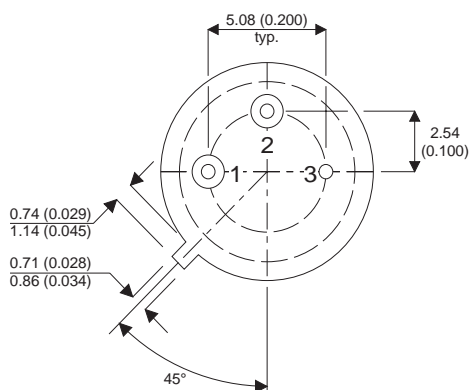
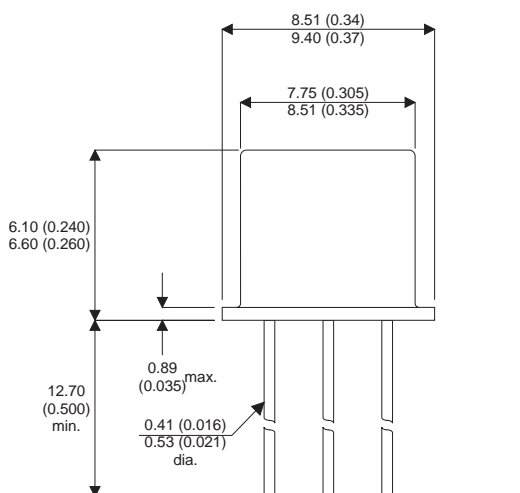


MECHANICAL DATA



TO-39 PACKAGE

PIN1 - DRAIN PIN2 - GATE PIN3 - SOURCE

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

FEATURES

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

APPLICATIONS

- VHF/UHF COMMUNICATIONS
from DC to 1GHz

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

| | | |
|--------------|--|--------------|
| P_D | Power Dissipation | 29W |
| BV_{DSS} | Drain – Source Breakdown Voltage | 40V |
| BV_{GSS} | Gate – Source Breakdown Voltage | $\pm 20V$ |
| $I_{D(sat)}$ | Drain Current | 4A |
| T_{stg} | Storage Temperature | -65 to 150°C |
| T_j | Maximum Operating Junction Temperature | 200°C |

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

| Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|--|--|------|------|------|------|
| B _V 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 | | | 2 | 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} | 1 | | 7 | 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 |
| η Drain Efficiency | V _{DS} = 12.5V I _{DQ} = 0.1A | 40 | | | % |
| VSWR Load Mismatch Tolerance | f = 400MHz | 20:1 | | | — |
| C _{iss} Input Capacitance | V _{DS} = 0V V _{GS} = -5V f = 1MHz | | | 24 | pF |
| C _{oss} Output Capacitance | V _{DS} = 12.5V V _{GS} = 0 f = 1MHz | | | 20 | pF |
| C _{rss} Reverse Transfer Capacitance | V _{DS} = 12.5V V _{GS} = 0 f = 1MHz | | | 2 | pF |

* Pulse Test: Pulse Duration = 300 μs , Duty Cycle ≤ 2%

THERMAL DATA

| | | |
|-----------------------|------------------------------------|--------------|
| R _{THj-case} | Thermal Resistance Junction – Case | Max. 6.0°C/W |
|-----------------------|------------------------------------|--------------|

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