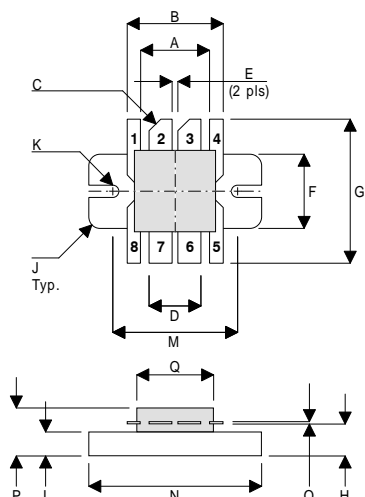


MECHANICAL DATA



DD

PIN 1	SOURCE (COMMON)	PIN 2	DRAIN 1
PIN 3	DRAIN 2	PIN 4	SOURCE (COMMON)
PIN 5	SOURCE (COMMON)	PIN 6	GATE 2
PIN 7	GATE 1	PIN 8	SOURCE (COMMON)

DIM	mm	Tol.	Inches	Tol.
A	9.14	0.13	0.360	0.005
B	12.70	0.13	0.500	0.005
C	45°	5°	45°	5°
D	6.86	0.13	0.270	0.005
E	0.76	0.13	0.030	0.005
F	9.78	0.13	0.385	0.005
G	19.05	0.25	0.750	0.010
H	4.19	0.13	0.165	0.005
I	3.17	0.13	0.125	0.005
J	1.52R	0.13	0.060R	0.005
K	1.65R	0.13	0.065R	0.005
M	16.51	0.13	0.650	0.005
N	22.86	0.13	0.900	0.005
O	0.13	0.02	0.005	0.001
P	6.35	0.64	0.250	0.025
Q	10.77	0.13	0.424	0.005

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

P_D	Power Dissipation	100W
BV_{DSS}	Drain – Source Breakdown Voltage *	40V
BV_{GSS}	Gate – Source Breakdown Voltage *	$\pm 20V$
$I_{D(sat)}$	Drain Current *	6A
T_{stg}	Storage Temperature	-65 to $150^{\circ}C$
T_j	Maximum Operating Junction Temperature	$200^{\circ}C$

* Per Side

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Semelab Ltd. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.

E-mail: sales@semelab.co.uk

Website: <http://www.semelab.co.uk>

Document Number 8138

Issue 1

GOLD METALLISED MULTI-PURPOSE SILICON DMOS RF FET 15W – 12.5V – 500MHz PUSH-PULL

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW C_{rss}
- LOW NOISE
- HIGH GAIN

APPLICATIONS

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

ELECTRICAL CHARACTERISTICS (T_{case} = 25°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			3	mA
I _{GSS} Gate Leakage Current	V _{GS} = 20V V _{DS} = 0			3	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 = 0.6A	0.54			S
TOTAL DEVICE					
G _{PS} Common Source Power Gain	P _O = 15W	10			dB
η Drain Efficiency	V _{DS} = 12.5V I _{DQ} = 0.6A	40			%
VSWR Load Mismatch Tolerance	f = 500MHz	20:1			—
PER SIDE					
C _{iss} Input Capacitance	V _{DS} = 0 V _{GS} = -5V f = 1MHz			36	pF
C _{oss} Output Capacitance	V _{DS} = 12.5V V _{GS} = 0 f = 1MHz			30	pF
C _{rss} Reverse Transfer Capacitance	V _{DS} = 12.5V V _{GS} = 0 f = 1MHz			3	pF

