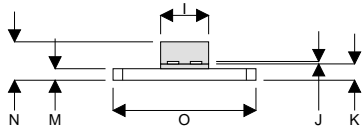
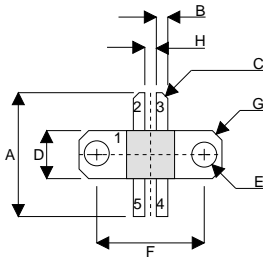


MECHANICAL DATA

**GOLD METALLISED  
MULTI-PURPOSE SILICON  
DMOS RF FET  
25W – 28V – 500MHz  
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 – 13 dB MINIMUM

APPLICATIONS

- VHF/UHF COMMUNICATIONS  
from 50 MHz to 1 GHz

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

$P_D$	Power Dissipation	125W
$BV_{DSS}$	Drain – Source Breakdown Voltage *	65V
$BV_{GSS}$	Gate – Source Breakdown Voltage *	$\pm 20V$
$I_{D(sat)}$	Drain Current *	5A
$T_{stg}$	Storage Temperature	-65 to 150°C
$T_j$	Maximum Operating Junction Temperature	200°C

\* Per Side

Semelab Ltd 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.

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**ELECTRICAL CHARACTERISTICS** ( $T_{case} = 25^{\circ}C$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
<b>PER SIDE</b>					
$B_{V_{DSS}}$ Drain-Source Breakdown Voltage	$V_{GS} = 0$ $I_D = 10mA$	65			V
$I_{DSS}$ Zero Gate Voltage Drain Current	$V_{DS} = 28V$ $V_{GS} = 0$			1	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		7	V
$g_{fs}$ Forward Transconductance*	$V_{DS} = 10V$ $I_D = 1A$	0.9			S
<b>TOTAL DEVICE</b>					
$G_{PS}$ Common Source Power Gain	$P_O = 25W$	13			dB
$\eta$ Drain Efficiency	$V_{DS} = 28V$ $I_{DQ} = 0.5A$	40			%
VSWR Load Mismatch Tolerance	$f = 500MHz$	20:1			—
<b>PER SIDE</b>					
$C_{iss}$ Input Capacitance	$V_{DS} = 28V$ $V_{GS} = -5V$ $f = 1MHz$			60	pF
$C_{oss}$ Output Capacitance	$V_{DS} = 28V$ $V_{GS} = 0$ $f = 1MHz$			30	pF
$C_{rss}$ Reverse Transfer Capacitance	$V_{DS} = 28V$ $V_{GS} = 0$ $f = 1MHz$			2.5	pF

\* Pulse Test: Pulse Duration = 300  $\mu s$  , 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. 1.4 $^{\circ}C / W$
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