



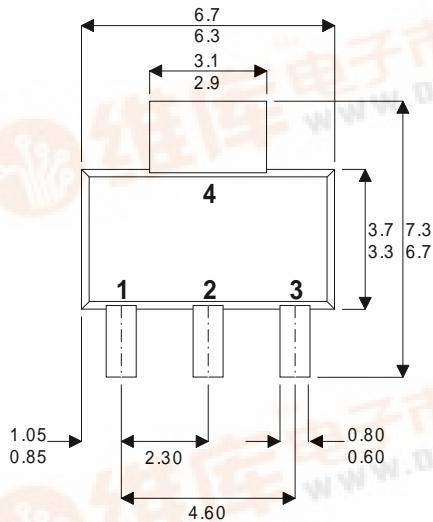
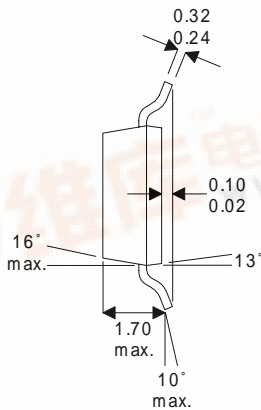
TetraFET

D2282UK

METAL GATE RF SILICON FET

MECHANICAL DATA

Dimensions in mm.



SOT-223

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

**GOLD METALLISED
 MULTI-PURPOSE SILICON
 DMOS RF FET
 750mW – 6V – 1GHz
 SINGLE ENDED**

FEATURES

- SIMPLIFIED AMPLIFIER DESIGN
- SUITABLE FOR BROAD BAND APPLICATIONS
- LOW C_{rss}
- SIMPLE BIAS CIRCUITS
- LOW NOISE (Typical < 2dB NF)
- HIGH GAIN – 8dB MINIMUM
- SURFACE MOUNT

APPLICATIONS

- VHF/UHF COMMUNICATIONS
 from DC to 2.5 GHz

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

P_D	Power Dissipation	2W
BV_{DSS}	Drain – Source Breakdown Voltage	40V
BV_{GSS}	Gate – Source Breakdown Voltage	$\pm 20V$
$I_{D(sat)}$	Drain Current	400mA
T_{stg}	Storage Temperature	-65 to 125°C
	Maximum Operating Junction Temperature	150°C



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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
BV_{DSS} Drain–Source Breakdown Voltage	$V_{GS} = 0$ $I_D = 10mA$	40			V
I_{DSS} Zero Gate Voltage Drain Current	$V_{DS} = 12.5V$ $V_{GS} = 0$			1	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		5	V
g_{fs} Forward Transconductance*	$V_{DS} = 10V$ $I_D = 0.2A$	0.18			mhos
G_{PS} Common Source Power Gain	$P_O = 750mW$	8			dB
η Drain Efficiency	$V_{DS} = 6V$ $I_{DQ} = 75mA$	40			%
VSWR Load Mismatch Tolerance	$f = 1GHz$	10:1			—
C_{iss} Input Capacitance	$V_{DS} = 0V$ $V_{GS} = -5V$ $f = 1MHz$			12	pF
C_{oss} Output Capacitance	$V_{DS} = 12.5V$ $V_{GS} = 0$ $f = 1MHz$			10	
C_{rss} Reverse Transfer Capacitance	$V_{DS} = 12.5V$ $V_{GS} = 0$ $f = 1MHz$			1	

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

THERMAL DATA

$R_{THj-case}$	Thermal Resistance Junction – Case	Max. 70°C / W
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