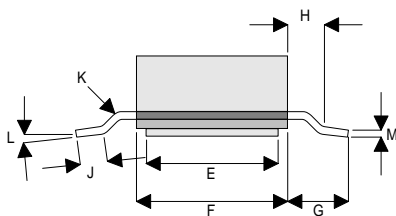
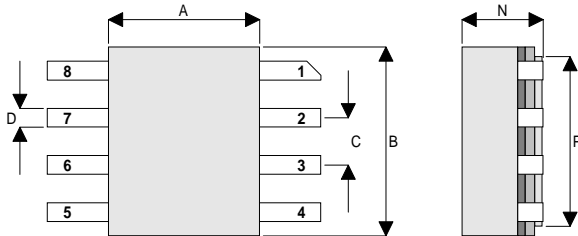


MECHANICAL DATA

**GOLD METALLISED
MULTI-PURPOSE SILICON
DMOS RF FET
5W – 12.5V – 1GHz
PUSH-PULL**



SO8 PACKAGE

- PIN 1 – SOURCE
- PIN 2 – DRAIN 1
- PIN 3 – DRAIN 2
- PIN 4 – SOURCE
- PIN 5 – SOURCE
- PIN 6 – GATE 2
- PIN 7 – GATE 1
- 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 -0.00 | 0.030 | +0.010 -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. |
| | 0.20 | ±0.08 | 0.008 | ±0.003 |
| N | 2.18 | Max. | 0.086 | Max. |
| P | 4.57 | ±0.08 | 0.180 | ±0.003 |

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- VERY LOW C_{rss}
- SIMPLE BIAS CIRCUITS
- LOW NOISE
- HIGH GAIN – 10 dB MINIMUM

APPLICATIONS

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

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

| | | |
|--------------|--|--------------|
| P_D | Power Dissipation | 17.5W |
| BV_{DSS} | Drain – Source Breakdown Voltage | 40V |
| BV_{GSS} | Gate – Source Breakdown Voltage | ±20V |
| $I_{D(sat)}$ | Drain Current | 4A |
| 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 |
|---------------------|---------------------------------|------------------|---------------------------|------|------|------|---------|
| PER SIDE | | | | | | | |
| BV_{DSS} | Drain–Source Breakdown Voltage | $V_{GS} = 0$ | $I_D = 10mA$ | 40 | | | V |
| I_{DSS} | Zero Gate Voltage Drain Current | $V_{DS} = 12.5V$ | $V_{GS} = 0$ | | | 1 | mA |
| I_{GSS} | Gate Leakage Current | $V_{GS} = 20V$ | $V_{DS} = 0$ | | | 1 | μA |
| $V_{GS(th)}$ | Gate Threshold Voltage* | $I_D = 10mA$ | $V_{DS} = V_{GS}$ | 0.5 | | 7 | V |
| g_{fs} | Forward Transconductance* | $V_{DS} = 10V$ | $I_D = 0.2A$ | 0.18 | | | S |
| TOTAL DEVICE | | | | | | | |
| G_{PS} | Common Source Power Gain | $P_O = 5W$ | | 10 | | | dB |
| η | Drain Efficiency | $V_{DS} = 12.5V$ | $I_{DQ} = 0.2A$ | 40 | | | % |
| VSWR | Load Mismatch Tolerance | $f = 1GHz$ | | 20:1 | | | — |
| PER SIDE | | | | | | | |
| C_{iss} | Input Capacitance | $V_{DS} = 0V$ | $V_{GS} = -5V$ $f = 1MHz$ | | | 12 | pF |
| C_{oss} | Output Capacitance | $V_{DS} = 12.5V$ | $V_{GS} = 0$ $f = 1MHz$ | | | 10 | pF |
| C_{rss} | Reverse Transfer Capacitance | $V_{DS} = 12.5V$ | $V_{GS} = 0$ $f = 1MHz$ | | | 1 | pF |

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

THERMAL DATA

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

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