

Wireless Bipolar Power Transistor 45W, 1805-1880 MHz

M/A-COM Products
Released - Rev. 07.07

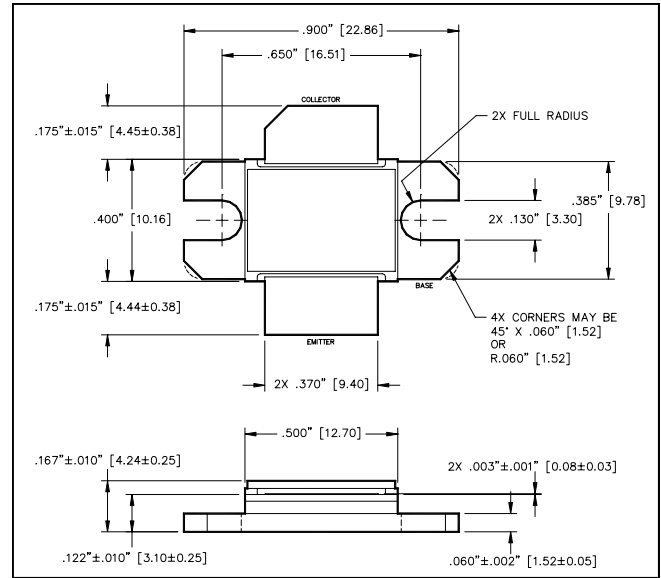
Features

- NPN silicon microwave power transistor
- Common emitter Class AB operation
- Internal input and output impedance matching
- Diffused emitter ballasting
- Gold metallization system

ABSOLUTE MAXIMUM RATING AT 25°C

Parameter	Symbol	Rating	Units
Collector-Base Voltage	V_{CBO}	25	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	θ_{JC}	1.3	°C/W

Outline Drawing



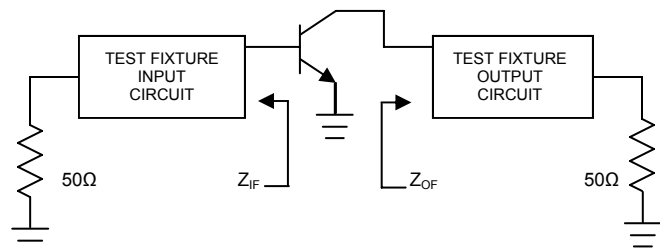
UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES ±.005" [MILLIMETERS ±0.13mm]

ELECTRICAL SPECIFICATIONS AT 25°C

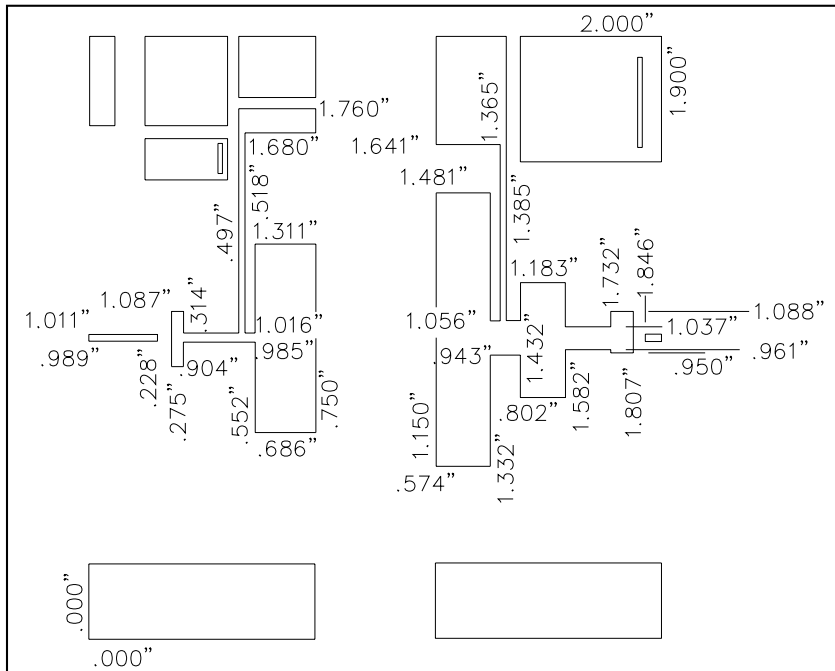
Parameter	Symbol	Min	Max	Units	Test Conditions
Power Gain	G_P	8	-	dB	$V_{CC} = 25V, I_{CQ} = 200 mA, P_{out} = 45 W, F = 1805, 1880 MHz$
Collector Efficiency	η_C	40	-	%	$V_{CC} = 25V, I_{CQ} = 200 mA, P_{out} = 45 W, F = 1805, 1880 MHz$
Input Return Loss	RL	10	-	dB	$V_{CC} = 25V, I_{CQ} = 200 mA, P_{out} = 45 W, F = 1805, 1880 MHz$
Load Mismatch Tolerance	VSWR	-	3:1	-	$V_{CC} = 25V, I_{CQ} = 200 mA, P_{out} = 45 W, F = 1805, 1880 MHz$

BROADBAND TEST FIXTURE IMPEDANCES

F (GHz)	$Z_{IN} (\Omega)$	$Z_{LOAD} (\Omega)$
1805	2.0-j3.8	3.7-j1.4
1850	2.0-j3.8	3.9-j1.8
1880	2.0-j3.7	3.9-j2.1



TEST FIXTURE DIMENSIONS



TEST FIXTURE ASSEMBLY

