



Wireless Power Transistor 90 Watts, 1930-1990 MHz



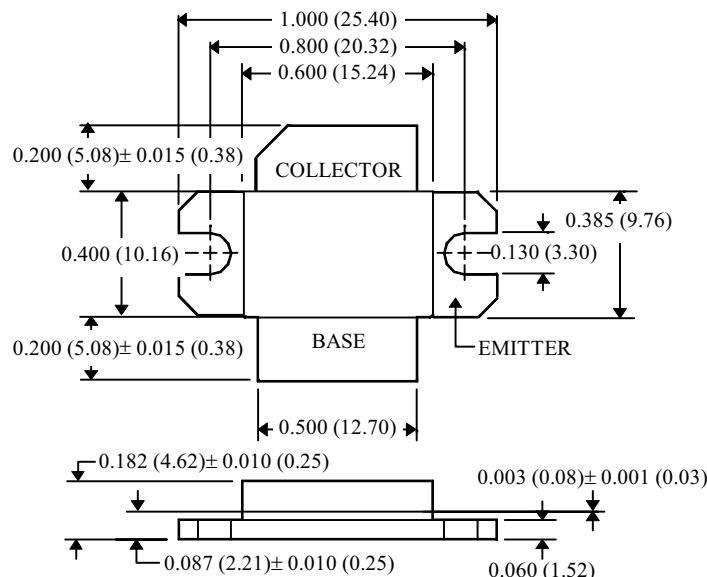
Features

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

Description

M/A-COM's PH1920-90 is a high power transistor designed for use in wireless communications systems. The PH1920-90 is capable of operating at an output power of 90W CW, and is currently being used in both TDMA and CDMA applications in the 1.8 GHz to 2.0 GHz frequency range.

Package Outline¹

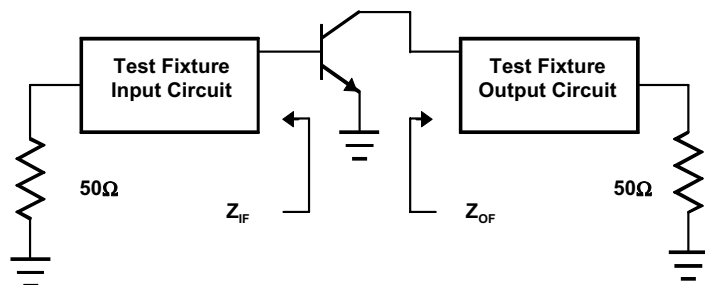


Notes: (unless otherwise specified)

1. Tolerance are inches ±0.005; (Millimeters ±0.13MM)

Broadband Test Fixture Impedances

F (MHz)	Z _{IF} (Ω)	Z _{OF} (Ω)
1930	2.2 - j3.8	1.7 - j1.2
1960	1.8 - j3.1	1.5 - j1.4
1990	1.1 - j2.9	1.6 - j1.4



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	TBD	A
Power Dissipation	P _D	TBD	W
Storage Temperature	T _{STG}	-55 to +150	°C
Junction Temperature	T _J	200	°C
Thermal Resistance	θ _{JC}	TBD	°C/W

Electrical Specifications at +25°C

Symbol	Parameters	Test Conditions	Units	Min.	Max.
h _{FE}	DC Forward Current Gain	V _{CE} = 5V, I _C = 4A	—	15	120
G _P	Power Gain	V _{CC} = 25 V, I _{CQ} = 260 mA, P _{OUT} = 90 W, F = 1930, 1990 MHz	dB	8.0	—
η _C	Collector Efficiency	V _{CC} = 25 V, I _{CQ} = 260 mA, P _{OUT} = 90 W, F = 1930, 1990 MHz	%	40	—
RL	Input Return Loss	V _{CC} = 25 V, I _{CQ} = 260 mA, P _{OUT} = 90 W, F = 1930, 1990 MHz	dB	10	—
VSWR-T	Load Mismatch Tolerance	V _{CC} = 25 V, I _{CQ} = 260 mA, P _{OUT} = 90 W, F = 1930, 1990 MHz	—	—	TBD

V1.00

