

CW Power Transistor 1W, 2.3 GHz

M/A-COM Products
Released - Rev. 07.07

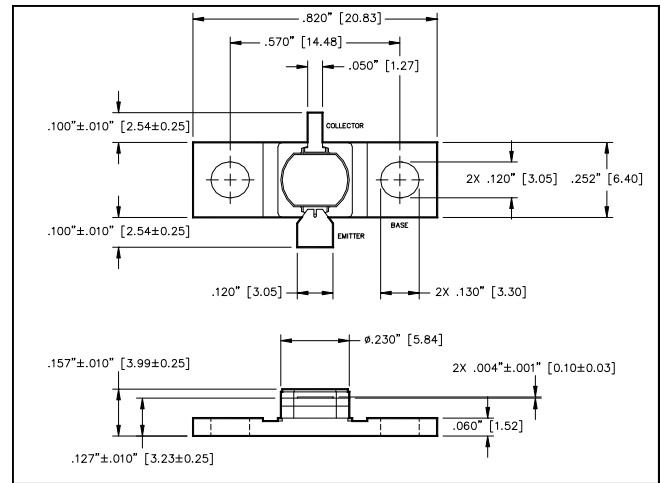
Features

- NPN silicon microwave power transistor
- Common base configuration
- Class C operation
- Interdigitated geometry
- Diffused emitter ballasting resistors
- Gold metalization system
- Hermetic metal/Ceramic package

ABSOLUTE MAXIMUM RATING AT 25°C

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CES}	60	V
Emitter-Base Voltage	V_{EBO}	3.0	V
Collector Current	I_C	0.2	A
Power Dissipation	P_D	7.0	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-65 to + 200	°C
Thermal Resistance	θ_{JC}	25	°C/W

Outline Drawing



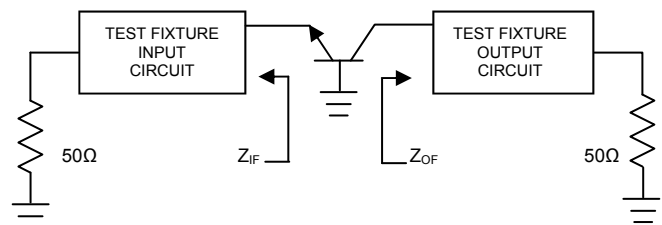
UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES ± .005" [MILLIMETERS ± 0.13MM]

ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	BV_{CES}	60	-	V	$I_C = 2.5mA$
Collector-Emitter Leakage Current	I_{CES}	-	0.5	mA	$V_{CE} = 28V$
Input Power	h_{FE}	-	0.158	w	$V_{CE} = 28V, P_{out} = 1.0 W, F = 2.3 GHz$
Power Gain	G_P	8	-	dB	$V_{CE} = 28V, P_{out} = 1.0 W, F = 2.3 GHz$
Collector Efficiency	η_C	30	-	%	$V_{CE} = 28V, P_{out} = 1.0 W, F = 2.3 GHz$
Input Return Loss	RL	6	-	dB	$V_{CE} = 28V, P_{out} = 1.0 W, F = 2.3 GHz$
Load Mismatch Tolerance	VSWR	-	3:1	-	$V_{CE} = 28V, P_{out} = 1.0 W, F = 2.3 GHz$

TEST FIXTURE IMPEDANCES

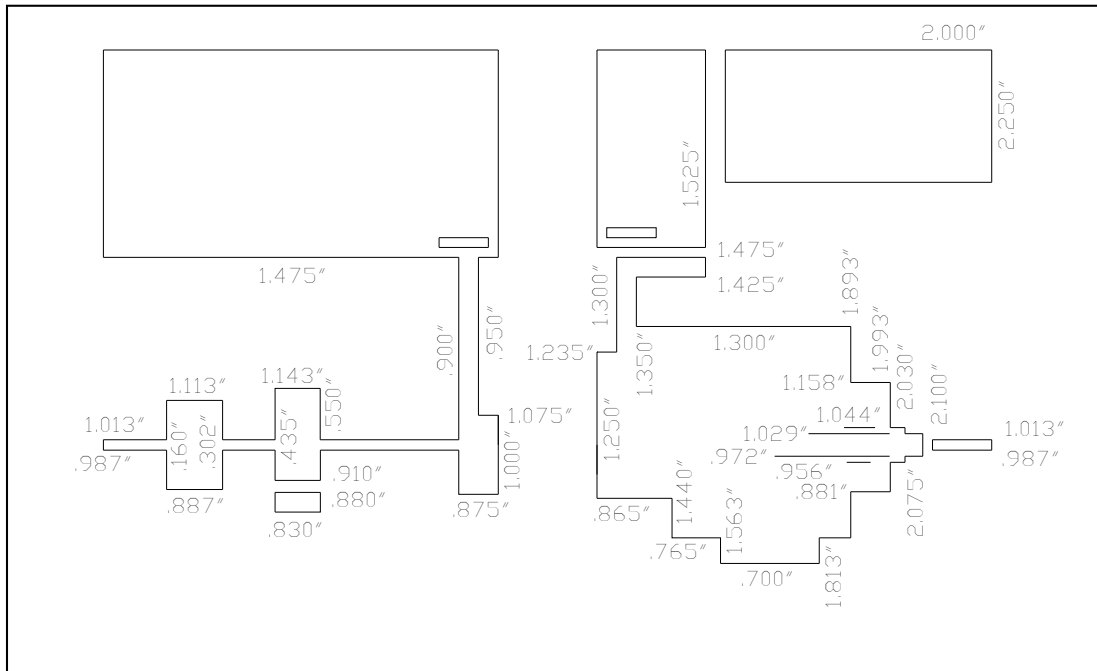
F (GHz)	$Z_{IN} (\Omega)$	$Z_{LOAD} (\Omega)$
2.30	12.5-j26.0	3.7+j10.4



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TEST FIXTURE DIMENSIONS



TEST FIXTURE ASSEMBLY

