

SILICON MICROWAVE POWER TRANSISTOR

PRODUCT DATA SHEET

FEATURES:

- Common Base Package Configuration
- High Output Power
1 W @ 1.0 GHz
- High Gain Bandwidth Product
 $f_t = 8.0 \text{ GHz @ } I_C = 70 \text{ mA}$
- High Gain
 $G_{PE} = 12 \text{ dB @ } 1.0 \text{ GHz}$
- High Reliability
Gold Metallization
Nitride Passivation
- Diffused Ballast Resistors
- Ceramic, BeO & Stripline Packages available

Absolute Maximum Ratings:

SYMBOL	PARAMETERS	RATING	UNITS
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	1.5	V
I_C	Collector Current (instantaneous)	180	mA
T_J	Junction Temperature	200	°C
T_{STG}	Storage Temperature	-65 to 200	°C

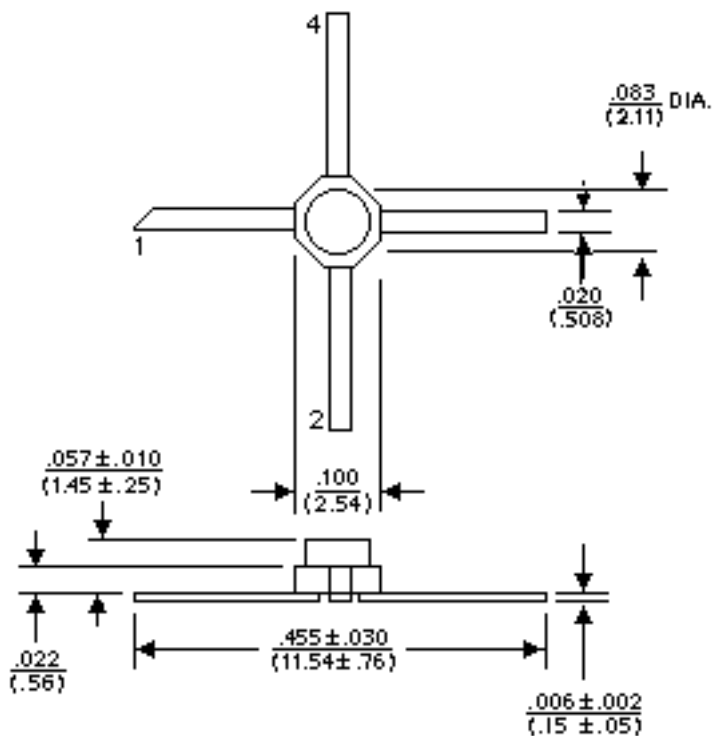
PERFORMANCE DATA:

- Electrical Characteristics ($T_A = 25^\circ\text{C}$)

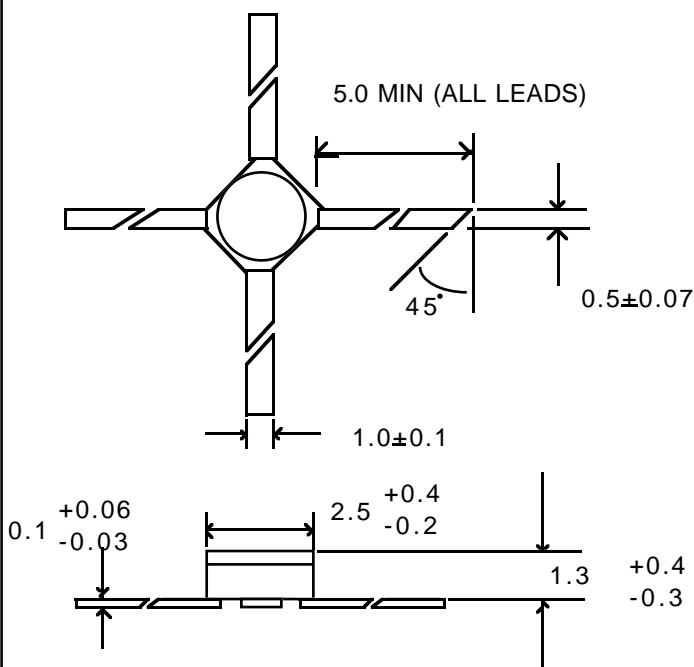
SYMBOL	PARAMETERS & CONDITIONS $V_{CE} = 10\text{V}, I_C = 60 \text{ mA}, \text{Class C}$	UNIT	MIN.	TYP.	MAX.
P_{1dB}	Power output at 1 dB compression: $f = 1.0 \text{ GHz}$	W		1	
η	Collector Efficiency Class C	%		65	
h_{FE}	Forward Current Transfer Ratio: $V_{CB} = 8\text{V}, I_C = 15 \text{ mA}$		20	60	100
C_{CB}	Collector Base Capacitance: $f = 1 \text{ MHz}, I_E = 0$	pF		0.75	
P_T	Total Power Dissipation	W		1.5	

MEDIUM POWER SILICON MICROWAVE TRANSISTOR

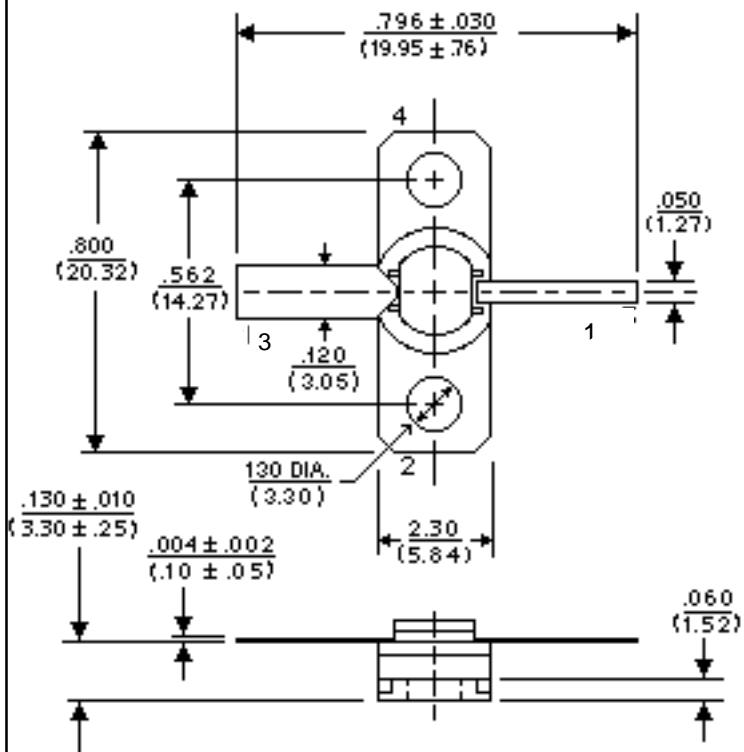
Package Style 85: 0.085" Ceramic Micro-X



Package Style 70: 0.070" Stripline



Package Style 23: 0.230" BeO Flange



LEAD	1	2	3	4
Package	Collector	Emitter	Base	Emitter
70, 85 & 23				

NOTES: (unless otherwise specified)

1. Dimensions are $\frac{\text{in}}{\text{mm}}$
2. Tolerances:
 in .xxx = ± .005
 mm .xx = ± .13
3. All dimensions nominal; subject to change without notice