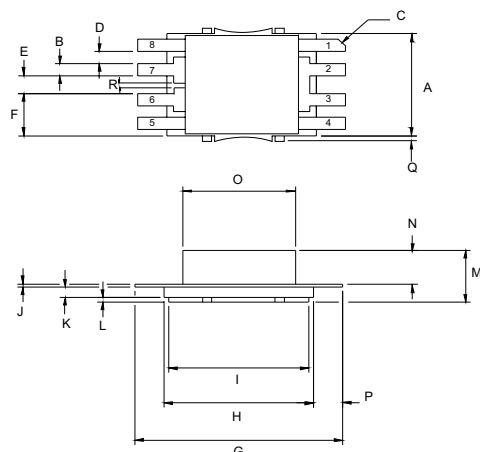


## MECHANICAL DATA



## 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 |

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

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

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

\* Pulse Test: Pulse Duration = 300  $\mu\text{s}$  , Duty Cycle  $\leq 2\%$

## THERMAL DATA

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