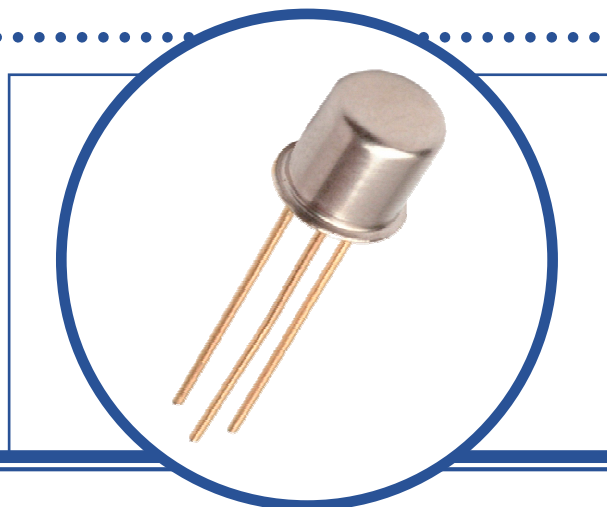


SILICON SMALL SIGNAL N-CHANNEL JFET

2N4391

- High Speed Switching.
- Low On Resistance.
- Designed For High Reliability and Space Applications.



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

V_{DS}	Drain – Source Voltage	40V
V_{GS}	Gate – Source Voltage	-40V
V_{GD}	Gate – Drain Voltage	-40V
I_G	Gate Current	50mA
P_D	Total Power Dissipation at $T_A = 25^\circ\text{C}$ Derate Above 25°C	300mW 2mW/ $^\circ\text{C}$
T_J	Junction Temperature Range	-55 to $+175^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65 to $+200^\circ\text{C}$

THERMAL PROPERTIES

Symbols	Parameters	Max.	Units
$R_{\theta JA}$	Thermal Resistance, Junction To Ambient	500	$^\circ\text{C}/\text{W}$

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 2N4391

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	Ω

DYNAMIC CHARACTERISTICS

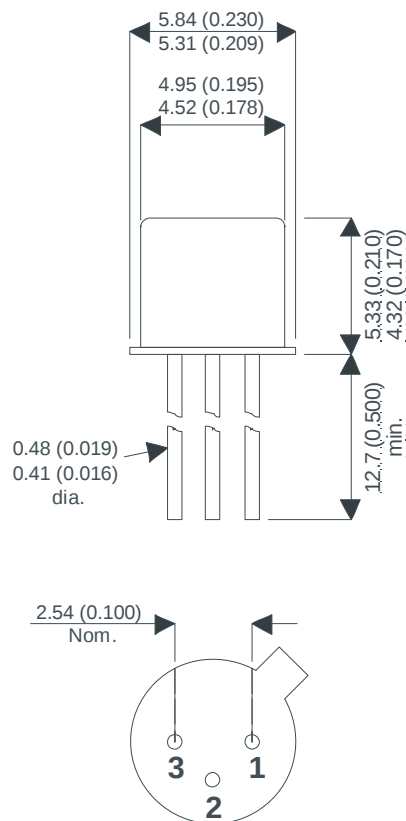
Symbols	Parameters	Test Conditions	Min.	Typ.	Max.	Units
C_{iss}	Common – Source Input Capacitance	$V_{DS} = 20V$ $V_{GS} = 0V$ $f = 1.0MHz$			26	pF
C_{rss}	Common – Source Reverse Transfer Capacitance	$V_{DS} = 0V$ $V_{GS} = -12V$ $f = 1.0MHz$			5	
$R_{DS(on)}$	Drain – Source On Resistance	$V_{GS} = 0$ $I_D = 0A$ $f = 1.0KHz$			30	Ω
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 2N4391

MECHANICAL DATA

Dimensions in mm (inches)



TO-18 (TO-206AA) METAL PACKAGE Underside View

Pin 1 – Source

Pin 2 – Drain

Pin 3 - Gate