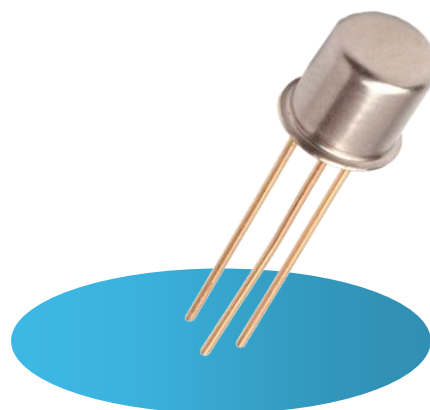


SILICON SMALL SIGNAL N-CHANNEL JFET

2N4392

- Hermetic TO18 Package
- Low On Resistance
- Fast Switching
- High Reliability Screening Options Available



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	Power Dissipation	300mW
	$T_A = 25^\circ\text{C}$	
	Derate Above 25°C	2mW/ $^\circ\text{C}$
T_J	Junction Temperature Range	-65 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	$^\circ\text{C}/\text{W}$

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SILICON SMALL SIGNAL

N-CHANNEL JFET

2N4392

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	$V_{DS} = 0$ $I_G = 1.0\mu\text{A}$	-40			V
$V_{GS(off)}$	Gate - Source Cut-off Voltage	$V_{DS} = 20\text{V}$ $I_D = 1.0\text{nA}$	-2		-5	
$I_{DSS}^{(1)}$	Zero Gate Voltage Drain Current	$V_{DS} = 20\text{V}$ $V_{GS} = 0$	25		75	mA
I_{GSS}	Gate Reverse Current	$V_{DS} = 0$ $V_{GS} = -20\text{V}$			-100	pA
		$T_A = +150^\circ\text{C}$			-200	nA
$I_{D(off)}$	Drain Cut-off Current	$V_{DS} = 20\text{V}$ $V_{GS} = -7\text{V}$			100	pA
		$T_A = +150^\circ\text{C}$			200	nA
$V_{DS(on)}$	Drain - Source On Voltage	$V_{GS} = 0$ $I_D = 6\text{mA}$			0.4	V
$R_{DS(on)}$	Drain - Source On Resistance	$V_{GS} = 0$ $I_D = 1.0\text{mA}$			60	Ω

DYNAMIC CHARACTERISTICS

C_{iss}	Common - Source Input Capacitance	$V_{DS} = 20\text{V}$ $V_{GS} = 0$ $f = 1.0\text{MHz}$			26	pF
C_{rss}	Common - Source Reverse Transfer Capacitance	$V_{DS} = 0$ $V_{GS} = -7\text{V}$ $f = 1.0\text{MHz}$			5	
$R_{DS(on)}$	Drain - Source On Resistance	$V_{GS} = 0$ $I_D = 0$ $f = 1.0\text{KHz}$			60	Ω
t_r	Rise Time	$V_{DS} = 10\text{V}$ $V_{GSX} = -7\text{V}$ $V_{GS} = 0\text{V}$ $I_{D(on)} = 6\text{mA}$			5	ns
$t_{d(on)}$	Turn-on Delay Time				15	
t_f	Fall Time				20	
$t_{d(off)}$	Turn-off Delay Time				35	

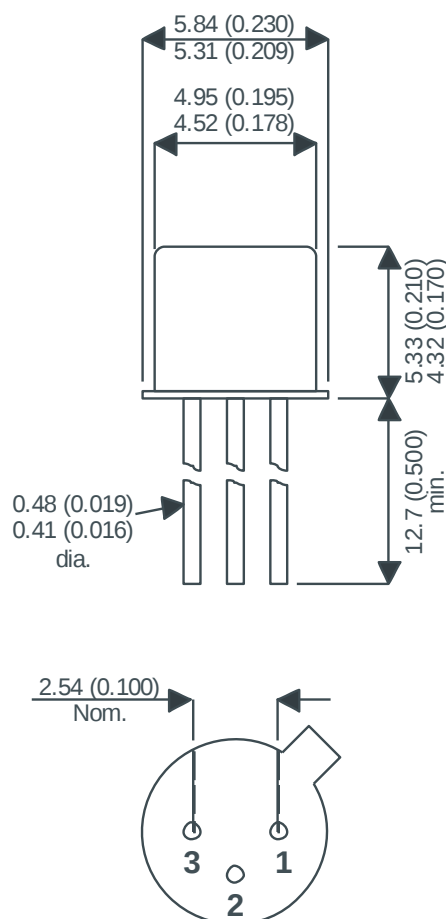
Notes

(1) Pulse Width $\leq 380\mu\text{s}$, duty cycle $\delta \leq 2\%$

SILICON SMALL SIGNAL N-CHANNEL JFET 2N4392

MECHANICAL DATA

Dimensions in mm (inches)



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

Pin 1 - Source

Pin 2 - Drain

Pin 3 - Gate