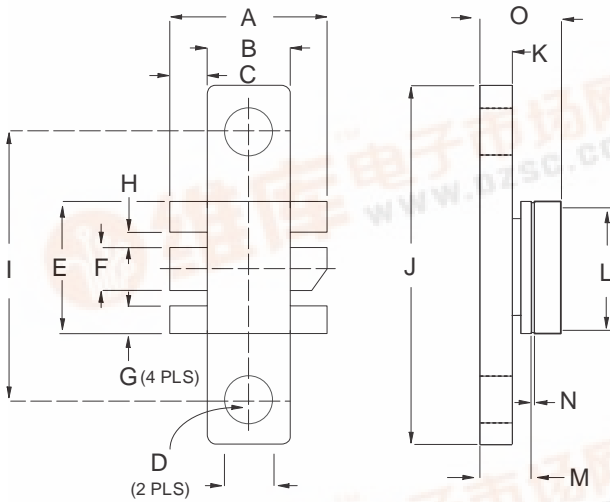


TetraFET

D2015UK

METAL GATE RF SILICON FET

MECHANICAL DATA



SOT 171

PIN 1	SOURCE	PIN 2	SOURCE
PIN 3	GATE	PIN 4	DRAIN
PIN 5	SOURCE	PIN 6	SOURCE

DIM	mm	Tol.	Inches	Tol.
A	10.92	0.25	0.430	0.001
B	5.84	0.08	0.230	0.003
C	2.54	0.08	0.100	0.003
D	3.30 dia	0.13	0.130 dia	0.05
E	9.14	0.08	0.360	0.003
F	3.05	0.08	0.120	0.003
G	2.01	0.08	0.079	0.003
H	1.04	0.08	0.041	0.003
I	18.42	0.08	0.725	0.003
J	24.77	0.08	0.975	0.003
K	2.74	0.08	0.108	0.003
L	9.14	0.13	0.360	0.005
M	4.19	0.08	0.165	0.003
N	0.13	0.05	0.005	0.002
O	7.11	MAX	0.280	MAX

**GOLD METALLISED
MULTI-PURPOSE SILICON
DMOS RF FET
5W – 28V – 500MHz
SINGLE ENDED**

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND

APPLICATIONS

- LOW C_{rss}
- SIMPLE BIAS CIRCUITS
- LOW NOISE
- HIGH GAIN – 13 dB MINIMUM

APPLICATIONS

- VHF/UHF COMMUNICATIONS
from DC to 2 GHz

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

P_D	Power Dissipation	29W
BV_{DSS}	Drain – Source Breakdown Voltage	65V
BV_{GSS}	Gate – Source Breakdown Voltage	$\pm 20V$
$I_{D(sat)}$	Drain Current	2A
T_{stg}	Storage Temperature	-65 to 150°C
	Maximum Operating Junction Temperature	200°C

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
BV_{DSS} Drain–Source Breakdown Voltage	$V_{GS} = 0$ $I_D = 10\text{mA}$	65			V
I_{DSS} Zero Gate Voltage Drain Current	$V_{DS} = 28\text{V}$ $V_{GS} = 0$			2	mA
I_{GSS} Gate Leakage Current	$V_{GS} = 20\text{V}$ $V_{DS} = 0$			1	μA
$V_{GS(th)}$ Gate Threshold Voltage*	$I_D = 10\text{mA}$ $V_{DS} = V_{GS}$	1		7	V
g_{fs} Forward Transconductance*	$V_{DS} = 10\text{V}$ $I_D = 0.4\text{A}$	0.36			S
G_{PS} Common Source Power Gain	$P_O = 5\text{W}$	13			dB
η Drain Efficiency	$V_{DS} = 28\text{V}$ $I_{DQ} = 0.2\text{A}$	40			%
VSWR Load Mismatch Tolerance	$f = 500\text{MHz}$	20:1			—
C_{iss} Input Capacitance	$V_{DS} = 0$ $V_{GS} = -5\text{V}$ $f = 1\text{MHz}$			20	pF
C_{oss} Output Capacitance	$V_{DS} = 28\text{V}$ $V_{GS} = 0$ $f = 1\text{MHz}$			11	pF
C_{rss} Reverse Transfer Capacitance	$V_{DS} = 28\text{V}$ $V_{GS} = 0$ $f = 1\text{MHz}$			1	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. 6.0°C / W
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