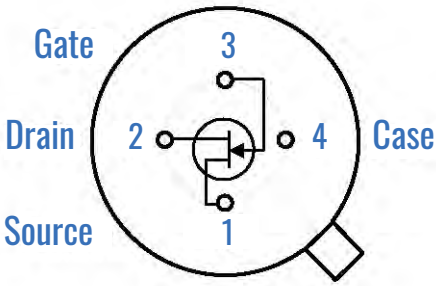
2N4901 | 2N4902 | 2N4903

N-Channel JFET - 1

FEATURES

- LOW NOISE: 1.2 NV/√HZ TYPICAL
- FAST SWITCHING



Bottom View

DESCRIPTION

The -40V 2N4091, 2N4092, and 2N4093 JFET's are targeted for very low noise switching applications for mid to high frequency designs.

Gate leakages are typically 50pA at room temperatures.

The TO-18 package is hermetically sealed and suitable for military applications.

TX, TXV, and S-Level Screening Available - Consult Factory.

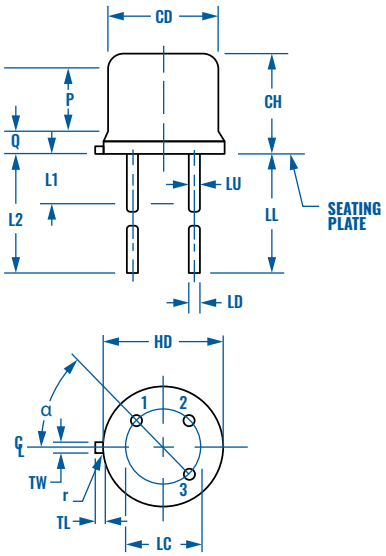
ORDERING GUIDE

Part Number 2N4901, 2N4902, 2N4903

Description -40V N-Channel JFET

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Reverse Gate Source and Gate Drain Voltage	V_{RGS}	-40	V
Continuous Forward Gate Current	I_{FG}	50	mA
Continuous Device Power Dissipation	P_D	1800	mW
Power Derating	P	12	mW/°C
Operating Junction Temperature	T_J	-55 to 125	°C
Storage Temperature	T_{STG}	-65 to 150	°C



Ltr	Dimensions			
	Inches		mm	
	Min.	Max.	Min.	Max.
CD	0.178	0.195	4.52	4.95
CH	0.170	0.210	4.32	5.33
HD	0.209	0.230	5.31	5.84
LC	0.100 TP		2.54 TP	
LD	0.016	0.021	0.41	0.53
LL	0.500	0.750	2.70	19.05
LU	0.016	0.019	0.41	0.48
L1		0.050		1.27
L2	0.250		6.35	
P	0.100		2.54	
Q		0.030		0.76
TL	0.028	0.048	0.71	1.22
TW	0.036	0.046	0.91	1.17
r		0.010		0.25
α	45° TP			

STATIC CHARACTERISTICS

Typical @ 25°C unless otherwise noted, highlighted values = A version.

Parameter		Symbol	2N4091		2N4092		2N4093		Unit
			Min.	Max.	Min.	Max.	Min.	Max.	
Gate to Source Breakdown Voltage	V_{DS} = 0V, I_G = -1µA	$V_{(BR)GSS}$	-40		-40		-40		V
Gate to Source Reverse Current	V_{GS} = -20V, V_{DS} = 0V	I_{GSS}		-10		-10		-10	nA
Gate to Source Cutoff Voltage	V_{DS} = 20V, I_D = 1nA	$V_{GS(OFF)}$	-5	-10	-2	-7	-1	-5	V
Drain to Source Saturation Current	V_{GS} = 0V, V_{DS} = 20V (Pulsed)	I_{DSS}	30		15		8		nA

DYNAMIC CHARACTERISTICS

Typical @ 25°C unless otherwise noted

Parameter		Symbol	2N4091		2N4092		2N4093		Unit
			Min.	Max.	Min.	Max.	Min.	Max.	
Drain to Source ON Resistance	V_{GS} = 0V, I_D = 0A, f = 1kHz	$R_{DS(ON)}$		30		50		80	Ω
Input Capacitance	V_{DS} = 20V, V_{GS} = 0V, f = 1MHz	C_{iss}		16		16		16	pF
Reverse Transfer Capacitance	V_{DS} = 0V, V_{GS} = -20V, f = 1MHz	C_{rss}		5		5		5	pF
Turn-On Delay Time	V_{DD} = 3V, $V_{GS(ON)}$ = 0V	t_d		10		15		20	ns
Rise Time	V_{DD} = 3V, $V_{GS(ON)}$ = 0V	t_r		10		20		40	ns
Turn-Off Time	V_{DD} = 3V, $V_{GS(ON)}$ = 0V	t_{off}		40		60		80	ns

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