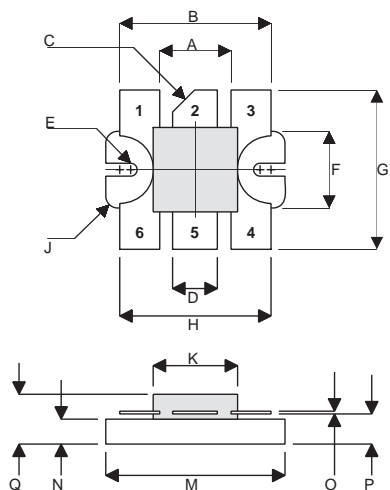


MECHANICAL DATA

**GOLD METALLISED  
MULTI-PURPOSE SILICON  
DMOS RF FET  
150W – 50V – 175MHz  
SINGLE ENDED**



DV

PIN 1	SOURCE	PIN 2	DRAIN
PIN 3	SOURCE	PIN 4	SOURCE
PIN 5	GATE	PIN 6	SOURCE

DIM	mm	Tol.	Inches	Tol.
A	9.09	0.13	0.358	0.005
B	19.3	0.13	0.760	0.005
C	45°	5°	45°	5°
D	5.71	0.13	0.225	0.005
E	1.65R	0.13	0.065R	0.005
F	10.16	0.13	0.400	0.005
G	20.32	0.25	0.800	0.010
H	19.30	0.13	0.760	0.005
J	1.52R	0.13	0.060R	0.005
K	10.77	0.13	0.424	0.005
M	22.86	0.13	0.900	0.005
N	3.17	0.13	0.125	0.005
O	0.13	0.02	0.005	0.001
P	4.19	0.13	0.165	0.005
Q	6.35	REF	0.250	REF

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW  $C_{rss}$
- SIMPLE BIAS CIRCUITS
- HIGH GAIN – 13 dB MINIMUM

APPLICATIONS

- HF/VHF/UHF COMMUNICATIONS  
from 1 MHz to 200 MHz

ABSOLUTE MAXIMUM RATINGS ( $T_{case} = 25^{\circ}C$  unless otherwise stated)

$P_D$	Power Dissipation	220W
$BV_{DSS}$	Drain – Source Breakdown Voltage	125V
$BV_{GSS}$	Gate – Source Breakdown Voltage	$\pm 20V$
$I_{D(sat)}$	Drain Current	21A
$T_{stg}$	Storage Temperature	$-65$ to $150^{\circ}C$
$T_j$	Maximum Operating Junction Temperature	$200^{\circ}C$

## ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25°C unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
B <sub>V</sub> DSS Drain–Source Breakdown Voltage	V <sub>GS</sub> = 0      I <sub>D</sub> = 100mA	125			V
I <sub>D</sub> DSS Zero Gate Voltage Drain Current	V <sub>DS</sub> = 50V      V <sub>GS</sub> = 0			7	mA
I <sub>G</sub> DSS Gate Leakage Current	V <sub>GS</sub> = 20V      V <sub>DS</sub> = 0			1	μA
V <sub>GS(th)</sub> Gate Threshold Voltage*	I <sub>D</sub> = 10mA      V <sub>DS</sub> = V <sub>GS</sub>	1		7	V
g <sub>fs</sub> Forward Transconductance*	V <sub>DS</sub> = 10V      I <sub>D</sub> = 3.5A	5.6			S
G <sub>PS</sub> Common Source Power Gain	P <sub>O</sub> = 150W	13			dB
η Drain Efficiency	V <sub>DS</sub> = 50V      I <sub>DQ</sub> = 0.7A	40			%
VSWR Load Mismatch Tolerance	f = 175MHz	20:1			—
C <sub>iss</sub> Input Capacitance	V <sub>DS</sub> = 50V      V <sub>GS</sub> = -5V      f = 1MHz			420	pF
C <sub>oss</sub> Output Capacitance	V <sub>DS</sub> = 50V      V <sub>GS</sub> = 0      f = 1MHz			175	pF
C <sub>rss</sub> Reverse Transfer Capacitance	V <sub>DS</sub> = 50V      V <sub>GS</sub> = 0      f = 1MHz			10.5	pF

\* Pulse Test:    Pulse Duration = 300 μs , Duty Cycle ≤ 2%

## HAZARDOUS MATERIAL WARNING

The ceramic portion of the device between leads and metal flange is beryllium oxide. Beryllium oxide dust is highly toxic and care must be taken during handling and mounting to avoid damage to this area.

**THESE DEVICES MUST NEVER BE THROWN AWAY WITH GENERAL INDUSTRIAL OR DOMESTIC WASTE.**

## THERMAL DATA

R <sub>THj-case</sub>	Thermal Resistance Junction – Case	Max. 0.8°C / W
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