

SILICON MICROWAVE POWER TRANSISTOR

PRODUCT DATA SHEET

FEATURES:

- Common Base Package Configuration
- High Output Power
8 W @ 1.0 GHz
- High Gain Bandwidth Product
 $f_t = 6.0 \text{ GHz @ } I_C = 800 \text{ mA}$
- 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)	1200	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		8	
η	Collector Efficiency Class C	%		65	
h_{FE}	Forward Current Transfer Ratio: $V_{CB} = 8\text{V}, I_C = 400 \text{ mA}$		20	60	100
C_{OB}	Output Capacitance: $f = 1 \text{ MHz}, I_E = 0$	pF		8.0	
P_T	Total Power Dissipation	W		12	