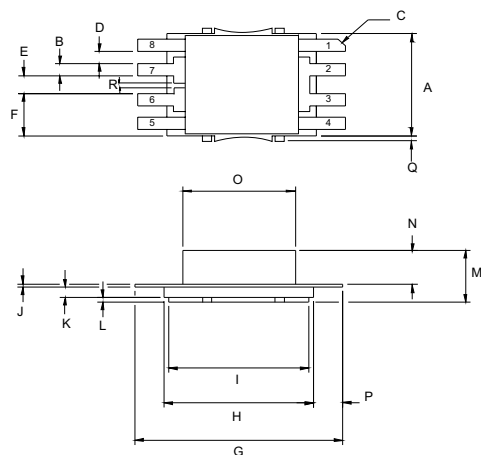


MECHANICAL DATA



**GOLD METALLISED
MULTI-PURPOSE SILICON
DMOS RF FET
10W – 28V – 1GHz
SINGLE ENDED**

DBC3 Package

- PIN 1 Source PIN 5 Source
- PIN 2 Drain PIN 6 Gate
- PIN 3 Drain PIN 7 Gate
- PIN 4 Source PIN 8 Source

| DIM | mm | Tol. | Inches | Tol. |
|-----|--------|------|--------|------|
| A | 6.47 | 0.08 | .255 | .003 |
| B | 0.76 | 0.08 | .030 | .003 |
| C | 45° | 5° | 45° | 5° |
| D | 0.76 | 0.08 | .030 | .003 |
| E | 1.14 | 0.08 | .045 | .003 |
| F | 2.67 | 0.08 | .105 | .003 |
| G | 11.73 | 0.13 | .462 | .005 |
| H | 8.43 | 0.08 | .332 | .003 |
| I | 7.92 | 0.08 | .312 | .003 |
| J | 0.20 | 0.02 | .008 | .001 |
| K | 0.64 | 0.02 | .025 | .001 |
| L | 0.30 | 0.02 | .012 | .001 |
| M | 3.25 | 0.08 | .128 | .003 |
| N | 2.11 | 0.08 | .083 | .003 |
| O | 6.35SQ | 0.08 | .250SQ | .003 |
| P | 1.65 | 0.51 | .065 | .020 |
| Q | 0.13 | max | .005 | max |
| R | 0.25 | 0.07 | 0.010 | .003 |

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW C_{rss}
- LOW NOISE
- HIGH GAIN

APPLICATIONS

- HF/VHF/UHF COMMUNICATIONS
from 1 MHz to 2 GHz

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

| | | |
|--------------|--|-------------------------|
| P_D | Power Dissipation | 70W |
| BV_{DSS} | Drain – Source Breakdown Voltage | 65V |
| BV_{GSS} | Gate – Source Breakdown Voltage | $\pm 20V$ |
| $I_{D(sat)}$ | Drain Current | 8A |
| T_{stg} | Storage Temperature | -65 to $150^{\circ}C$ |
| T_j | Maximum Operating Junction Temperature | $200^{\circ}C$ |

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

| Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|---|--|------|------|------|---------|
| BV_{DSS} Drain–Source Breakdown Voltage | $V_{GS} = 0$ $I_D = 10mA$ | 65 | | | V |
| I_{DSS} Zero Gate Voltage Drain Current | $V_{DS} = 28V$ $V_{GS} = 0$ | | | 8 | mA |
| I_{GSS} Gate Leakage Current | $V_{GS} = 20V$ $V_{DS} = 0$ | | | 8 | μA |
| $V_{GS(th)}$ Gate Threshold Voltage* | $I_D = 10mA$ $V_{DS} = V_{GS}$ | 1 | | 7 | V |
| g_{fs} Forward Transconductance* | $V_{DS} = 10V$ $I_D = 1.6A$ | 1.44 | | | S |
| G_{PS} Common Source Power Gain | $P_O = 10W$ | 10 | | | dB |
| η Drain Efficiency | $V_{DS} = 28V$ $I_{DQ} = 0.8A$ | 40 | | | % |
| VSWR Load Mismatch Tolerance | $f = 1GHz$ | 20:1 | | | — |
| C_{iss} Input Capacitance | $V_{DS} = 0$ $V_{GS} = -5V$ $f = 1MHz$ | | | 96 | pF |
| C_{oss} Output Capacitance | $V_{DS} = 28V$ $V_{GS} = 0$ $f = 1MHz$ | | | 48 | pF |
| C_{rss} Reverse Transfer Capacitance | $V_{DS} = 28V$ $V_{GS} = 0$ $f = 1MHz$ | | | 4 | pF |

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

THERMAL DATA

| | | |
|----------------|------------------------------------|--------------------------|
| $R_{THj-case}$ | Thermal Resistance Junction – Case | Max. 2.5 $^{\circ}C / W$ |
|----------------|------------------------------------|--------------------------|