
60 WATTS, 1930-1990 MHz

FEATURES

- NPN Silicon Microwave Power Transistor
- -27dBc Typical 3rd IMD at 60 Watts PEP
- Common Emitter Class AB Operation
- Internal Input and Output Impedance Matching
- Diffused Emitter Ballasting
- Gold Metallization System

OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS AT 25°C

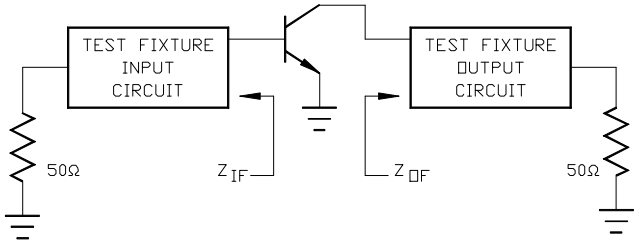
Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CEO}	20	V
Collector-Emitter Voltage	V_{CES}	65	V
Emitter-Base Voltage	V_{EBO}	3.0	V
Collector Current	I_C	5.8	A
Power Dissipation	P_D	150	W
Storage Temperature	T_{STG}	-55 to +150	°C
Junction Temperature	T_J	200	°C
Thermal Resistance	θ_{JC}	1.0	°C/W

ELECTRICAL CHARACTERISTICS AT 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
DC Forward Current Gain	h_{FE}	15	120	-	V_{CE} = 5V, I_C = 2A
Power Gain	G_P	8.0	-	dB	V_{CC}=26 V, I_{CQ}=260 mA, P_{OUT}=60 W, F=1930, 1990MHz
Collector Efficiency	η_C	40	-	%	V_{CC}=26 V, I_{CQ}=260 mA, P_{OUT}=60 W, F=1930, 1990MHz
Input Return Loss	RL	8	-	dB	V_{CC}=26 V, I_{CQ}=260 mA, P_{OUT}=60 W, F=1930, 1990MHz
Load Mismatch Tolerance	VSWR-T	-	2:1	-	V_{CC}=26 V, I_{CQ}=260 mA, P_{OUT}=60 W, F=1930, 1990MHz

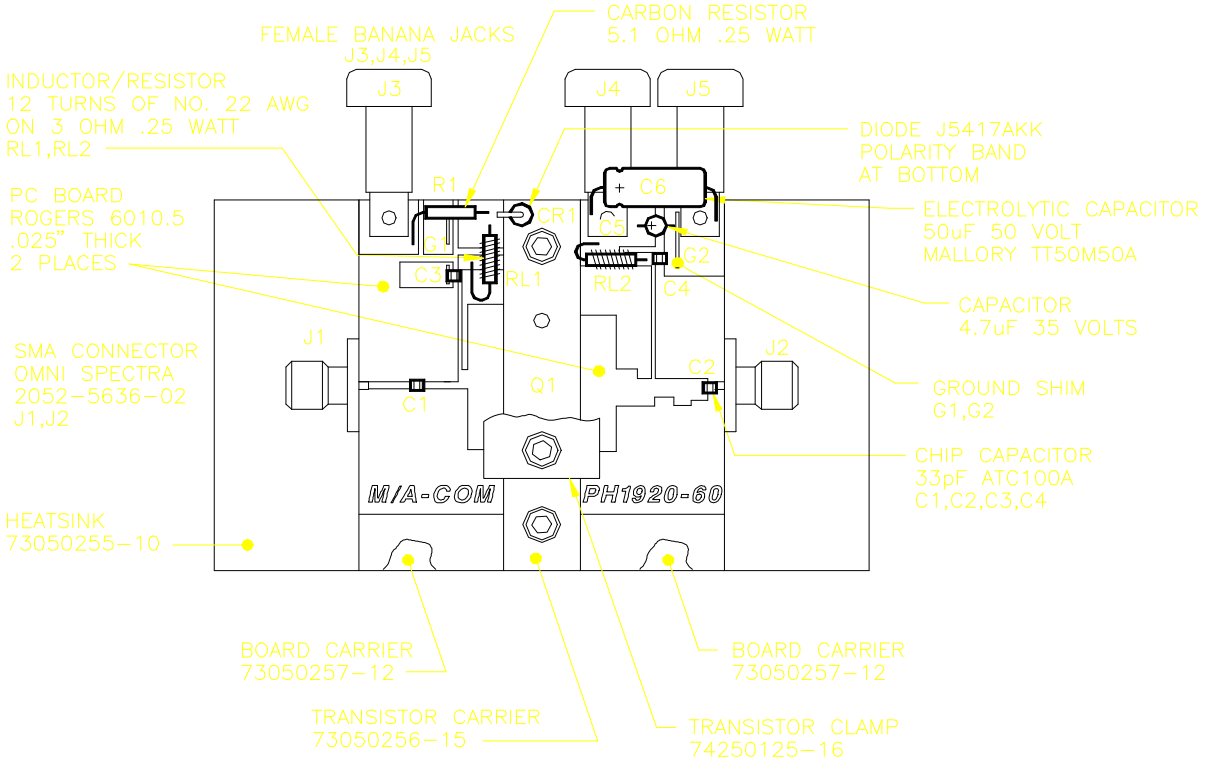
BROADBAND TEST FIXTURE IMPEDANCES

F (MHz)	Z_{IF} (Ω)	Z_{OF} (Ω)
1930	0.80 - j2.8	2.6 - j1.30
1960	0.80 - j2.7	2.8 - j1.20
1990	0.80 - j2.7	3.0 - j1.20

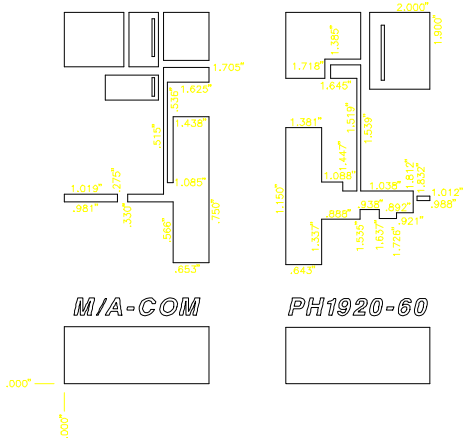


M/A-COM POWER HYBRIDS OPERATION • 1742 CRENSHAW BLVD • TORRANCE, CA 90501
(310) 320-6160 • FAX (310) 618-9191

TEST FIXTURE DRAWING - PH1920-60



ASSEMBLY VIEW



CIRCUIT DIMENSIONS