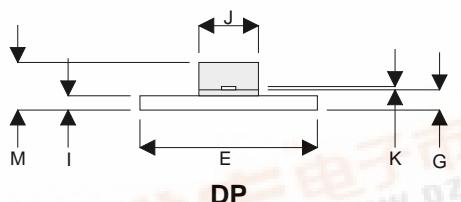
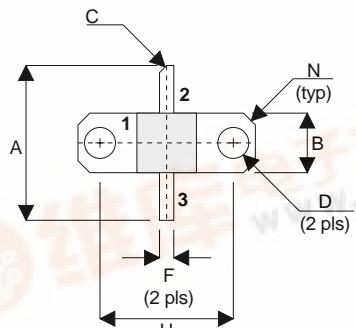




**SEME
LAB**
D1014UK
METAL GATE RF SILICON FET
MECHANICAL DATA


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 – 28V – 400MHz
SINGLE ENDED**
FEATURES

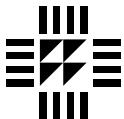
- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW C_{rss}
- USEFUL P_o AT 1GHz
- LOW NOISE
- HIGH GAIN – 13 dB MINIMUM

APPLICATIONS

- HF/VHF/UHF COMMUNICATIONS
from 1 MHz to 400 MHz

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

P_D	Power Dissipation	87.5W
BV_{DSS}	Drain – Source Breakdown Voltage	70V
BV_{GSS}	Gate – Source Breakdown Voltage	$\pm 20\text{V}$
$I_{D(sat)}$	Drain Current	10A
T_{stg}	Storage Temperature	-65 to 150°C
	Maximum Operating Junction Temperature	200°C



**SEME
LAB**

D1014UK

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

Parameter	Test Conditions		Min.	Typ.	Max.	Unit	
BV_{DSS}	Drain–Source Breakdown Voltage	$V_{GS} = 0$	$I_D = 100mA$	70		V	
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = 28V$	$V_{GS} = 0$		2	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*	$V_{DS} = 10V$	$I_D = 1A$	1.6		S	
G_{PS}	Common Source Power Gain	$P_O = 20W$		13		dB	
η	Drain Efficiency	$V_{DS} = 28V$	$I_{DQ} = 0.2A$	60		%	
VSWR	Load Mismatch Tolerance	$f = 400MHz$		20:1		—	
C_{iss}	Input Capacitance	$V_{DS} = 0$	$V_{GS} = -5V$	$f = 1MHz$		120	pF
C_{oss}	Output Capacitance	$V_{DS} = 28V$	$V_{GS} = 0$	$f = 1MHz$		50	pF
C_{rss}	Reverse Transfer Capacitance	$V_{DS} = 28V$	$V_{GS} = 0$	$f = 1MHz$		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. 2.0°C / W
----------------	------------------------------------	----------------