

Wireless Bipolar Power Transistor 33W, 1930-1900 MHz

M/A-COM Products
Released - Rev. 08.07

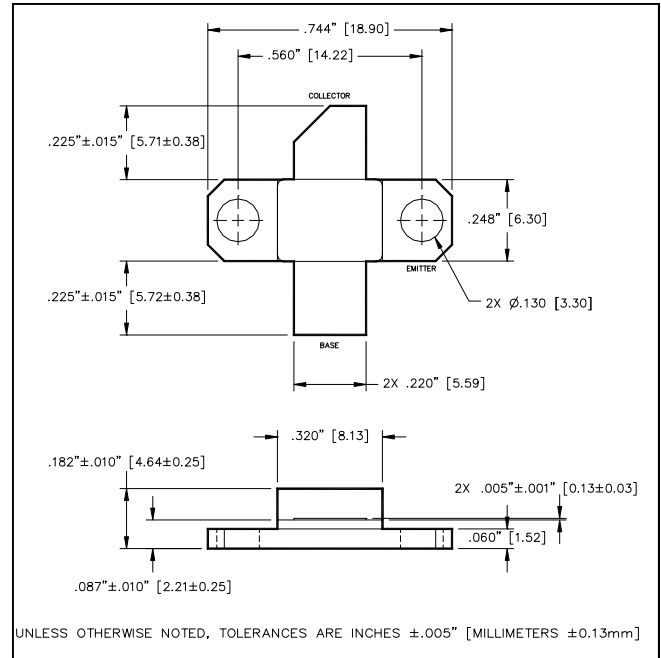
Features

- 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}	1.6	°C/W

Outline Drawing

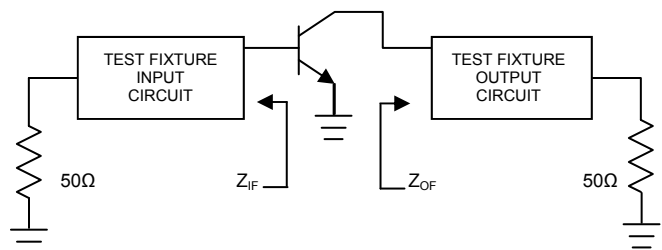


ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Power Gain	G_P	7.0	-	dB	$V_{CC} = 25V$, $I_{CQ} = 200$ mA, $P_{out} = 33$ W, $F = 1930, 1990$ MHz
Collector Efficiency	η_C	40	-	%	$V_{CC} = 25V$, $I_{CQ} = 200$ mA, $P_{out} = 33$ W, $F = 1930, 1990$ MHz
Input Return Loss	RL	10	-	dB	$V_{CC} = 25V$, $I_{CQ} = 200$ mA, $P_{out} = 33$ W, $F = 1930, 1990$ MHz
Load Mismatch Tolerance	VSWR	-	2:1	-	$V_{CC} = 25V$, $I_{CQ} = 200$ mA, $P_{out} = 33$ W, $F = 1930, 1990$ MHz

BROADBAND TEST FIXTURE IMPEDANCES

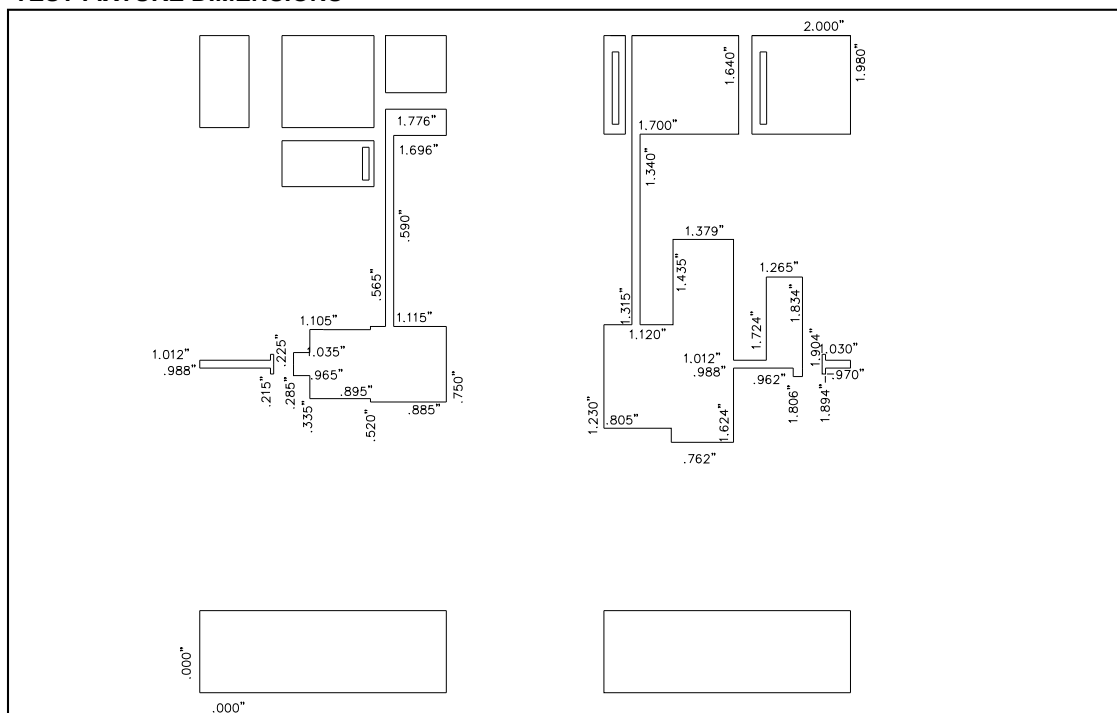
F (GHz)	Z_{IN} (Ω)	Z_{LOAD} (Ω)
1930	$2.6 - j2.6$	$3.3 - j1.1$
1960	$2.5 - j2.5$	$3.8 - j1.0$
1990	$2.4 - j2.3$	$4.1 - j0.8$



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TEST FIXTURE DIMENSIONS



TEST FIXTURE ASSEMBLY

