

NTE326

Silicon P-Channel JFET Transistor

General Purpose AF Amplifier

TO92 Type Package

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Drain-Gate Voltage, V_{DG}	40V
Reverse Gate-Source Voltage, V_{GSR}	40V
Forward Gate Current, $I_{G(f)}$	10mA
Total Device Dissipation ($T_A = +25^\circ\text{C}$), P_D	310mW
Derate Above 25°C	2.82mW/ $^\circ\text{C}$
Operating Junction Temperature Range, T_J	-65° to $+135^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Gate-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G = 10\mu\text{A}$, $V_{DS} = 0$	40	–	–	V
Gate Reverse Current	I_{GSS}	$V_{GS} = 20\text{V}$, $V_{DS} = 0$	–	–	5	nA
		$V_{GS} = 20\text{V}$, $V_{DS} = 0$, $T_A = +100^\circ\text{C}$	–	–	1	μA
Gate-Source Cutoff Voltage	$V_{GS(off)}$	$I_D = 1\mu\text{A}$, $V_{DS} = 15\text{V}$	1.0	–	7.5	V
Gate-Source Voltage	V_{GS}	$I_D = 0.2\text{mA}$, $V_{DS} = 15\text{V}$	0.8	–	4.5	V
ON Characteristics						
Zero-Gate-Voltage Drain Current	I_{DSS}	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $f = 1\text{kHz}$	2	–	9	mA
Small-Signal Characteristics						
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $f = 1\text{kHz}$	1500	–	5000	μmho
Output Admittance	$ y_{os} $	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $f = 1\text{kHz}$	–	–	75	μmho
Input Capacitance	C_{iss}	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $f = 1\text{MHz}$	–	5	7	pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $f = 1\text{MHz}$	–	1	2	pF
Functional Characteristics						
Noise Figure	NF	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $R_G = 1\text{M}\Omega$, $f = 100\text{Hz}$, $BW = 1\text{Hz}$	–	1.0	2.5	dB
Equivalent Short-Circuit Input Noise Voltage	e_n	$V_{DS} = 15\text{V}$, $V_{GS} = 0$, $f = 100\text{Hz}$, $BW = 1\text{Hz}$	–	60	115	$\text{nV}/\sqrt{\text{Hz}}$

