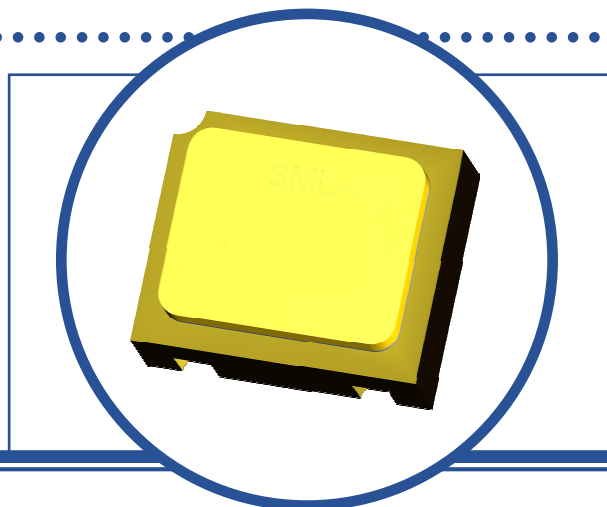


# SILICON SMALL SIGNAL N-CHANNEL JFET

## 2N4391CSM

- Hermetic Surface Mounted Package.
- High Speed Switching.
- Low On Resistance.
- Designed For High Reliability and Space Applications.



### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise stated)

V <sub>DS</sub>	Drain – Source Voltage	40V
V <sub>GS</sub>	Gate – Source Voltage	-40V
V <sub>GD</sub>	Gate – Drain Voltage	-40V
I <sub>G</sub>	Gate Current	50mA
P <sub>D</sub>	Total Power Dissipation at T <sub>A</sub> = 25°C Derate Above 25°C	300mW 2mW/°C
T <sub>J</sub>	Junction Temperature Range	-55 to +175°C
T <sub>stg</sub>	Storage Temperature Range	-65 to +200°C

### THERMAL PROPERTIES

Symbols	Parameters	Max.	Units
R <sub>θJA</sub>	Thermal Resistance, Junction To Ambient	500	°C/W

Semelab Limited reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.



# SILICON SMALL SIGNAL N-CHANNEL JFET 2N4391CSM

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

Symbols	Parameters	Test Conditions	Min.	Typ.	Max.	Units
$V_{(BR)GSS}$	Gate – Source Breakdown Voltage	$V_{DS} = 0V$ $I_G = 1.0\mu A$	-40			V
$V_{GS(off)}$	Gate – Source Cut-off Voltage	$V_{DS} = 20V$ $I_D = 1.0nA$	-4		-10	
$I_{DSS}^{(1)}$	Saturation Drain Current	$V_{DS} = 20V$ $V_{GS} = 0V$	50		150	mA
$I_{GSS}$	Gate Reverse Current	$V_{DS} = 0V$ $V_{GS} = -20V$			-100	pA
		$T_A = 150^\circ\text{C}$			-200	nA
$I_{D(off)}$	Drain Cut-off Current	$V_{DS} = 20V$ $V_{GS} = -12V$			100	pA
		$T_A = 150^\circ\text{C}$			200	nA
$V_{DS(on)}$	Drain – Source On Voltage	$V_{GS} = 0V$ $I_D = 12mA$			0.4	V
$R_{DS(on)}$	Drain – Source On Resistance	$V_{GS} = 0$ $I_D = 1.0mA$			30	$\Omega$

