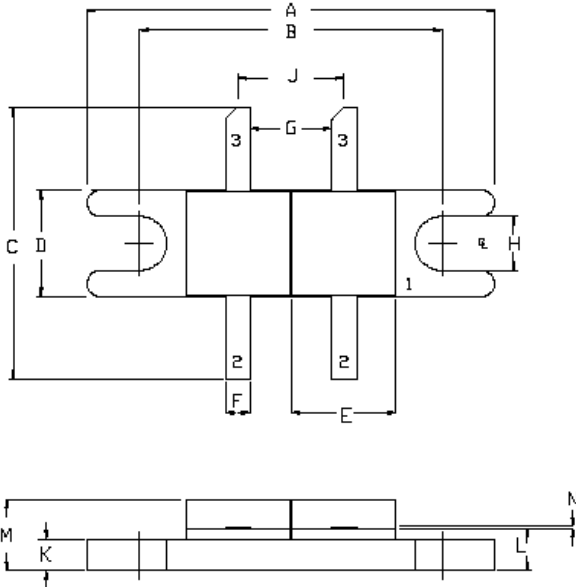


## MECHANICAL DATA



## GOLD METALLISED VDMOS RF FET 40W – 28V – 400MHz PUSH-PULL

### FEATURES

- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW  $C_{rss}$
- HIGH GAIN – 13 dB TYPICAL at 400MHz
- GROSS LEAK QUALIFIED

### APPLICATIONS

- VHF/UHF COMMUNICATIONS  
from 1 MHz to 400MHz

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.970	0.980	24.64	24.89
B	0.720	0.730	18.29	18.54
C	0.630	0.670	16.00	17.01
D	0.250	0.260	6.35	6.60
E	0.245	0.255	6.22	6.48
F	0.055	0.065	1.40	1.65
G	0.189	0.199	4.80	5.05
H	0.125	0.135	3.17	3.43
J	0.249	0.259	6.32	6.58
K	0.070	0.080	1.78	2.03
L	0.095	0.105	2.41	2.67
M	0.180	0.190	4.57	4.82
N	0.003	0.006	0.08	0.15

PIN 1 SOURCE (COMMON)      PIN 2 GATE  
PIN 3 DRAIN

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

$P_D$	Power Dissipation	150W
$BV_{DSS}$	Drain – Source Breakdown Voltage *	80V
$BV_{GSS}$	Gate – Source Breakdown Voltage *	$\pm 20V$
$I_{D(sat)}$	Drain Current *	7A
$T_{stg}$	Storage Temperature	$-55$ to $200^{\circ}C$
$T_j$	Maximum Operating Junction Temperature	$200^{\circ}C$

\* Per Side

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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>					
$BV_{DSS}$ Drain-Source Breakdown Voltage	$V_{GS} = 0$ $I_D = 10mA$	70			V
$I_{DSS}$ Zero Gate Voltage Drain Current	$V_{DS} = 28V$ $V_{GS} = 0$			0.1	mA
$I_{GSS}$ Gate Leakage Current	$V_{GS} = 20V$ $V_{DS} = 0$			80	$\mu A$
$V_{GS(th)}$ Gate Threshold Voltage*	$I_D = 25mA$ $V_{DS} = V_{GS}$	1.5		5	V
$g_{fs}$ Forward Transconductance*	$V_{DS} = 10V$ $I_D = 1A$	3.5			S
<b>TOTAL DEVICE</b>					
$G_{PS}$ Common Source Power Gain	$P_O = 40W$	13			dB
$\eta$ Drain Efficiency	$V_{DS} = 28V$ $I_{DQ} = 0.05A$	60			%
$V_{SWR}$ Load Mismatch Tolerance	$f = 400MHz$	10:1			—
<b>PER SIDE</b>					
$C_{iss}$ Input Capacitance	$V_{DS} = 28V$ $V_{GS} = 0V$ $f = 1MHz$			64	pF
$C_{oss}$ Output Capacitance	$V_{DS} = 28V$ $V_{GS} = 0$ $f = 1MHz$			31	pF
$C_{rss}$ Reverse Transfer Capacitance	$V_{DS} = 28V$ $V_{GS} = 0$ $f = 1MHz$			4	pF

\* Pulse Test: Pulse Duration = 300  $\mu s$  , Duty Cycle  $\leq 2\%$

### WARNING

Product and environmental safety - toxic materials

This product contains beryllium oxide. The product is entirely safe provided that the BeO base is not damaged. All persons who handle, use or dispose of this product should be aware of its nature and of the necessary safety precautions. After use, dispose of as chemical or special waste according to the regulations applying at the location of the user. It must never be thrown out with general or domestic waste.

### THERMAL DATA

$R_{THj-case}$	Thermal Resistance Junction – Case	Max. 1.2°C / W
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