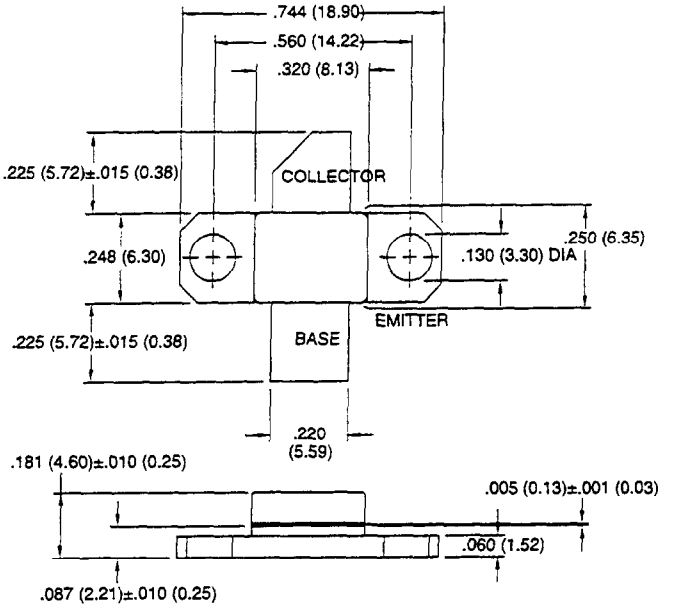
Wireless Bipolar Power Transistor, 33W
1930 - 1990 MHz

PH1920-33

V2.01

Features

- NPN Silicon Microwave Power Transistor
- Common Emitter Class AB Operation
- Internal Input and Output Impedance Matching
- Diffused Emitter Ballasting
- Gold Metallization System



UNLESS OTHERWISE NOTED, TOLERANCES ARE
INCHES ±.005" (MILLIMETERS ±0.13MM)

Absolute Maximum Ratings at 25°C

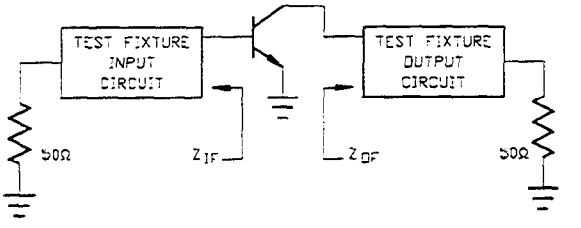
Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CEO}	25	V
Collector-Emitter Voltage	V_{CES}	65	V
Emitter-Base Voltage	V_{EBO}	3.0	V
Collector Current	I_C	4.7	A
Power Dissipation	P_D	91	W
Storage Temperature	T_{STG}	-55 to +150	°C
Junction Temperature	T_J	200	°C
Thermal Resistance	θ_{JC}	1.6	°C/W

Electrical Characteristics at 25°C

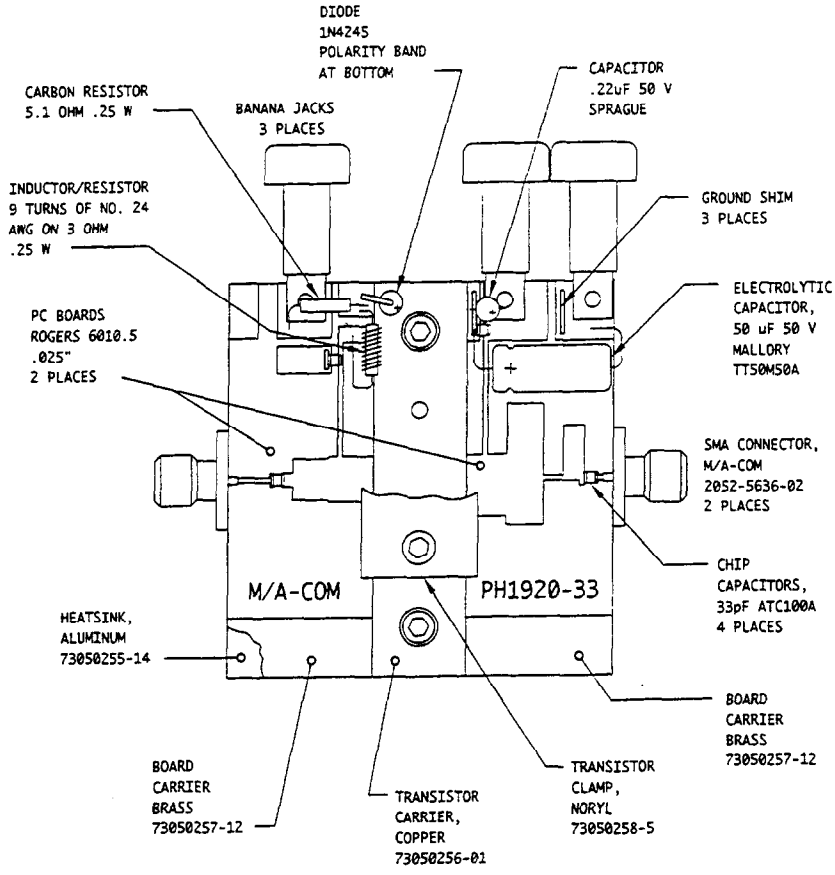
Parameter	Symbol	Min	Max	Units	Test Conditions
Power Gain	G_P	7.0	-	dB	V_{CC}=25 V, I_{CQ}=200 mA, P_{OUT}=33 W, F=1930, 1990 MHz
Collector Efficiency	η_C	40	-	%	V_{CC}=25 V, I_{CQ}=200 mA, P_{OUT}=33 W, F=1930, 1990 MHz
Input Return Loss	RL	10	-	dB	V_{CC}=25 V, I_{CQ}=200 mA, P_{OUT}=33 W, F=1930, 1990 MHz
Load Mismatch Tolerance	VSWR-T	-	2:1	-	V_{CC}=25 V, I_{CQ}=200 mA, P_{OUT}=33 W, F=1930, 1990 MHz

Broadband Test Fixture Impedances

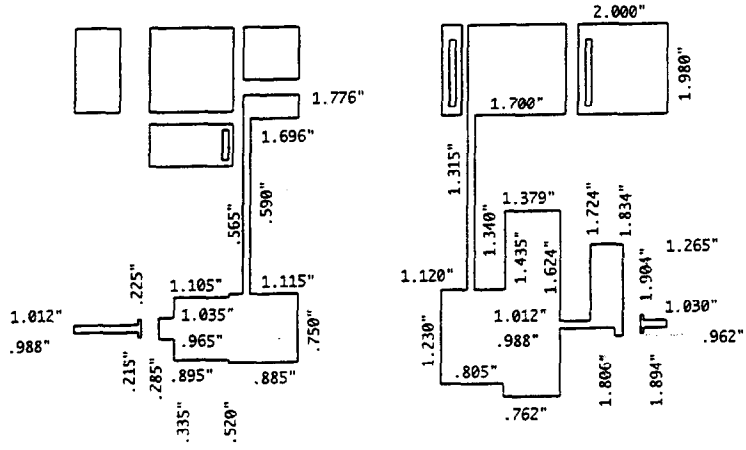
F(GHz)	$Z_{IF}(\Omega)$	$Z_{OF}(\Omega)$
.1930	2.6 - j2.6	3.3 - j1.1
1960	2.5 - j2.5	3.8 - j1.0
1990	2.4 - j2.3	4.1 - j0.8



RF Test Fixture



Test Fixture PC Board Dimensions



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