

## CW Power Transistor 14W, 2.3 GHz

M/A-COM Products

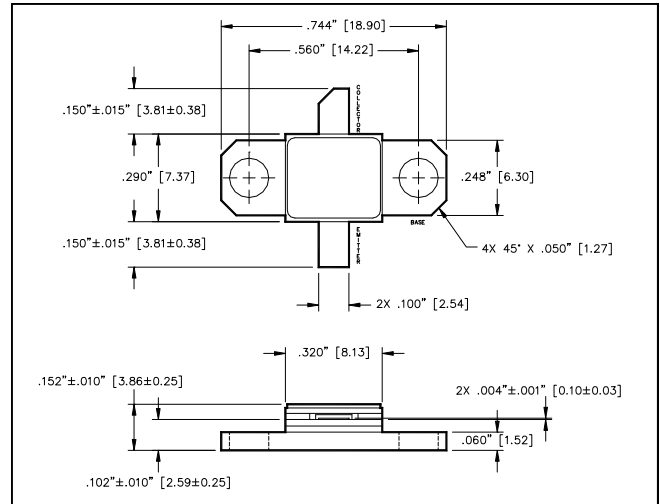
### Features

- NPN silicon microwave power transistor
- Common base configuration
- Class C operation
- Interdigitated geometry
- Gold metallization system
- Hermetic metauceramic package
- Diffused emitter ballasting resistors
- Internal input and output impedance matching

### 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	$I_C$	0.8	A
Power Dissipation	$P_D$	25	W
Junction Temperature	$T_J$	200	°C
Storage Temperature	$T_{STG}$	-65 to +200	°C
Thermal Resistance	$\theta_{JC}$	4.5	°C/W

### Outline Drawing



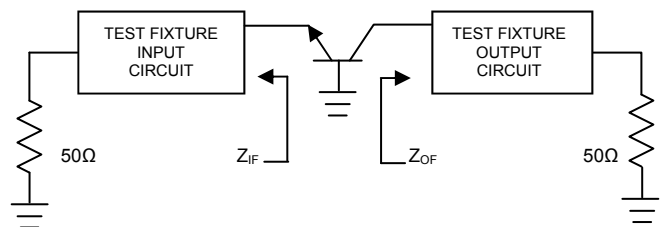
UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES ±.005" [MILLIMETERS ±0.13MM]

### ELECTRICAL SPECIFICATIONS AT 25°C

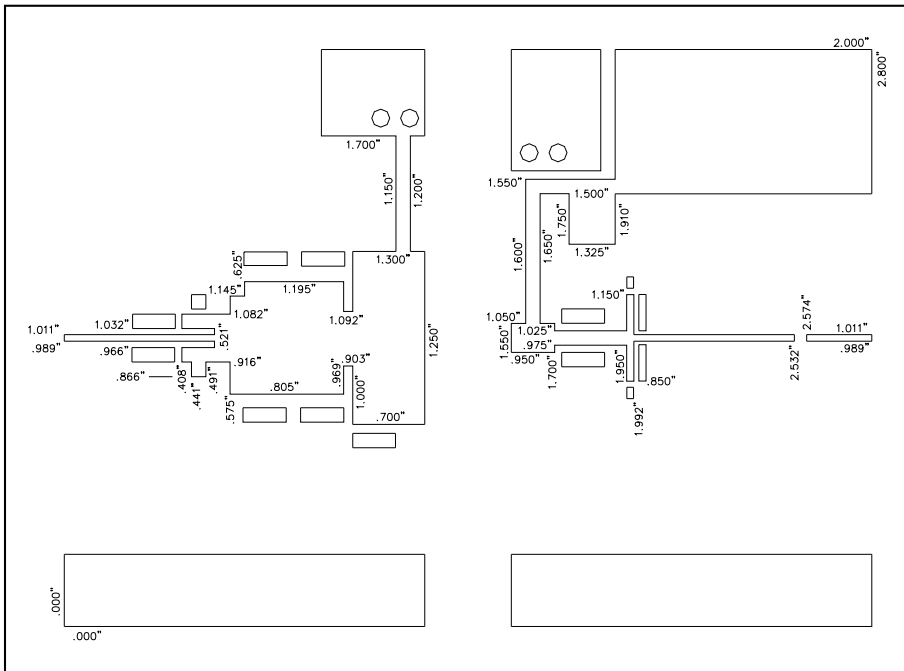
Parameter	Symbol	Min	Max	Units	Test Conditions
Collector-Emitter Breakdown Voltage	$BV_{CES}$	60	-	V	$I_C = 10\text{mA}$
Collector-Emitter Leakage Current	$I_{CES}$	-	2.0	mA	$V_{CE} = 28\text{V}$
Input Power	$P_{OUT}$	14	-	w	$V_{CE} = 28\text{V}$ , $P_{out} = 2.5\text{W}$ , $F = 2.3\text{GHz}$
Power Gain	$G_P$	7.6	-	dB	$V_{CE} = 28\text{V}$ , $P_{out} = 2.5\text{W}$ , $F = 2.3\text{GHz}$
Collector Efficiency	$\eta_C$	35	-	%	$V_{CE} = 28\text{V}$ , $P_{out} = 2.5\text{W}$ , $F = 2.3\text{GHz}$
Input Return Loss	RL	10	-	dB	$V_{CE} = 28\text{V}$ , $P_{out} = 2.5\text{W}$ , $F = 2.3\text{GHz}$
Load Mismatch Tolerance	VSWR-T	-	2:1	-	$V_{CE} = 28\text{V}$ , $P_{out} = 2.5\text{W}$ , $F = 2.3\text{GHz}$

### TEST FIXTURE IMPEDANCES

F (GHz)	$Z_{IN}$ ( $\Omega$ )	$Z_{OF}$ ( $\Omega$ )
2.30	4.1-8.5	11.0+j4.0



### TEST FIXTURE DIMENSIONS



### TEST FIXTURE ASSEMBLY