## DYNAMIC CHARACTERISTICS

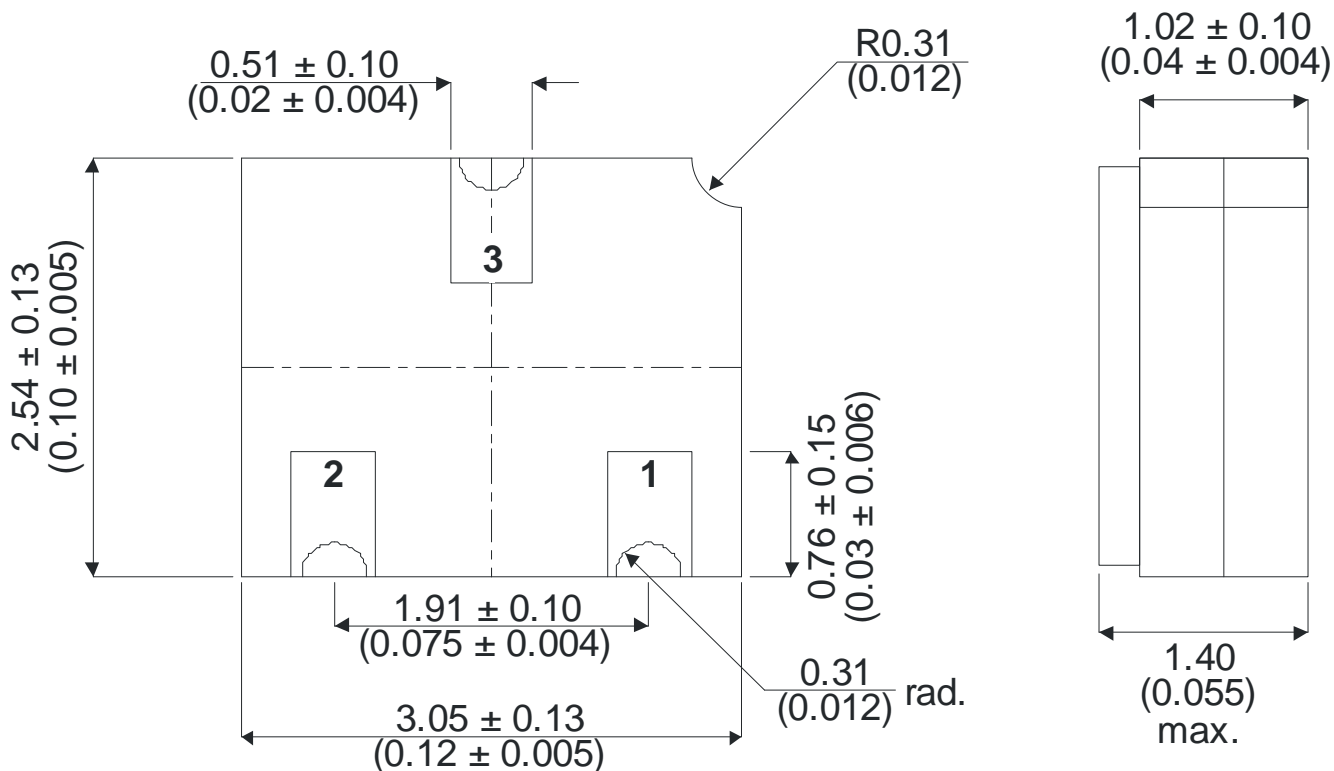
Symbols	Parameters	Test Conditions	Min.	Typ.	Max.	Units
$C_{iss}$	Common – Source Input Capacitance	$V_{DS} = 20V$ $V_{GS} = 0V$ $f = 1.0MHz$			26	pF
$C_{rss}$	Common – Source Reverse Transfer Capacitance	$V_{DS} = 0V$ $V_{GS} = -12V$ $f = 1.0MHz$			5	
$R_{DS(on)}$	Drain – Source On Resistance	$V_{GS} = 0$ $I_D = 0A$ $f = 1.0KHz$			30	$\Omega$
$t_r$	Rise Time	$V_{DD} = 10V$ $V_{GSX} = -12V$ $V_{GS} = 0V$ $I_{D(on)} = 12mA$			5	ns
$t_{d(on)}$	Turn-on Delay Time				15	
$t_f$	Fall Time				15	
$t_{d(off)}$	Turn-off Delay Time				20	

(1) Pulse Width  $\leq 380\mu s$ ,  $\delta \leq 2\%$

# SILICON SMALL SIGNAL N-CHANNEL JFET 2N4391CSM

## MECHANICAL DATA

Dimensions in mm (inches)



**LCC1**

**Underside View**

Pad 1 - Source

Pad 2 - Drain

Pad 3 - Gate