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NTE492 MOSFET N-Ch, Enhancement Mode High Speed Switch TO92 Type Package

Absolute Maximum Ratings:

Drain-Source Voltage, V_{DS}	200V
Gate-Source Voltage, V_{GS}	$\pm 20V$
Drain Current, I_D	
Continuous (Note 1)	250mA
Pulsed (Note 2)	500mA
Total Device Dissipation ($T_A = +25^\circ C$), P_D	350mW
Derate above $25^\circ C$	2.8mW/ $^\circ C$
Operating Junction Temperature Range, T_J	-55° to $+150^\circ C$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ C$

Note 1. The Power Dissipation of the package may result in a lower continuous drain current.
 Note 2. Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Zero-Gate-Voltage Drain Current	I_{DSS}	$V_{DS} = 130V, V_{GS} = 0$	-	-	30	nA
Drain-Source Breakdown Voltage	$V_{(BR)DSX}$	$V_{GS} = 0, I_D = 100\mu A$	200	-	-	V
Gate Reverse Current	I_{GSS}	$V_{GS} = 15V, V_{DS} = 0$	-	0.01	10.0	nA
ON Characteristics (Note 2)						
Gate Threshold Voltage	$V_{GS(Th)}$	$I_D = 1mA, V_{DS} = V_{GS}$	1.0	-	3.0	V
Static Drain-Source ON Resistance	$r_{DS(on)}$	$V_{GS} = 10V, I_D = 100mA$	-	4.5	6.0	Ω
		$V_{GS} = 10V, I_D = 250mA$	-	4.8	6.4	Ω
Small-Signal Characteristics						
Input Capacitance	C_{iss}	$V_{DS} = 25V, V_{GS} = 0, f = 1MHz$	-	60	-	pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 25V, V_{GS} = 0, f = 1MHz$	-	6.0	-	pF
Output Capacitance	C_{oss}	$V_{DS} = 25V, V_{GS} = 0, f = 1MHz$	-	30	-	pF
Forward Transconductance	g_{fs}	$V_{DS} = 25V, I_D = 250mA$	200	400	-	mmhos

Note 2. Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Switching Characteristics						
Turn-On Time	t_{on}		-	6.0	15.0	ns
Turn-Off Time	t_{off}		-	12	15	ns

