NTE466
Silicon N–Channel JFET Transistor
Chopper, High Speed Switch
TO218 Type package

Absolute Maximum Ratings:

Drain–Source Voltage, V_{DS} 40V

Drain–Gate Voltage, V_{DG} 40V

Reverse Gate–Source Voltage, V_{GSR} . . . . –40V

Forward Gate Current, $I_{G(f)}$ 50mA

Total Device Dissipation (T_A = +25°C), P_D 360mW

       Derate Above 25°C . . . . 2.4mW/°C

Storage Temperature Range, T_{stg} . . . . –65° to +175°C

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Gate–Source Breakdown Voltage	$V_{(BR)GSS}$	I_G = 1A, V_{DS} = 0	–40	–	–	V
Gate Reverse Current	I_{GSS}	V_{GS} = –20V, V_{DS} = 0	–	–	0.25	nA
		V_{GS} = –20V, V_{DS} = 0, T_A = +150°C	–	–	0.5	°A
Gate–Source Cutoff Voltage	$V_{GS(off)}$	V_{DS} = 15V, I_D = 0.5nA	–4	–	–10	V
Drain Cutoff Current	$I_{D(off)}$	V_{DS} = 15V, V_{GS} = –10V	–	–	0.25	nA
		V_{DS} = 15V, V_{GS} = –10V, T_A = +150°C	–	–	0.5	°A
ON Characteristics						
Zero–Gate–Voltage Drain Current	I_{DSS}	V_{DS} = 15V, V_{GS} = 0, Note 1	50	–	–	mA
Drain–Source ON–Voltage	$V_{DS(on)}$	I_D = 20mA, V_{GS} = 0	–	–	0.75	V
Small–Signal Characteristics						
Drain–Source "ON" Resistance	$r_{DS(on)}$	V_{GS} = 0, I_D = 0, f = 1kHz	–	–	25	≤
Input Capacitance	C_{iss}	V_{DS} = 0, V_{GS} = –10V, f = 1MHz	–	–	18	pF
Reverse Transfer Capacitance	C_{rss}	V_{DS} = 0, V_{GS} = –10V, f = 1MHz	–	–	0.8	pF
Switching Characteristics (Note 2)						
Turn–On Delay Time	$t_{d(on)}$	V_{DD} = 10V, $I_{D(on)}$ = 20mA, $V_{GS(on)}$ = 0, $V_{GS(off)}$ = –10V	–	–	6	ns
Rise Time	t_r		–	–	3	ns
Turn–Off Time	t_{off}		–	–	25	ns

Note 1. Pulse Test: Pulse Width = 100ms, Duty Cycle ≤ 10%.

Note 2. The $I_{D(on)}$ values are nominal; exact values vary slightly with transistor parameters.

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.230 (5.84) Dia Max

.195 (4.95) Dia Max

.210 (5.33)
Max

.030 (.762) Max

.500
(12.7)
Min

.018 (0.45)

Drain

Source

Gate

45°

.041 (1.05)