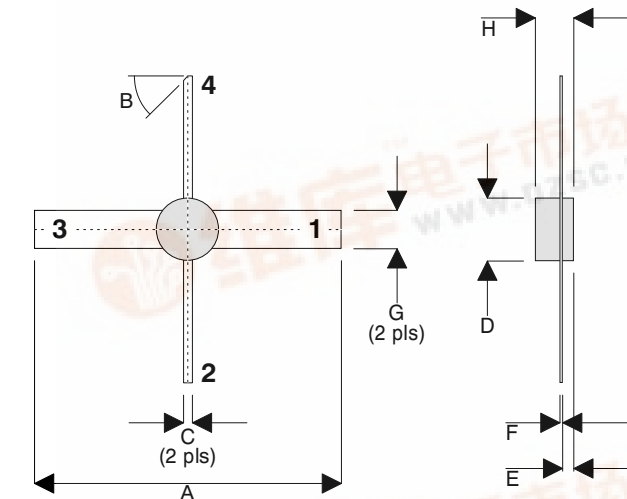


TetraFET

D2089UK

METAL GATE RF SILICON FET

MECHANICAL DATA



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

DIM	Millimetres	Tol.	Inches	Tol.
A	25.40	0.25	1.00	0.010
B	45°	5°	45°	5°
C	0.76	0.05	0.030	0.002
D	5.21 DIA	0.13	0.205	0.005
E	1.02	0.13	0.040	0.005
F	0.13	0.02	0.005	0.001
G	3.18	0.13	0.125	0.005
H	3.18	REF	0.125	REF

**GOLD METALLISED  
 MULTI-PURPOSE SILICON  
 DMOS RF FET  
 1W – 28V – 2GHz  
 SINGLE ENDED**

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW  $C_{rss}$
- SIMPLE BIAS CIRCUITS
- LOW NOISE
- HIGH GAIN

APPLICATIONS

- HF/VHF/UHF COMMUNICATIONS  
 from DC to 2 GHz

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

$P_D$	Power Dissipation	4W
$BV_{DSS}$	Drain – Source Breakdown Voltage	65V
$BV_{GSS}$	Gate – Source Breakdown Voltage	$\pm 20V$
$I_{D(sat)}$	Drain Current	1A
$T_{stg}$	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
BV <sub>DSS</sub> 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			1	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> = 0.2A	0.18			mhos
P <sub>out</sub> Power Output	V <sub>DS</sub> = 28V      I <sub>DQ</sub> = 75mA f = 30MHz      P <sub>in</sub> = 5mW	750			mW
C <sub>iSS</sub> Input Capacitance	V <sub>DS</sub> = 0V      V <sub>GS</sub> = -5V      f = 1MHz			12	pF
C <sub>oss</sub> Output Capacitance	V <sub>DS</sub> = 28V      V <sub>GS</sub> = 0      f = 1MHz			6	
C <sub>rSS</sub> Reverse Transfer Capacitance				0.5	

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

## THERMAL DATA

R <sub>THj-case</sub>	Thermal Resistance Junction – Case	Max. 30°C / W
-----------------------	------------------------------------	---------------