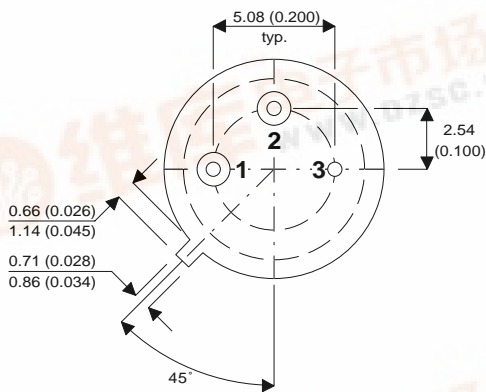
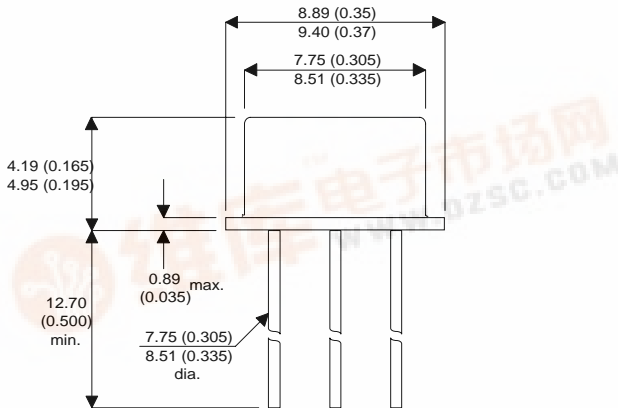


# D2008UK

METAL GATE RF SILICON FET

## MECHANICAL DATA



### TO-39 PACKAGE

PIN1 – DRAIN      PIN2 – GATE      PIN3 – SOURCE

## GOLD METALLISED MULTI-PURPOSE SILICON DMOS RF FET 5W – 28V – 400MHz 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 COMMUNICATIONS  
from DC to 400MHz

### 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<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> = 10mA	65			V
I <sub>DSS</sub> Zero Gate Voltage Drain Current	V <sub>DS</sub> = 28V      V <sub>GS</sub> = 0			2	mA
I <sub>GSS</sub> 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>	1		7	V
g <sub>fs</sub> Forward Transconductance*	V <sub>DS</sub> = 10V      I <sub>D</sub> = 0.4A	0.36			S
G <sub>PS</sub> Common Source Power Gain	P <sub>O</sub> = 5W	13			dB
η Drain Efficiency	V <sub>DS</sub> = 28V      I <sub>DQ</sub> = 0.2A	40			%
VSWR Load Mismatch Tolerance	f = 400MHz	20:1			—
C <sub>iss</sub> Input Capacitance	V <sub>DS</sub> = 0      V <sub>GS</sub> = -5V      f = 1MHz			20	pF
C <sub>oss</sub> Output Capacitance	V <sub>DS</sub> = 28V      V <sub>GS</sub> = 0      f = 1MHz			11	pF
C <sub>rss</sub> Reverse Transfer Capacitance	V <sub>DS</sub> = 28V      V <sub>GS</sub> = 0      f = 1MHz			1	pF

\* Pulse Test:    Pulse Duration = 300 μs , Duty Cycle ≤ 2%

## THERMAL DATA

R <sub>THj-case</sub>	Thermal Resistance Junction – Case	Max. 6.0°C / W
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