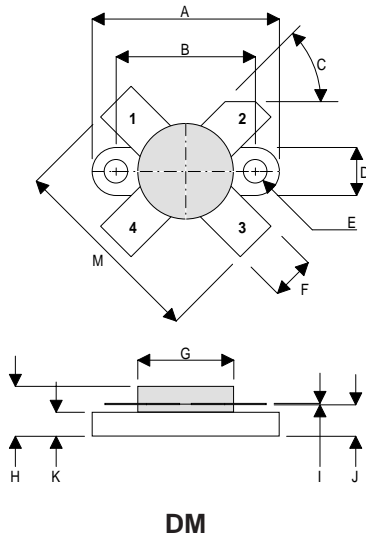


MECHANICAL DATA

**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 | ±20V |
| $I_{D(sat)}$ | Drain Current | 15A |
| T_{stg} | Storage Temperature | -65 to 150°C |
| T_j | Maximum Operating Junction Temperature | 200°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 |
|-----------------------|------------------------------------|----------------|