

Wireless Power Transistor

90 Watts, 1805-1880 MHz



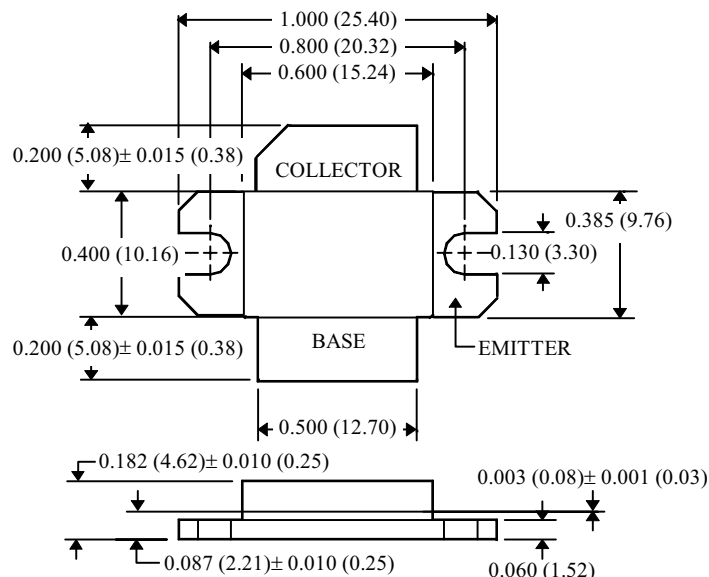
Features

- 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 PH1819-90 is a high power transistor designed for use in wireless communications systems. The PH1819-90 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

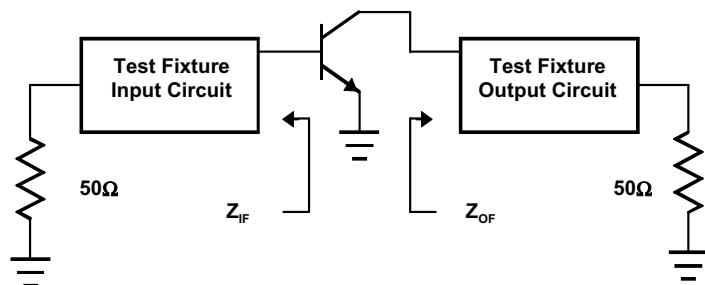


Notes: (unless otherwise specified)

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

Broadband Test Fixture Impedances

F (MHz)	Z _{IF} (Ω)	Z _{OF} (Ω)
1805	TBD	1.6 - j1.5
1840	TBD	1.6 - j0.8
1880	TBD	1.7 - j1.2



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 = 1805, 1880 MHz	dB	8.0	—
η _C	Collector Efficiency	V _{CC} = 25 V, I _{CQ} = 260 mA, P _{OUT} = 90 W, F = 1805, 1880 MHz	%	40	—
RL	Input Return Loss	V _{CC} = 25 V, I _{CQ} = 260 mA, P _{OUT} = 90 W, F = 1805, 1880 MHz	dB	10	—
VSWR-T	Load Mismatch Tolerance	V _{CC} = 25 V, I _{CQ} = 260 mA, P _{OUT} = 90 W, F = 1805, 1880 MHz	—	—	TBD

V1.00