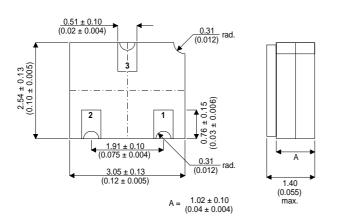
# 2N4393CSM



#### MECHANICAL DATA Dimensions in mm (inches) HERMETICAL CERAMIC SURFACE FOR HIGH RELIABIL



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

### FEATURES

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

### SOT23 CERAMIC (LCC1 PACKAGE)

#### **Underside View**

PAD 1 – Source

PAD 2 – Drain

### of

## **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<sub>amb</sub> = 25°C unless otherwise stated)

PAD 3 - Gate

	( and	,		
V <sub>GD</sub>	Gate – Drain Voltage	-35V		
V <sub>GS</sub>	Gate – Source Voltage	–35V		
I <sub>G</sub>	Gate Current	50mA		
P <sub>D</sub>	Power Dissipation	350mW		
	Derate	2.8mW / °C		
Тj	Operating Junction Temperature Range	–55 to 175°C		
T <sub>stg</sub>	Storage Temperature Range	–55 to 175°C		

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# ELECTRICAL CHARACTERISTICS (T<sub>amb</sub> = 25°C unless otherwise stated)

	Parameter Test Conditions		Min.	Тур.	Max.	Unit	
	STATIC CHARACTERISTICS	•					1
V <sub>(BR)GSS</sub>	Gate – Source Breakdown Voltage	$V_{DS} = 0V$	$I_G = -1\mu A$	-35	-55		V
V <sub>GSS(off)</sub>	Gate – Source Cut–off Voltage	$V_{DS} = 20V$	I <sub>D</sub> = 1nA	-0.5		-3	V
I <sub>DSS*</sub>	Saturation Current	$V_{DS} = 20V$	$V_{GS} = 0V$	5		30	mA
I <sub>GSS</sub>	Gate Reverse Current	$V_{GS} = -20V$			-5	-100	pА
		$V_{DS} = 0V$	T <sub>amb</sub> = 125°C		-3	-200	nA
I <sub>D(off)</sub>	Drain Cut–off Current	$V_{DS} = 20V$	$V_{GS} = -5V$		5	100	рА
		V <sub>DS</sub> = 10V	$V_{GS} = -5V$		3	200	nA
			T <sub>amb</sub> = 125°C				
V <sub>DS(on)</sub>	Drain – Source On Voltage	$V_{GS} = 0V$	I <sub>D</sub> = 3mA		0.25	0.4	V
R <sub>DS(on)</sub>	Drain – Source On Resistance	$V_{GS} = 0V$	I <sub>D</sub> = 1mA			100	Ω
	DYNAMIC CHARACTERISTICS	•	•			1	
R <sub>DS(on)</sub>	Drain – Source On Resistance	$V_{GS} = 0V$	I <sub>D</sub> = 0mA			100	Ω
		f = 1kHz					
C <sub>ISS</sub>	Common – Source Input Capacitance	V <sub>DS</sub> = 20V	$V_{GS} = 0V$		13	16	pF
		f = 1MHz					
C <sub>RSS</sub>	Common – Source Reverse Transfer	$V_{DS} = 0V$	$V_{GS} = -5V$		4	5	pF
	Capacitance	f = 1MHz					
ē <sub>n</sub>	Equivalent Input Noise Voltage	V <sub>DG</sub> = 10V	I <sub>D</sub> = 10mA		3.0		nV
		f = 1kHz					√Hz
t <sub>r</sub>	Rise Time					5	
t <sub>d(on)</sub>	Turn-on Time	V <sub>DD</sub> = 10V	I <sub>D</sub> = 3mA			15	nS
t <sub>f</sub>	Fall Time	V <sub>GS</sub> = 0V	V <sub>GS(off)</sub> = 5V			30	
t <sub>d(off)</sub>	Turn-off Time					50	

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