

Wireless Bipolar Power Transistor, 45W 1930 - 1990 MHz

PH1920-45

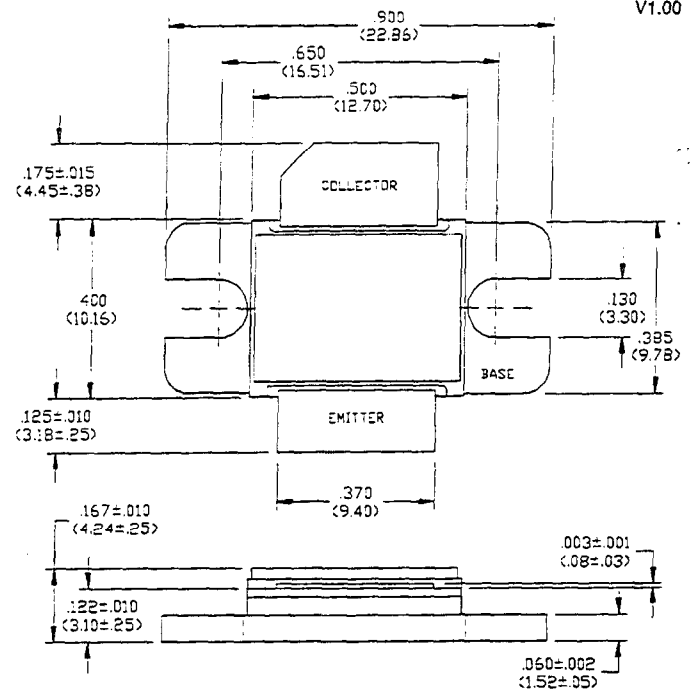
V1.00

Features

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

Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CE0}	20	V
Collector-Emitter Voltage	V_{CES}	65	V
Emitter-Base Voltage	V_{EB0}	3.0	V
Collector Current	I_C	5.5	A
Power Dissipation	P_D	100	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-65 to +200	°C
Thermal Resistance	θ_{JC}	1.3	°C/W



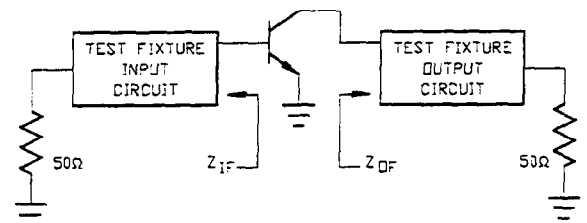
UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES ±.005" (MILLIMETERS ±.13MM)

Electrical Characteristics at 25°C

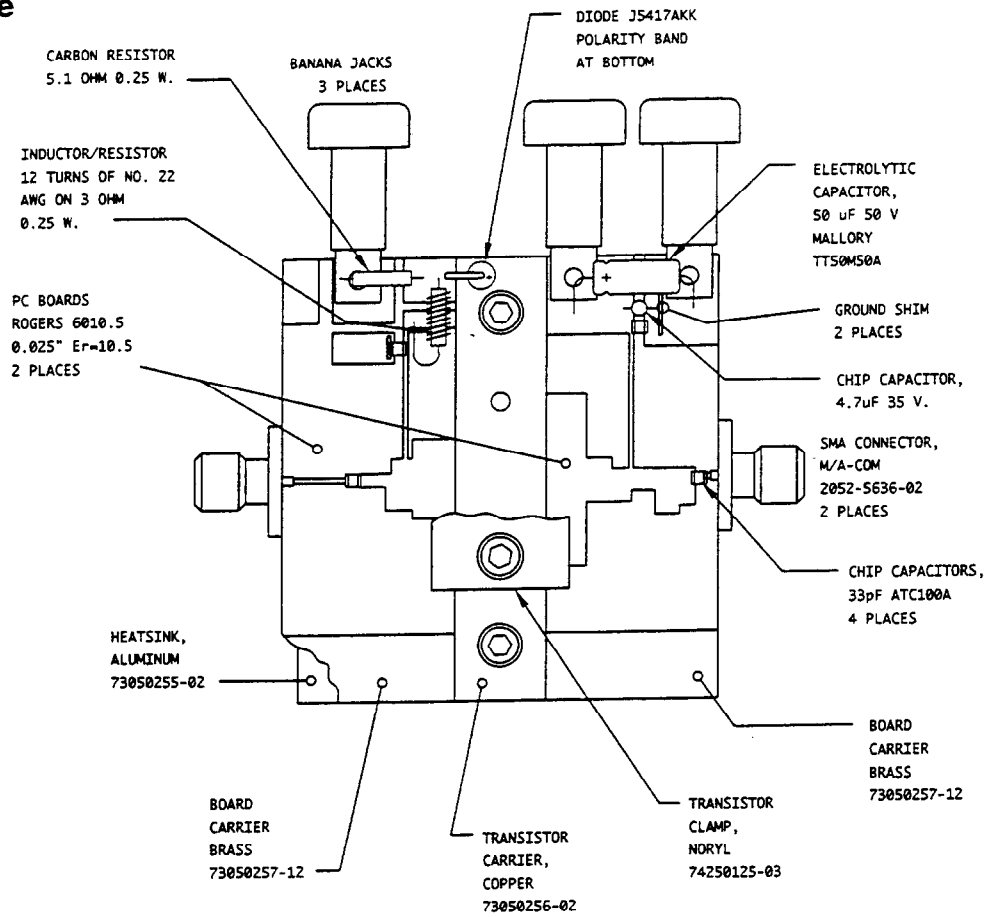
Parameter	Symbol	Min	Max	Units	Test Conditions
Power Gain	G_P	8	-	dB	$V_{CC}=25\text{ V}$, $I_{CO}=200\text{ mA}$, $P_{OUT}=45\text{ W}$, $F=1930, 1990\text{ MHz}$
Collector Efficiency	η_C	40	-	%	$V_{CC}=25\text{ V}$, $I_{CO}=200\text{ mA}$, $P_{OUT}=45\text{ W}$, $F=1930, 1990\text{ MHz}$
Input Return Loss	RL	10	-	dB	$V_{CC}=25\text{ V}$, $I_{CO}=200\text{ mA}$, $P_{OUT}=45\text{ W}$, $F=1930, 1990\text{ MHz}$
Load Mismatch Tolerance	VSWR-T	-	3:1	-	$V_{CC}=25\text{ V}$, $I_{CO}=200\text{ mA}$, $P_{OUT}=45\text{ W}$, $F=1930, 1990\text{ MHz}$

Broadband Test Fixture Impedances

F(MHz)	$Z_{IF}(\Omega)$	$Z_{OF}(\Omega)$
1930	2.8 - j5.5	4.8 - j1.1
1960	2.7 - j5.4	5.0 - j1.3
1990	2.6 - j5.3	5.2 - j1.5



RF Test Fixture



Test Fixture PC Board Dimensions

