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## NTE460 Silicon P-Channel JFET Transistor AF Amp

### Absolute Maximum Ratings:

Drain-Gate Voltage, $V_{DG}$ .....	20V
Reverse Gate-Source Voltage, $V_{GSR}$ .....	20V
Gate Current, $I_G$ .....	10mA
Total Device Dissipation ( $T_A = +25^\circ\text{C}$ ), $P_D$ .....	0.3W
Derate above $25^\circ\text{C}$ .....	1.7mW/ $^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-65^\circ$ to $+200^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
<b>OFF Characteristics</b>						
Gate-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G = 10\mu\text{A}$ , $V_{DS} = 0$	20	-	-	V
Gate Reverse Current	$I_{GSS}$	$V_{GS} = 10\text{V}$ , $V_{DS} = 0$	-	-	10	nA
		$V_{GS} = 10\text{V}$ , $V_{DS} = 0$ , $T_A = +150^\circ\text{C}$	-	-	10	$\mu\text{A}$
<b>ON Characteristics</b>						
Zero-Gate-Voltage Drain Current	$I_{DSS}$	$V_{DS} = -10\text{V}$ , $V_{GS} = 0$ , Note 1	2.0	-	6.0	mA
Gate-Source Voltage	$V_{GS}$	$V_{DG} = -15\text{V}$ , $I_D = 10\mu\text{A}$	-	-	6.0	V
Drain-Source Resistance	$r_{DS}$	$I_D = 100\mu\text{A}$ , $V_{GS} = 0$	-	-	800	$\Omega$
<b>Small-Signal Characteristics</b>						
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 10\text{V}$ , $I_D = 2\text{mA}$ , $f = 1\text{kHz}$ , Note 1	1500	-	3000	$\mu\text{hos}$
		$V_{DS} = 10\text{V}$ , $I_D = 2\text{mA}$ , $f = 10\text{MHz}$ , Note 1	1350	-	-	$\mu\text{hos}$
Output Admittance	$ y_{os} $	$V_{DS} = 10\text{V}$ , $I_D = 2\text{mA}$ , $f = 1\text{kHz}$	-	-	40	$\mu\text{hos}$
Reverse Transfer Conductance	$ y_{rs} $	$V_{DS} = 10\text{V}$ , $I_D = 2\text{mA}$ , $f = 1\text{kHz}$	-	-	0.1	$\mu\text{hos}$
Input Conductance	$ y_{is} $	$V_{DS} = 10\text{V}$ , $I_D = 2\text{mA}$ , $f = 1\text{kHz}$	-	-	0.2	$\mu\text{hos}$
Input Capacitance	$C_{iss}$	$V_{DS} = 10\text{V}$ , $V_{GS} = 1\text{V}$ , $f = 1\text{MHz}$	-	-	20	pF
<b>Functional Characteristics</b>						
Noise Figure	NF	$V_{DS} = -5\text{V}$ , $I_D = 1\text{mA}$ , $R_g = 1\text{M}\Omega$ , $f = 1\text{kHz}$	-	-	3.0	dB

Note 1. Pulse Test: PulseWidth  $\leq 630\text{ms}$ , Duty Cycle  $\leq 10\%$ .

