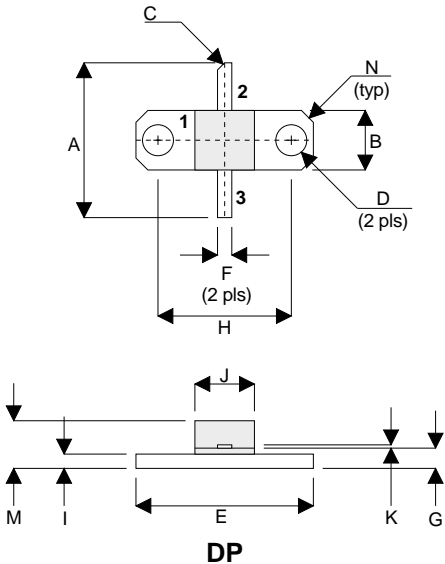


MECHANICAL DATA

**GOLD METALLISED  
MULTI-PURPOSE SILICON  
DMOS RF FET  
10W – 12.5V – 500MHz  
SINGLE ENDED**



**FEATURES**

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW  $C_{rss}$
- USEFUL  $P_O$  AT 1GHz
- LOW NOISE
- HIGH GAIN – 10 dB MINIMUM

**APPLICATIONS**

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

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

**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	10A
$T_{stg}$	Storage Temperature	-65 to 150°C
$T_j$	Maximum Operating Junction Temperature	200°C

## ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25°C unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
B <sub>V</sub> DSS Drain–Source Breakdown Voltage	V <sub>GS</sub> = 0      I <sub>D</sub> = 100mA	40			V
I <sub>D</sub> DSS Zero Gate Voltage Drain Current	V <sub>DS</sub> = 12.5V      V <sub>GS</sub> = 0			1	mA
I <sub>G</sub> DSS Gate Leakage Current	V <sub>GS</sub> = 20V      V <sub>DS</sub> = 0			1	μA
V <sub>GS(th)</sub> Gate Threshold Voltage*	I <sub>D</sub> = 10mA      V <sub>DS</sub> = V <sub>GS</sub>	0.5		7	V
g <sub>fs</sub> Forward Transconductance*	V <sub>DS</sub> = 10V      I <sub>D</sub> = 1A	0.8			S
G <sub>PS</sub> Common Source Power Gain	P <sub>O</sub> = 10W	10			dB
η Drain Efficiency	V <sub>DS</sub> = 12.5V      I <sub>DQ</sub> = 0.2A	50			%
VSWR Load Mismatch Tolerance	f = 500MHz	20:1			—
C <sub>iss</sub> Input Capacitance	V <sub>DS</sub> = 0      V <sub>GS</sub> = -5V      f = 1MHz			60	pF
C <sub>oss</sub> Output Capacitance	V <sub>DS</sub> = 12.5V      V <sub>GS</sub> = 0      f = 1MHz			40	pF
C <sub>rss</sub> Reverse Transfer Capacitance	V <sub>DS</sub> = 12.5V      V <sub>GS</sub> = 0      f = 1MHz			4	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 <sub>THj-case</sub>	Thermal Resistance Junction – Case	Max. 3.5°C / W
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