* Pulse Test: Pulse Duration = 300 μs , Duty Cycle ≤ 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. 1.75°C / W
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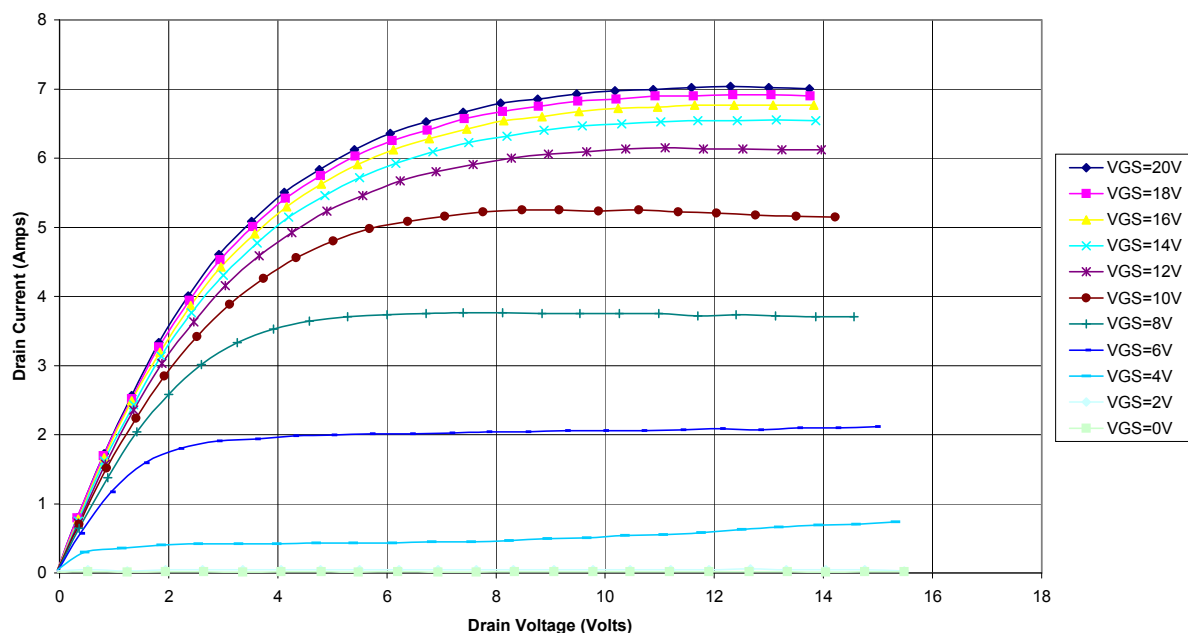


Figure 1 – Typical IV Characteristics.

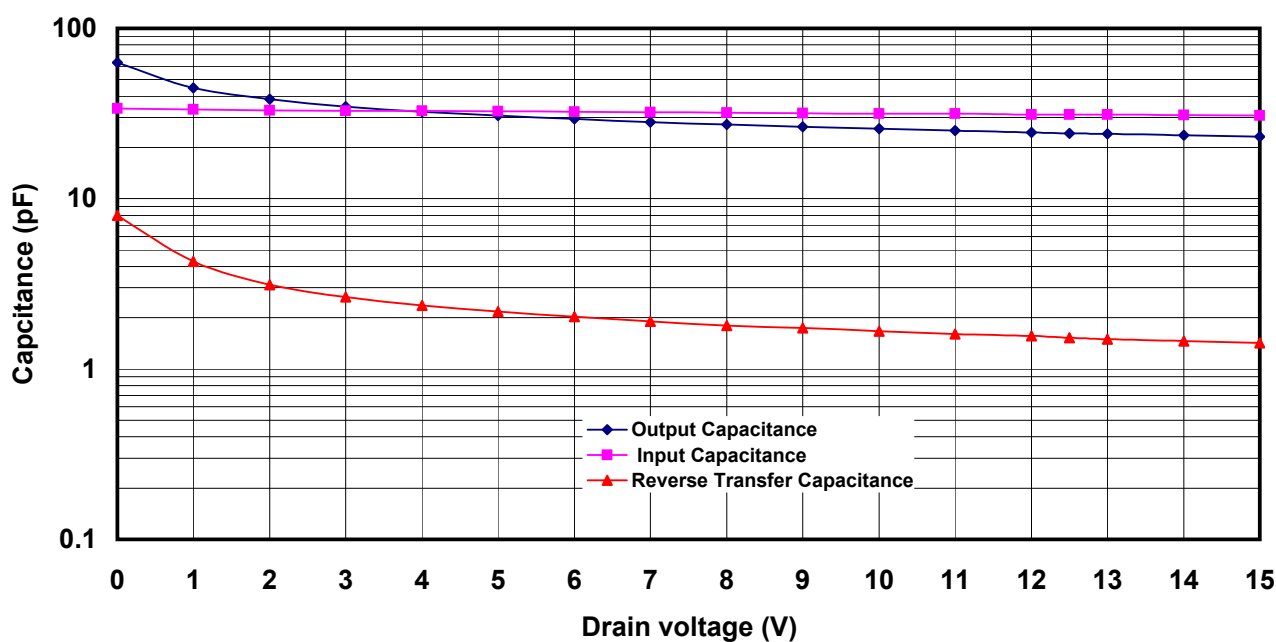


Figure 2 – Typical CV Characteristics.