

SILICON MICROWAVE POWER TRANSISTOR

PRODUCT DATA SHEET

FEATURES:

- Common Base Package Configuration
- High Output Power
1 W @ 1.0 GHz
- High Gain Bandwidth Product
 $f_t = 8.0 \text{ GHz @ } I_C = 140 \text{ mA}$
- High Gain
 $G_{PE} = 11.5 \text{ dB @ } 1.0\text{GHz}$
- High Reliability
Gold Metallization
Nitride Passivation
- Diffused Ballast Resistors
- Ceramic & Pill 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)	320	mA
T_J	Junction Temperature	200	°C
T_{STG}	Storage Temperature	-65 to 200	°C

PERFORMANCE DATA:

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

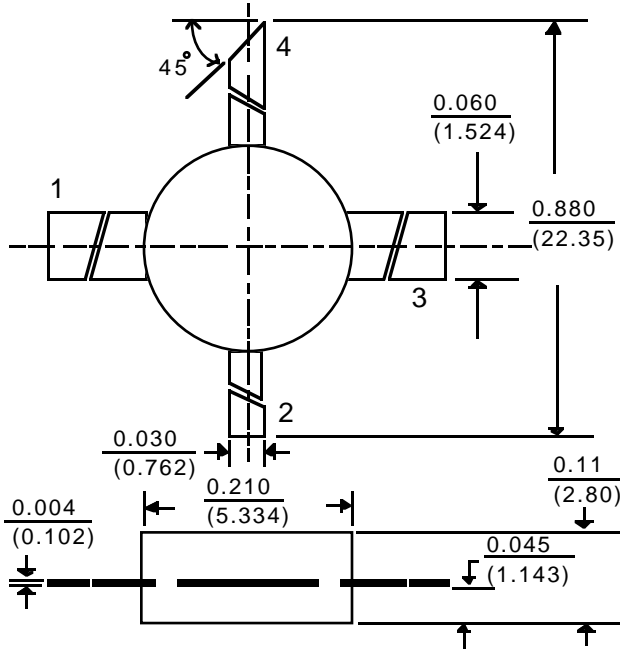
SYMBOL	PARAMETERS & CONDITIONS $V_{CE} = 8\text{V}, I_C = 120 \text{ mA}, \text{Class C}$	UNIT	MIN.	TYP.	MAX.
P_{1dB}	Power output at 1 dB compression: $f = 1.0 \text{ GHz}$	W		2	
η	Collector Efficiency Class C	%		65	
h_{FE}	Forward Current Transfer Ratio: $V_{CB} = 5\text{V}, I_C = 30 \text{ mA}$		30	100	300
C_{CB}	Collector Base Capacitance: $f = 1 \text{ MHz}$	pF		1.5	
P_T	Total Power Dissipation	W		3.0	

BIPOLARICS, INC

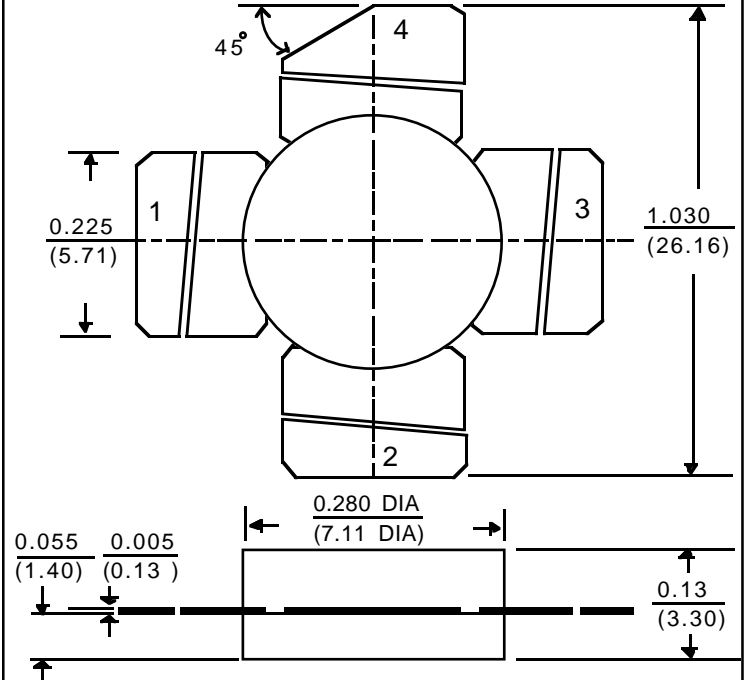
Part Number B30V180B

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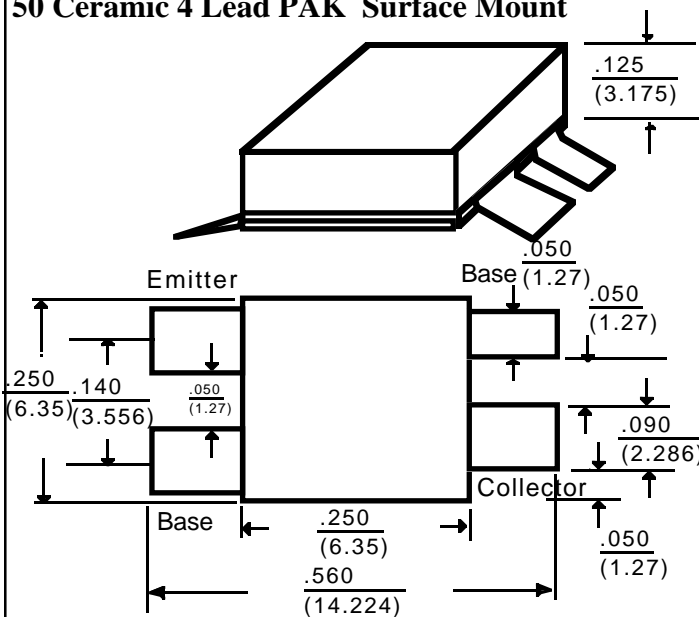
20 0.210" Pill Package



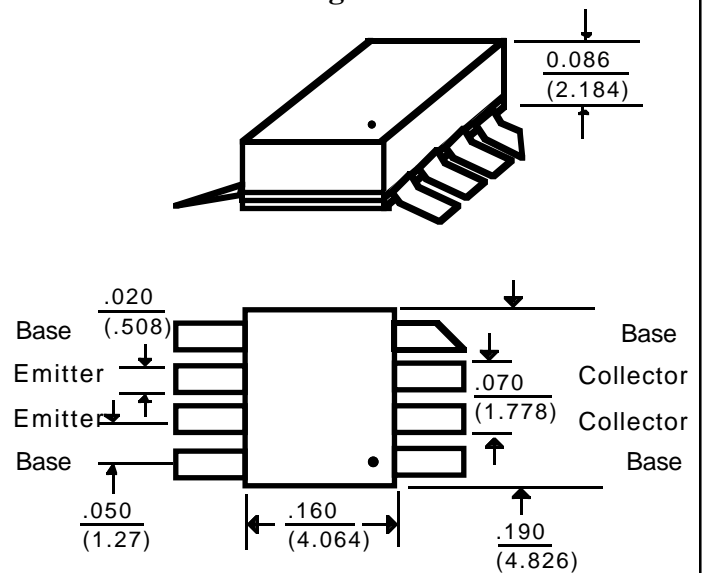
28 0.280" Pill Package



50 Ceramic 4 Lead PAK Surface Mount



08 Ceramic SO8 Package



NOTES: (unless otherwise specified)

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

Drawings are not to scale.

LEAD	1	2	3	4
20 & 28 Package	Base	Emitter	Base	Collector