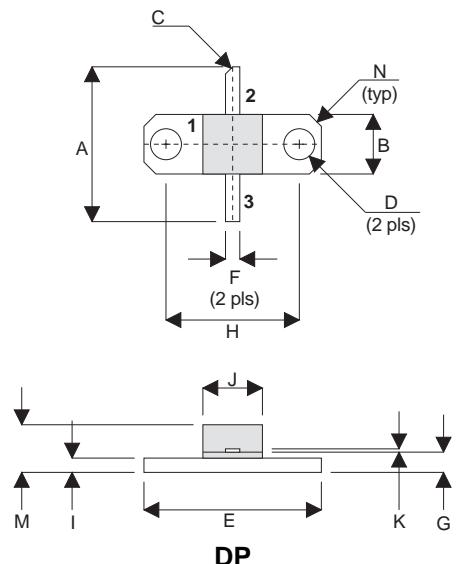


MECHANICAL DATA



PIN 1 SOURCE PIN 2 DRAIN
PIN 3 GATE

Dim	mm	Tol.	Inches	Tol.
A	16.51	0.25	0.650	0.010
B	6.35	0.13	0.250	0.005
C	45°	5°	45°	5°
D	3.30	0.13	0.130	0.005
E	18.92	0.08	0.745	0.003
F	1.52	0.13	0.060	0.005
G	2.16	0.13	0.085	0.005
H	14.22	0.08	0.560	0.003
I	1.52	0.13	0.060	0.005
J	6.35	0.13	0.250	0.005
K	0.13	0.03	0.005	0.001
M	5.08	0.51	0.200	0.020
N	1.27 x 45°	0.13	0.050 x 45°	0.005

**GOLD METALLISED
MULTI-PURPOSE SILICON
DMOS RF FET
20W – 50V – 500MHz
SINGLE ENDED**

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW C_{rss}
- USEFUL P_o AT 1GHz
- LOW NOISE
- HIGH GAIN – 13 dB MINIMUM

APPLICATIONS

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

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

Parameter		Symbol	Description	Value
P _D	Power Dissipation			50W
BV _{DSS}	Drain – Source Breakdown Voltage			125V
BV _{GSS}	Gate – Source Breakdown Voltage			±20V
I _{D(sat)}	Drain Current			3A
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 ($T_{case} = 25^\circ C$ unless otherwise stated)

Parameter	Test Conditions		Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS} = 0$	$I_D = 100mA$	125		V
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = 50V$	$V_{GS} = 0$		1	mA
I_{GSS}	Gate Leakage Current	$V_{GS} = 20V$	$V_{DS} = 0$		1	μA
$V_{GS(th)}$	Gate Threshold Voltage*	$I_D = 10mA$	$V_{DS} = V_{GS}$	1	7	V
g_{fs}	Forward Transconductance*	$V_{DS} = 10V$	$I_D = 0.5A$	0.8		S
G_Ps	Common Source Power Gain	$P_O = 20W$		13		dB
η	Drain Efficiency	$V_{DS} = 50V$	$I_{DQ} = 0.1A$	50		%
VSWR	Load Mismatch Tolerance	$f = 500MHz$		20:1		—
C_{iss}	Input Capacitance	$V_{DS} = 50V$	$V_{GS} = -5V$	$f = 1MHz$	60	pF
C_{oss}	Output Capacitance	$V_{DS} = 50V$	$V_{GS} = 0$	$f = 1MHz$	25	pF
C_{rss}	Reverse Transfer Capacitance	$V_{DS} = 50V$	$V_{GS} = 0$	$f = 1MHz$	1.5	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°C / W
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