



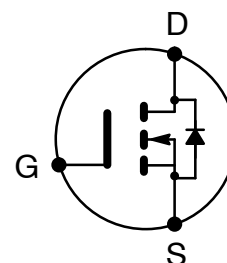
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## NTE2906 MOSFET N-Channel, Enhancement Mode High Speed Switch (Compl to NTE2998)

**Features:**

- High Speed Switching
- High Voltage
- High Energy Rating
- Enhancement Mode
- Integral Protection Diode



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

Drain-Source Voltage, $V_{DSX}$ .....	200V
Gate-Source Voltage, $V_{GSS}$ .....	$\pm 14\text{V}$
Continuous Drain Current, $I_D$ .....	8A
Body Drain Diode, $I_{D(PK)}$ .....	8A
Total Power Dissipation ( $T_C = +25^\circ\text{C}$ ), $P_D$ .....	125W
Maximum Operating Junction Temperature, $T_J$ .....	$+150^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-55^\circ$ to $+150^\circ\text{C}$
Thermal Resistance, Junction-to-Case, $R_{thJC}$ .....	$1.0^\circ\text{C/W}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
<b>Static Characteristics</b>						
Drain-Source Breakdown Voltage	$BV_{DSX}$	$V_{GS} = -10\text{V}, I_D = 10\text{mA}$	200	-	-	V
Gate-Source Breakdown Voltage	$BV_{GSS}$	$V_{DS} = 0, I_G = \pm 100\mu\text{A}$	$\pm 14$	-	-	V
Gate-Source Cut-Off Voltage	$V_{GS(OFF)}$	$V_{DS} = 10\text{V}, I_D = 100\text{mA}$	0.15	-	1.5	V
Drain-Source Saturation Voltage	$V_{DS(SAT)}$	$V_{GD} = 0, I_D = 8\text{A}, \text{Note 1}$	-	-	12	V
Drain-Source Cut-Off Current	$I_{DSX}$	$V_{GS} = -10\text{V}, V_{DS} = 200\text{V}$	-	-	10	mA
Forward Transfer Admittance	$y_{fs}$	$V_{DS} = 10\text{V}, I_D = 3\text{A}, \text{Note 1}$	0.7	-	2.0	S

Note 1. Pulse Test: Pulse Width =  $300\mu\text{s}$ , Duty Cycle  $\leq 2\%$ .

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
<b>Dynamic Characteristics</b>						
Input Capacitance	$C_{iss}$	$V_{DS} = 10\text{V}, f = 1\text{MHz}$	-	500	-	pF
Output Capacitance	$C_{oss}$		-	300	-	pF
Reverse Transfer Capacitance	$C_{rss}$		-	10	-	pF
Turn-On Time	$t_{on}$	$V_{DS} = 20\text{V}, I_D = 5\text{A}$	-	100	-	ns
Turn-Off Time	$t_{off}$		-	50	-	ns

