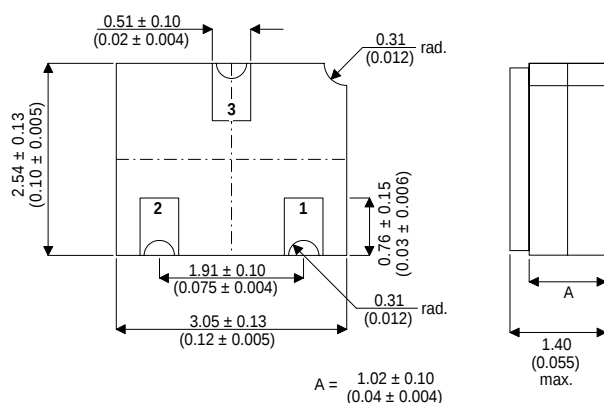


SMALL SIGNAL N-CHANNEL J-FET IN A HERMETICALLY SEALED CERAMIC SURFACE MOUNT PACKAGE FOR HIGH RELIABILITY APPLICATIONS

MECHANICAL DATA Dimensions in mm (inches)



SOT23 CERAMIC (LCC1 PACKAGE)

Underside View

PAD 1 – Source PAD 2 – Drain PAD 3 – Gate

FEATURES

- HERMETIC CERAMIC SURFACE MOUNT PACKAGE (SOT23 COMPATIBLE)
- CECC SCREENING OPTIONS
- SPACE QUALITY LEVELS OPTIONS

APPLICATIONS:

Hermetically sealed surface mount version of the popular 2N4393 for high reliability / space applications requiring small size and low weight devices.

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

V_{GD}	Gate – Drain Voltage	–35V
V_{GS}	Gate – Source Voltage	–35V
I_G	Gate Current	50mA
P_D	Power Dissipation	350mW
	Derate	2.8mW / °C
T_j	Operating Junction Temperature Range	–55 to 175°C
T_{stg}	Storage Temperature Range	–55 to 175°C

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
STATIC CHARACTERISTICS					
$V_{(BR)GSS}$ Gate – Source Breakdown Voltage	$V_{DS} = 0V$ $I_G = -1\mu A$	-35	-55		V
$V_{GSS(off)}$ Gate – Source Cut-off Voltage	$V_{DS} = 20V$ $I_D = 1nA$	-0.5		-3	
I_{DSS}^* Saturation Current	$V_{DS} = 20V$ $V_{GS} = 0V$	5		30	mA
I_{GSS} Gate Reverse Current	$V_{GS} = -20V$		-5	-100	pA
	$V_{DS} = 0V$ $T_{amb} = 125^{\circ}\text{C}$		-3	-200	nA
$I_{D(off)}$ Drain Cut-off Current	$V_{DS} = 20V$ $V_{GS} = -5V$		5	100	pA
	$V_{DS} = 10V$ $V_{GS} = -5V$ $T_{amb} = 125^{\circ}\text{C}$		3	200	nA
$V_{DS(on)}$ Drain – Source On Voltage	$V_{GS} = 0V$ $I_D = 3mA$		0.25	0.4	V
$R_{DS(on)}$ Drain – Source On Resistance	$V_{GS} = 0V$ $I_D = 1mA$			100	Ω
DYNAMIC CHARACTERISTICS					
$R_{DS(on)}$ Drain – Source On Resistance	$V_{GS} = 0V$ $I_D = 0mA$ $f = 1kHz$			100	Ω
C_{ISS} Common – Source Input Capacitance	$V_{DS} = 20V$ $V_{GS} = 0V$ $f = 1MHz$		13	16	pF
C_{RSS} Common – Source Reverse Transfer Capacitance	$V_{DS} = 0V$ $V_{GS} = -5V$ $f = 1MHz$		4	5	pF
$\bar{e}_n$ Equivalent Input Noise Voltage	$V_{DG} = 10V$ $I_D = 10mA$ $f = 1kHz$		3.0		$\frac{nV}{\sqrt{Hz}}$
t_r Rise Time	$V_{DD} = 10V$ $I_D = 3mA$ $V_{GS} = 0V$ $V_{GS(off)} = 5V$			5	nS
$t_{d(on)}$ Turn-on Time				15	
t_f Fall Time				30	
$t_{d(off)}$ Turn-off Time				50	

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