

# Wireless Bipolar Power Transistor, 45W 1930 - 1990 MHz

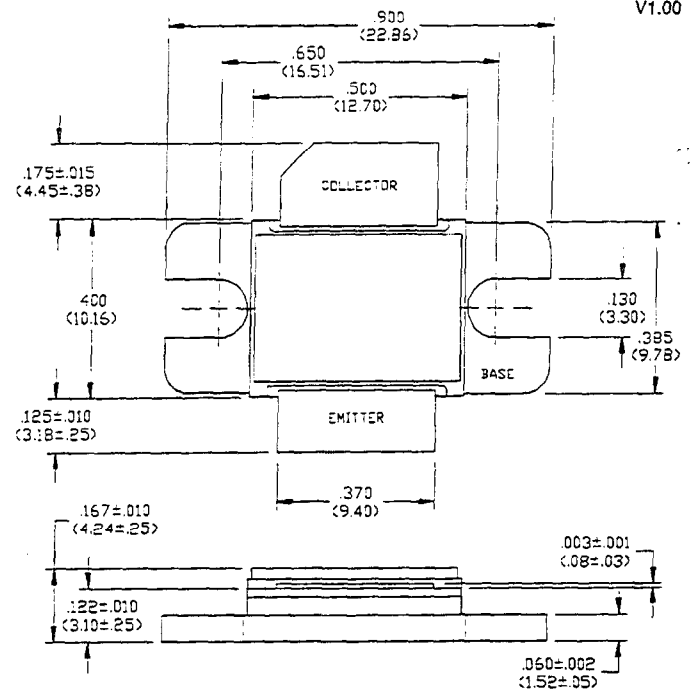
PH1920-45

## 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	$V_{EBO}$	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	$\theta_{JC}$	1.3	°C/W



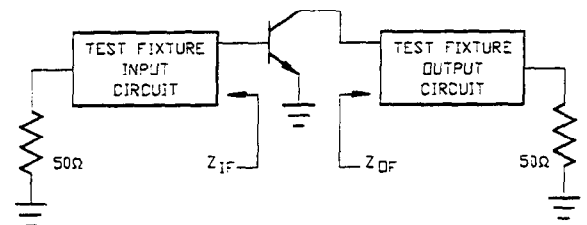
UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES ±.005" (MILLIMETERS ±.13MM)

## Electrical Characteristics at 25°C

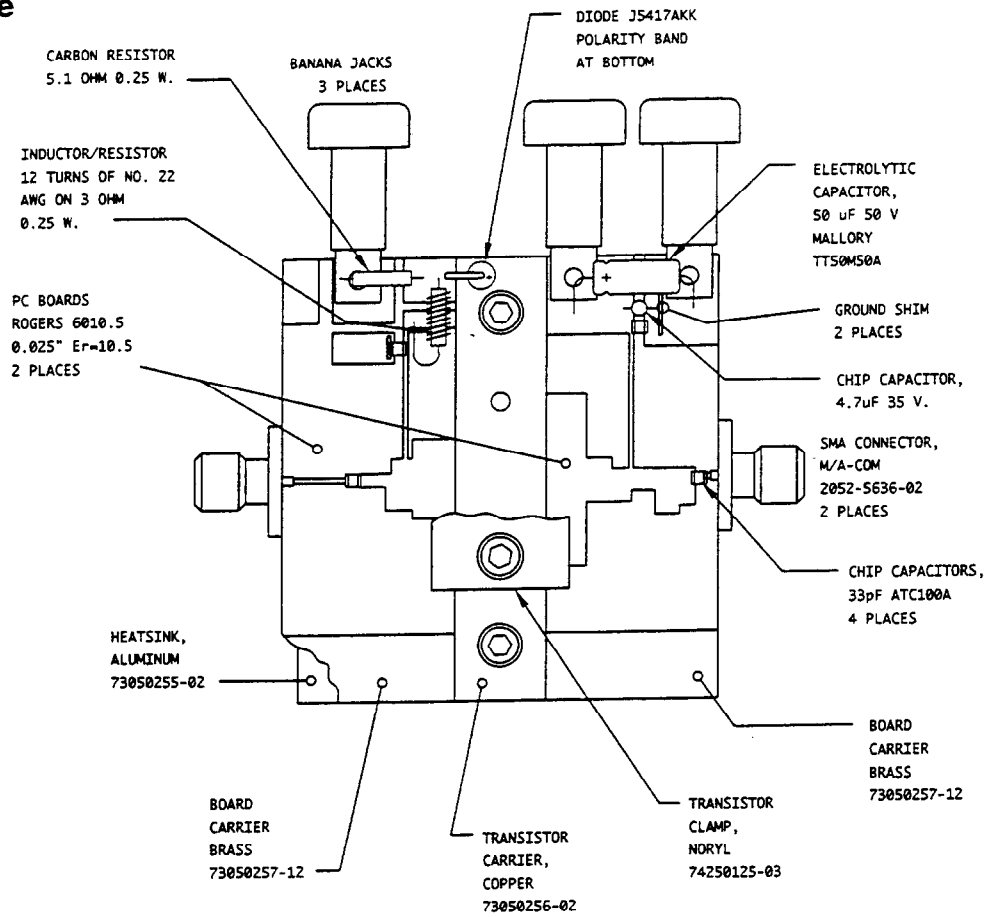
Parameter	Symbol	Min	Max	Units	Test Conditions
Power Gain	$G_P$	8	-	dB	$V_{CC}=25\text{ V}$ , $I_{CO}=200\text{ mA}$ , $P_{OUT}=45\text{ W}$ , $F=1930, 1990\text{ MHz}$
Collector Efficiency	$\eta_C$	40	-	%	$V_{CC}=25\text{ V}$ , $I_{CO}=200\text{ mA}$ , $P_{OUT}=45\text{ W}$ , $F=1930, 1990\text{ MHz}$
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

