

Wireless Bipolar Power Transistor 33W, 1805-1880 MHz

M/A-COM Products
Released - Rev. 08.07

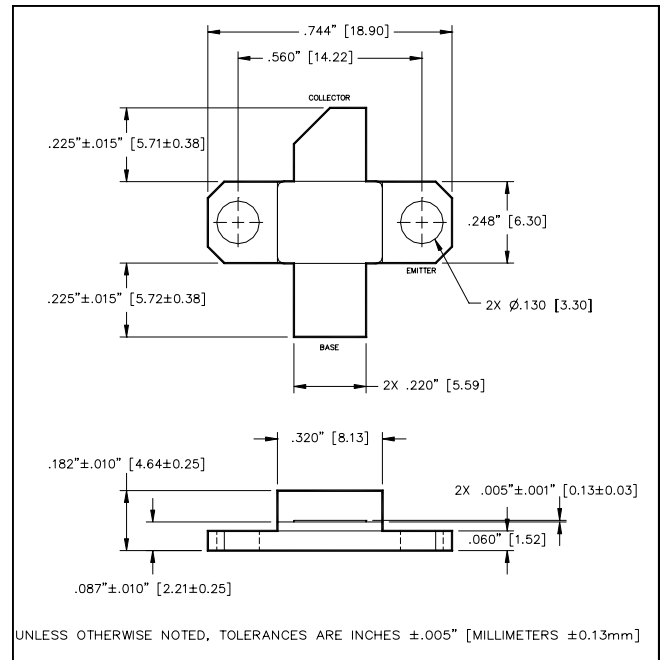
Features

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

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	4.7	A
Power Dissipation	P_D	91	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-55 to + 150	°C
Thermal Resistance	θ_{JC}	3.0	°C/W

Outline Drawing

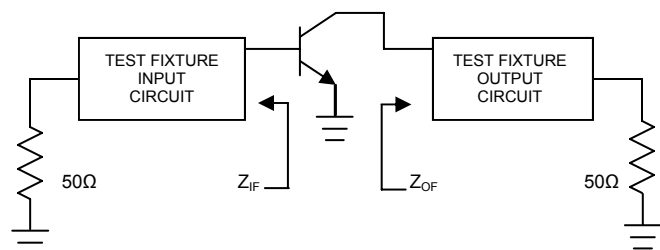


ELECTRICAL SPECIFICATIONS AT 25°C

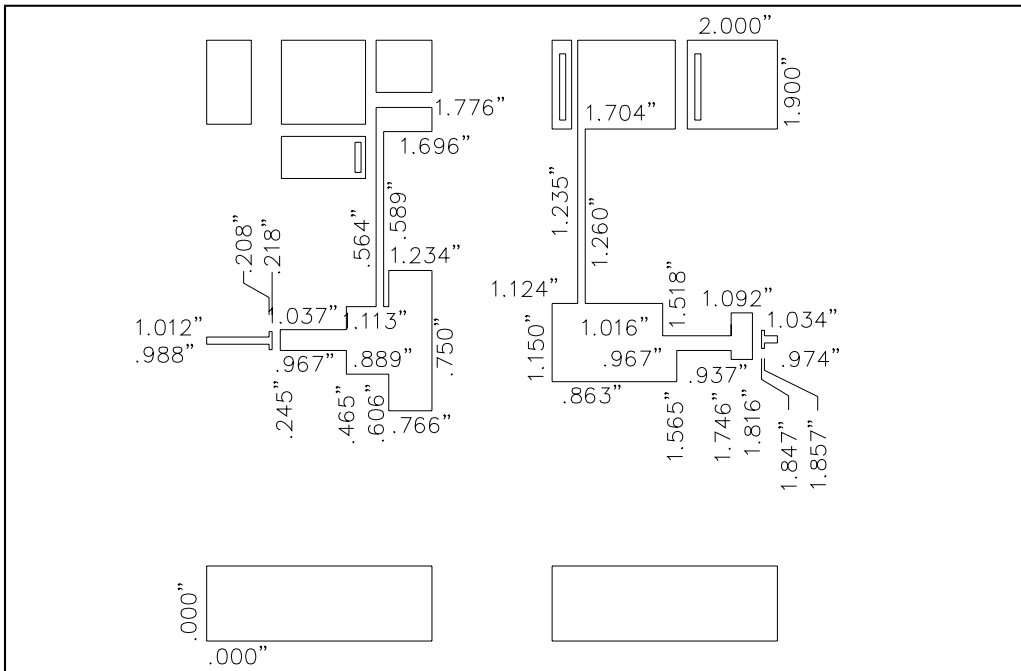
Parameter	Symbol	Min	Max	Units	Test Conditions
Power Gain	G_P	7.0	-	dB	$V_{CC} = 25V, I_{CQ} = 200\text{ mA}, P_{out} = 33\text{ W}, F = 1805, 1880\text{ MHz}$
Collector Efficiency	η_C	40	-	%	$V_{CC} = 25V, I_{CQ} = 200\text{ mA}, P_{out} = 33\text{ W}, F = 1805, 1880\text{ MHz}$
Input Return Loss	RL	10	-	dB	$V_{CC} = 25V, I_{CQ} = 200\text{ mA}, P_{out} = 33\text{ W}, F = 1805, 1880\text{ MHz}$
Load Mismatch Tolerance	VSWR	-	2:1	-	$V_{CC} = 25V, I_{CQ} = 200\text{ mA}, P_{out} = 33\text{ W}, F = 1805, 1880\text{ MHz}$

TYPICAL OPTIMUM DEVICE IMPEDANCES

F (GHz)	Z_{IN} (Ω)	Z_{LOAD} (Ω)
1805	1.8 - j5.5	4.0 - j1.4
1850	1.6 - j5.1	3.9 - j1.4
1880	1.7 - j4.8	4.0 - j0.9



TEST FIXTURE DIMENSIONS



TEST FIXTURE ASSEMBLY

