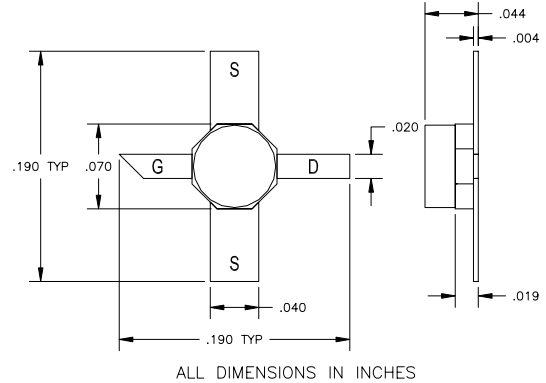


## High Efficiency Heterojunction Power FET

### FEATURES

- NON-HERMETIC LOW COST CERAMIC 70MIL PACKAGE
- +22.0 dBm OUTPUT POWER AT 1dB COMPRESSION
- 8.0 dB POWER GAIN AT 18GHZ
- 0.3 x 300 MICRON RECESSED "MUSHROOM" GATE
- Si<sub>3</sub>N<sub>4</sub> PASSIVATION
- ADVANCED EPITAXIAL HETEROJUNCTION PROFILE PROVIDES EXTRA HIGH POWER EFFICIENCY AND HIGH RELIABILITY
- Idss SORTED IN 10mA PER BIN RANGE



### ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25°C)



Caution! ESD sensitive device.

SYMBOL	PARAMETERS/TEST CONDITIONS <sup>1</sup>	MIN	TYP	MAX	UNITS
P <sub>1dB</sub>	Output Power at 1dB Compression V <sub>DS</sub> = 6V, I <sub>DS</sub> ≈ 50% I <sub>DSS</sub>	19.5	22.0 22.0		dBm
G <sub>1dB</sub>	Gain at 1dB Compression V <sub>DS</sub> = 6V, I <sub>DS</sub> ≈ 50% I <sub>DSS</sub>	9.5	11.5 8.0		dB
PAE	Power Added Efficiency at 1dB Compression V <sub>DS</sub> = 6V, I <sub>DS</sub> ≈ 50% I <sub>DSS</sub>		45		%
I <sub>DSS</sub>	Saturated Drain Current V <sub>DS</sub> = 3 V, V <sub>GS</sub> = 0 V	50	90	130	mA
G <sub>M</sub>	Transconductance V <sub>DS</sub> = 3 V, V <sub>GS</sub> = 0 V	60	95		mS
V <sub>P</sub>	Pinch-off Voltage V <sub>DS</sub> = 3 V, I <sub>DS</sub> = 1.0 mA		-1.0	-2.5	V
BV <sub>GD</sub>	Drain Breakdown Voltage I <sub>GD</sub> = 1.0mA	-11	-15		V
BV <sub>GS</sub>	Source Breakdown Voltage I <sub>GS</sub> = 1.0mA	-7	-14		V
R <sub>TH</sub>	Thermal Resistance		310*		°C/W

Notes: \* Overall Rth depends on case mounting.

### MAXIMUM RATINGS AT 25°C

SYMBOL	PARAMETERS	ABSOLUTE <sup>1</sup>	CONTINUOUS <sup>2</sup>
V <sub>DS</sub>	Drain to Source Voltage	10 V	6 V
V <sub>GS</sub>	Gate to Source Voltage	-6 V	-3 V
I <sub>DS</sub>	Drain Current	I <sub>DSS</sub>	65 mA
I <sub>GSF</sub>	Forward Gate Current	15 mA	2.5 mA
P <sub>IN</sub>	Input Power	19 dBm	@ 3dB compression
T <sub>CH</sub>	Channel Temperature	175°C	150°C
T <sub>STG</sub>	Storage Temperature	-65/+175°C	-65/+150°C
P <sub>T</sub>	Total Power Dissipation	440mW	370mW

Note: 1. Exceeding any of the above ratings may result in permanent damage.  
2. Exceeding any of the above ratings may reduce MTTF below design goals.

Specifications are subject to change without notice.