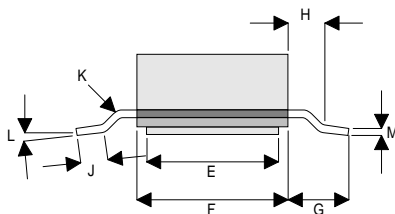
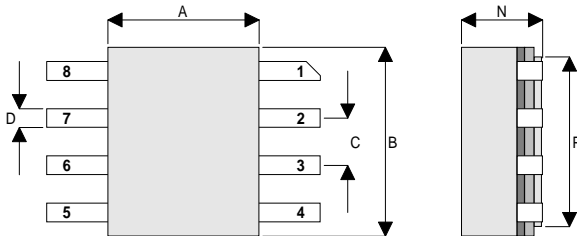


MECHANICAL DATA



SO8 PACKAGE

- PIN 1 – SOURCE
- PIN 2 – DRAIN
- PIN 3 – DRAIN
- PIN 4 – SOURCE
- PIN 5 – SOURCE
- PIN 6 – GATE
- PIN 7 – GATE
- PIN 8 – SOURCE

| Dim. | mm   | Tol.           | Inches | Tol.             |
|------|------|----------------|--------|------------------|
| A    | 4.06 | ±0.08          | 0.160  | ±0.003           |
| B    | 5.08 | ±0.08          | 0.200  | ±0.003           |
| C    | 1.27 | ±0.08          | 0.050  | ±0.003           |
| D    | 0.51 | ±0.08          | 0.020  | ±0.003           |
| E    | 3.56 | ±0.08          | 0.140  | ±0.003           |
| F    | 4.06 | ±0.08          | 0.160  | ±0.003           |
| G    | 1.65 | ±0.08          | 0.065  | ±0.003           |
| H    | 0.76 | +0.25<br>-0.00 | 0.030  | +0.010<br>-0.000 |
| J    | 0.51 | Min.           | 0.020  | Min.             |
|      | 1.02 | Max.           | 0.040  | Max.             |
| K    | 45°  | Max.           | 45°    | Max.             |
|      | 0°   | Min.           | 0°     | Min.             |
| L    | 7°   | Max.           | 7°     | Max.             |
|      | 0°   | Min.           | 0°     | Min.             |
| M    | 0.20 | ±0.08          | 0.008  | ±0.003           |
| N    | 2.18 | Max.           | 0.086  | Max.             |
| P    | 4.57 | ±0.08          | 0.180  | ±0.003           |

**GOLD METALLISED  
MULTI-PURPOSE SILICON  
DMOS RF FET  
5W – 28V – 1GHz  
SINGLE ENDED**

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- VERY LOW  $C_{rss}$
- SIMPLE BIAS CIRCUITS
- LOW NOISE
- HIGH GAIN – 13 dB MINIMUM

APPLICATIONS

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

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

|              |  |              |
|--------------|--|--------------|
| $P_D$        | Power Dissipation                      | 30W          |
| $BV_{DSS}$   | Drain – Source Breakdown Voltage *     | 65V          |
| $BV_{GSS}$   | Gate – Source Breakdown Voltage*       | ±20V         |
| $I_{D(sat)}$ | Drain Current                          | 2A           |
| $T_{stg}$    | 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 | $V_{DS} = 28V$ $V_{GS} = 0$             |      |      | 2    | mA      |
| $I_{GSS}$ Gate Leakage Current            | $V_{GS} = 20V$ $V_{DS} = 0$             |      |      | 1    | $\mu A$ |
| $V_{GS(th)}$ Gate Threshold Voltage*      | $I_D = 10mA$ $V_{DS} = V_{GS}$          | 1    |      | 5    | V       |
| $g_{fs}$ Forward Transconductance*        | $V_{DS} = 10V$ $I_D = 0.4A$             | 0.36 |      |      | S       |
| $G_{PS}$ Common Source Power Gain         | $P_O = 5W$                              | 13   |      |      | dB      |
| $\eta$ Drain Efficiency                   | $V_{DS} = 28V$ $I_{DQ} = 0.4A$          | 40   |      |      | %       |
| VSWR Load Mismatch Tolerance              | $f = 1GHz$                              | 20:1 |      |      | —       |
| $C_{iss}$ Input Capacitance               | $V_{DS} = 0V$ $V_{GS} = -5V$ $f = 1MHz$ |      |      | 24   | pF      |
| $C_{oss}$ Output Capacitance              | $V_{DS} = 28V$ $V_{GS} = 0$ $f = 1MHz$  |      |      | 12   | pF      |
| $C_{rss}$ Reverse Transfer Capacitance    | $V_{DS} = 28V$ $V_{GS} = 0$ $f = 1MHz$  |      |      | 1    | pF      |

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

**THERMAL DATA**

|                |                                    |              |
|----------------|------------------------------------|--------------|
| $R_{THj-case}$ | Thermal Resistance Junction – Case | Max. 6°C / W |
|----------------|------------------------------------|--------------|