

## 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	60	V
$V_{CEO}$	Collector-Emitter Voltage	30	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

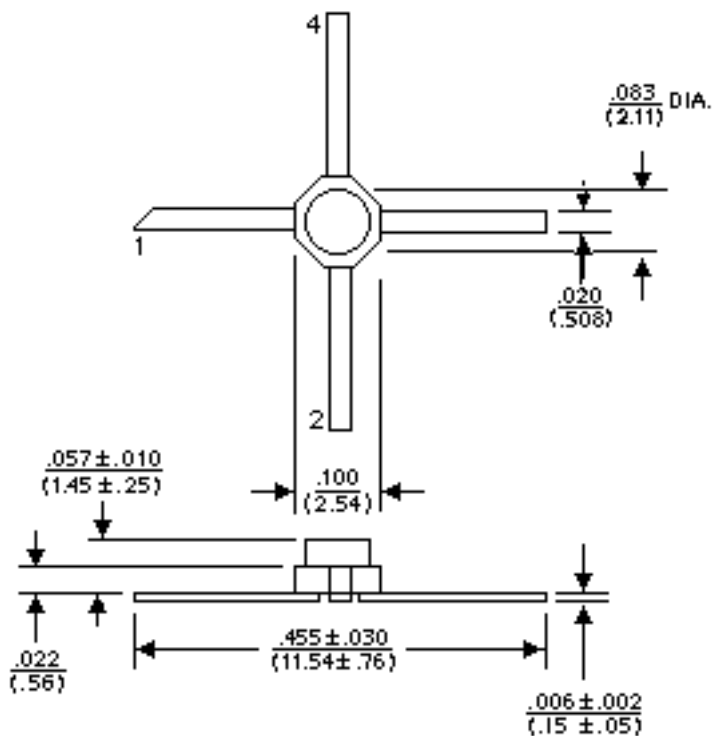
#### PERFORMANCE DATA:

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

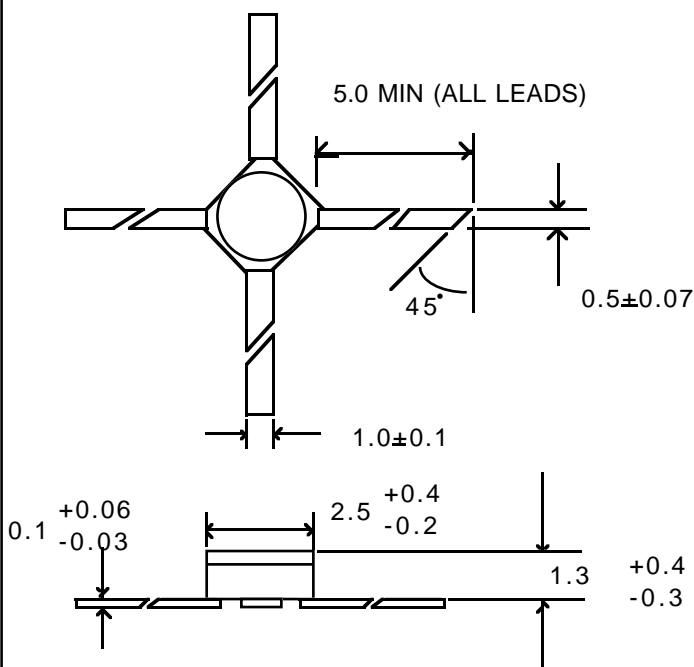
SYMBOL	PARAMETERS & CONDITIONS $V_{CE} = 10\text{V}, I_C = 60 \text{ mA}, \text{Class C}$	UNIT	MIN.	TYP.	MAX.
$P_{1dB}$	Power output at 1 dB compression: $f = 1.0 \text{ GHz}$	W		1	
$\eta$	Collector Efficiency $\text{Class C}$	%		65	
$h_{FE}$	Forward Current Transfer Ratio: $V_{CB} = 8\text{V}, I_C = 15 \text{ mA}$		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**

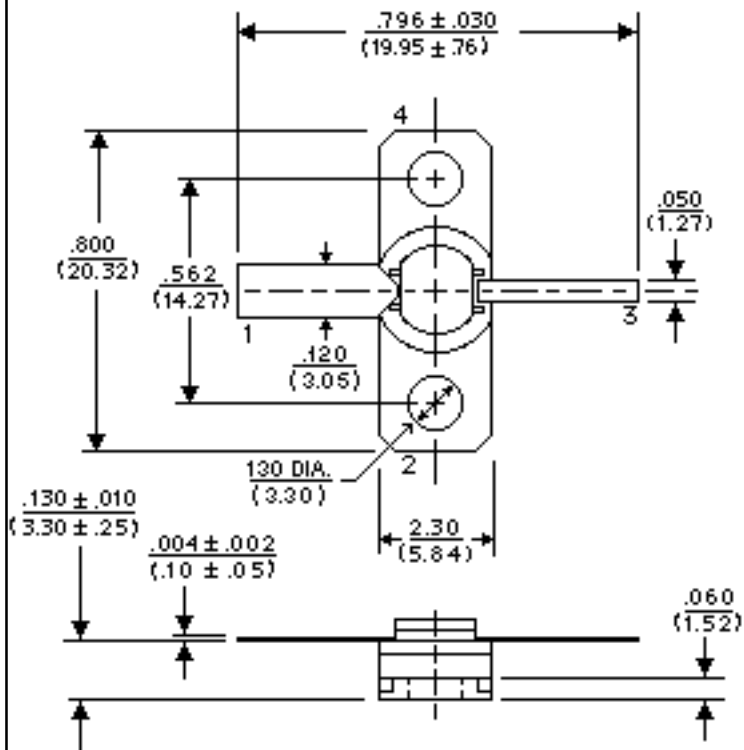
**Package Style 35: Micro-X 0.085" Ceramic**



**Package Style 70: 0.070" Stripline**



**Package Style 23: 0.230" BeO Flange**



LEAD	1	2	3	4
Package	Base	Emitter	Collector	Emitter
70, 35 & 23				

**NOTES:** (unless otherwise specified)

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