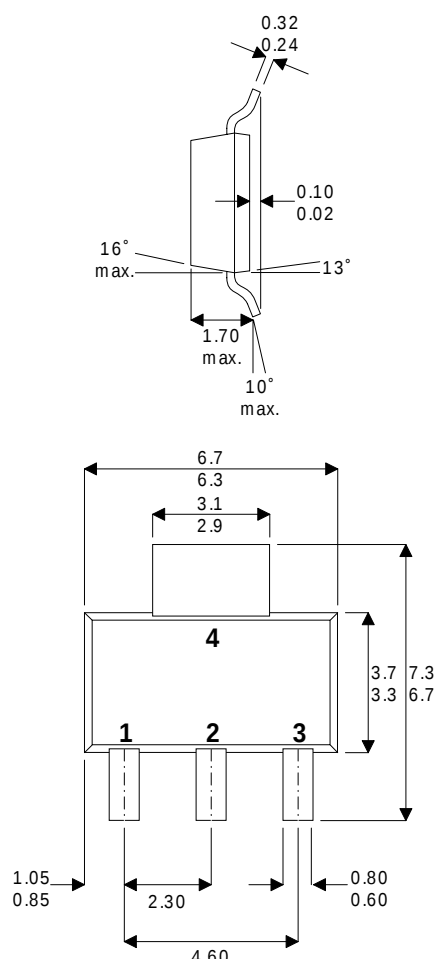


MECHANICAL DATA

Dimensions in mm.



SOT-223

PIN 1 GATE
PIN 3 SOURCE

PIN 2 DRAIN
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 $125^{\circ}C$
T_j	Maximum Operating Junction Temperature	$150^{\circ}C$

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
BV_{DSS} Drain–Source Breakdown Voltage	$V_{\text{GS}} = 0$ $I_{\text{D}} = 10\text{mA}$	40			V
I_{DSS} Zero Gate Voltage Drain Current	$V_{\text{DS}} = 12.5\text{V}$ $V_{\text{GS}} = 0$			1	mA
I_{GSS} Gate Leakage Current	$V_{\text{GS}} = 20\text{V}$ $V_{\text{DS}} = 0$			1	μA
$V_{\text{GS(th)}}$ Gate Threshold Voltage*	$I_{\text{D}} = 10\text{mA}$ $V_{\text{DS}} = V_{\text{GS}}$	1		5	V
g_{fs} Forward Transconductance*	$V_{\text{DS}} = 10\text{V}$ $I_{\text{D}} = 0.2\text{A}$	0.18			mhos
G_{PS} Common Source Power Gain	$P_{\text{O}} = 750\text{mW}$	8			dB
η Drain Efficiency	$V_{\text{DS}} = 6\text{V}$ $I_{\text{DQ}} = 75\text{mA}$	40			%
VSWR Load Mismatch Tolerance	$f = 1\text{GHz}$	10:1			—
C_{iss} Input Capacitance	$V_{\text{DS}} = 0\text{V}$ $V_{\text{GS}} = -5\text{V}$ $f = 1\text{MHz}$			12	pF
C_{oss} Output Capacitance	$V_{\text{DS}} = 12.5\text{V}$ $V_{\text{GS}} = 0$ $f = 1\text{MHz}$			10	
C_{rss} Reverse Transfer Capacitance	$V_{\text{DS}} = 12.5\text{V}$ $V_{\text{GS}} = 0$ $f = 1\text{MHz}$			1	

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

THERMAL DATA

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