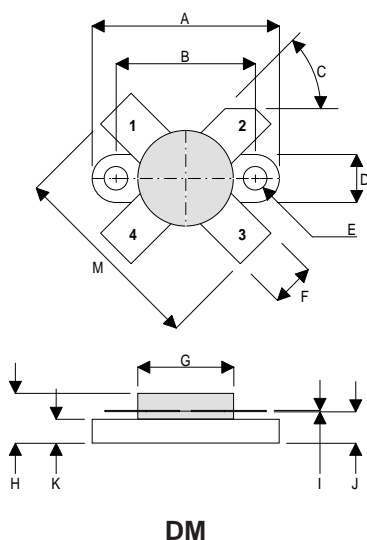


MECHANICAL DATA

**GOLD METALLISED
MULTI-PURPOSE SILICON
DMOS RF FET
30W – 12.5V – 500MHz
SINGLE ENDED**



FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW C_{rss}
- USEFUL P_O AT 1GHz
- LOW NOISE
- HIGH GAIN – 10 dB MINIMUM

APPLICATIONS

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

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

DIM	mm	Tol.	Inches	Tol.
A	24.76	0.13	0.975	0.005
B	18.42	0.13	0.725	0.005
C	45°	5°	45°	5°
D	6.35	0.13	0.25	0.005
E	3.17 Dia	0.13	0.125 Dia	0.005
F	5.71	0.13	0.225	0.005
G	12.7 Dia	0.13	0.500 Dia	0.005
H	6.60	REF	0.260	REF
I	0.13	0.02	0.005	0.001
J	4.32	0.13	0.170	0.005
K	3.17	0.13	0.125	0.005
M	26.16	0.25	1.03	0.010

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

P_D	Power Dissipation	117W
BV_{DSS}	Drain – Source Breakdown Voltage	40V
BV_{GSS}	Gate – Source Breakdown Voltage	$\pm 20V$
$I_{D(sat)}$	Drain Current	15A
T_{stg}	Storage Temperature	-65 to $150^{\circ}C$
T_j	Maximum Operating Junction Temperature	$200^{\circ}C$

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
B _V DSS Drain–Source Breakdown Voltage	V _{GS} = 0 I _D = 100mA	40			V
I _D DSS Zero Gate Voltage Drain Current	V _{DS} = 12.5V V _{GS} = 0			1	mA
I _G DSS Gate Leakage Current	V _{GS} = 20V V _{DS} = 0			3	μA
V _{GS(th)} Gate Threshold Voltage*	I _D = 10mA V _{DS} = V _{GS}	0.5		7	V
g _{fs} Forward Transconductance*	V _{DS} = 10V I _D = 3A	2.4			S
G _{PS} Common Source Power Gain	P _O = 30W	10			dB
η Drain Efficiency	V _{DS} = 12.5V I _{DQ} = 0.6A	50			%
VSWR Load Mismatch Tolerance	f = 500MHz	20:1			—
C _{iss} Input Capacitance	V _{DS} = 0 V _{GS} = -5V f = 1MHz			180	pF
C _{oss} Output Capacitance	V _{DS} = 12.5V V _{GS} = 0 f = 1MHz			120	pF
C _{rss} Reverse Transfer Capacitance	V _{DS} = 12.5V V _{GS} = 0 f = 1MHz			12	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 _{THj-case}	Thermal Resistance Junction – Case	Max. 1.5°C / W
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