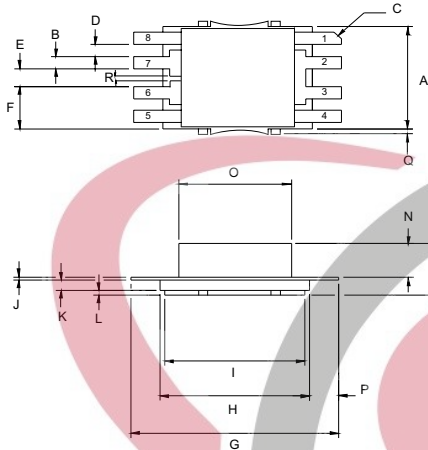


MECHANICAL DATA



**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

**FEATURES**

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

| 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 |

**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°C |
| $T_j$        | Maximum Operating Junction Temperature | 200°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    | $\mu A$ |
| $V_{GS(th)}$ 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      |
| $\eta$ 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  $\mu s$  , Duty Cycle  $\leq 2\%$

**THERMAL DATA**

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

