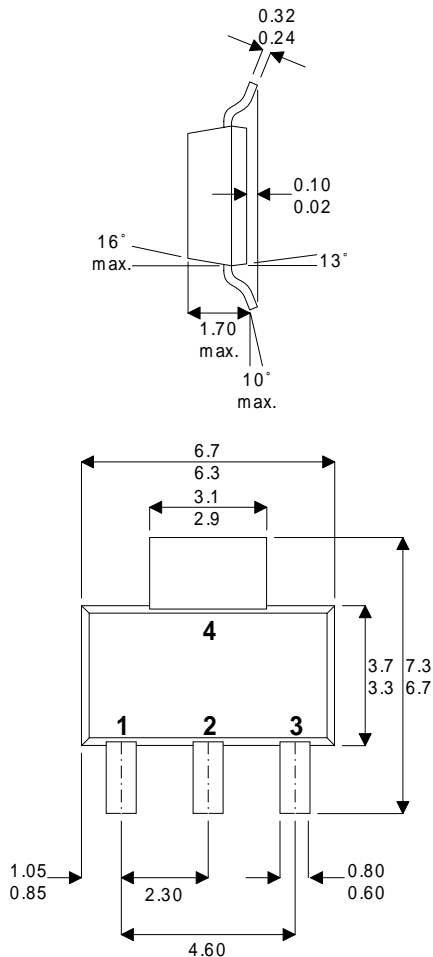


MECHANICAL DATA
Dimensions in mm.



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
T_j	Maximum Operating Junction Temperature	150°C

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
B _V 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 ≤ 2%

THERMAL DATA

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