

## SILICON MICROWAVE POWER TRANSISTOR

### PRODUCT DATA SHEET

#### FEATURES:

- Common Base Package Configuration
- High Output Power  
12 W @ 1.0 GHz
- High Gain Bandwidth Product  
 $f_t = 6.0 \text{ GHz @ } I_C = 1200 \text{ mA}$
- High Gain  
 $G_{PE} = 7.5 \text{ dB @ } 1.0\text{GHz}$
- 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	3.0	V
$I_C$	Collector Current (instantaneous)	1800	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 $V_{CE} = 15\text{V}, I_C = 1200 \text{ mA}, \text{Class C}$	UNIT	MIN.	TYP.	MAX.
$P_{1dB}$	Power output at 1 dB compression: $f = 1.0 \text{ GHz}$	W		12	
$\eta$	Collector Efficiency $\text{Class C}$	%		65	
$h_{FE}$	Forward Current Transfer Ratio: $V_{CB} = 8\text{V}, I_C = 600 \text{ mA}$		20	60	100
$C_{OB}$	Output Capacitance: $f = 1 \text{ MHz}, I_E = 0$	pF		12.0	
$P_T$	Total Power Dissipation	W		18	