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NTE326

Silicon P-Channel JFET Transistor General Purpose AF Amplifier

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	$\text{nV}/\sqrt{\text{Hz}}$

