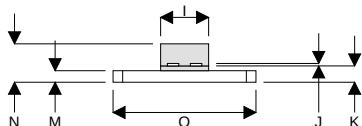
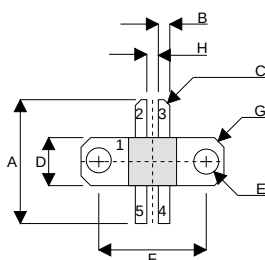


MECHANICAL DATA

GOLD METALLISED MULTI-PURPOSE SILICON DMOS RF FET 10W – 12.5V – 1GHz PUSH–PULL



DQ

PIN 1	SOURCE (COMMON)	PIN 2	DRAIN 1
PIN 3	DRAIN 2	PIN 4	GATE 2
PIN 5	GATE 1		

DIM	mm	Tol.	Inches	Tol.
A	16.38	0.26	0.645	0.010
B	1.52	0.13	0.060	0.005
C	45°	5°	45°	5°
D	6.35	0.13	0.250	0.005
E	3.30	0.13	0.130	0.005
F	14.22	0.13	0.560	0.005
G	1.27 x 45°	0.13	0.05 x 45°	0.005
H	1.52	0.13	0.060	0.005
I	6.35	0.13	0.250	0.005
J	0.13	0.02	0.005	0.001
K	2.16	0.13	0.085	0.005
M	1.52	0.13	0.060	0.005
N	5.08	MAX	0.200	MAX
O	18.90	0.13	0.744	0.005

FEATURES

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

APPLICATIONS

- VHF/UHF COMMUNICATIONS
from DC to 1 GHz

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

P_D	Power Dissipation	50W
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 $150^{\circ}C$
T_j	Maximum Operating Junction Temperature	$200^{\circ}C$
* Per Side		

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 ($T_{case} = 25^{\circ}C$ 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	$V_{GS} = 20V$ $V_{DS} = 0$			2	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
TOTAL DEVICE						
G_{PS}	Common Source Power Gain	$P_O = 10W$	10			dB
η	Drain Efficiency	$V_{DS} = 12.5V$ $I_{DQ} = 0.4A$	40			%
VSWR	Load Mismatch Tolerance	$f = 1GHz$	20:1			—
PER SIDE						
C_{iss}	Input Capacitance	$V_{DS} = 0$ $V_{GS} = -5V$ $f = 1MHz$			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 $\leq 2\%$

HAZARDOUS MATERIAL WARNING

The ceramic portion of the device between leads and metal flange is beryllium oxide. Beryllium oxide dust is highly toxic and care must be taken during handling and mounting to avoid damage to this area.

THESE DEVICES MUST NEVER BE THROWN AWAY WITH GENERAL INDUSTRIAL OR DOMESTIC WASTE.

THERMAL DATA

$R_{THj-case}$	Thermal Resistance Junction – Case	Max. 3.5 $^{\circ}C / W$
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