NTE2906
MOSFET
N−Channel, Enhancement Mode
High Speed Switch
(Compl to NTE2998)
TO3 Type Package

Features:
- High Speed Switching
- High Voltage
- High Energy Rating
- Enhancement Mode
- Integral Protection Diode
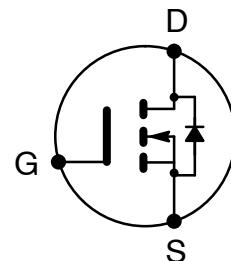
Absolute Maximum Ratings: (T_C = +25°C unless otherwise specified)

Drain−Source Voltage, V_{DSX} 200V

Gate−Source Voltage, V_{GSS} . . . . ±14V

Continuous Drain Current, I_D 8A

Body Drain Diode, $I_{D(PK)}$ 8A

Total Power Dissipation (T_C = +25°C), P_D 125W

Maximum Operating Junction Temperature, T_J . . . . +150°C

Storage Temperature Range, T_{stg} . . . . −55° to +150°C

Thermal Resistance, Junction−to−Case, R_{thJC} . . . . 1.0°C/W

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

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

Note 1. Pulse Test: Pulse Width = 300±s, Duty Cycle ≤ 2%.

Electrical Characteristics (Cont'd): (T$_C$ = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Dynamic Characteristics						
Input Capacitance	C$_{iss}$	V$_{DS}$ = 10V, f = 1MHz	–	500	–	pF
Output Capacitance	C$_{oss}$		–	300	–	pF
Reverse Transfer Capacitance	C$_{rss}$		–	10	–	pF
Turn–On Time	t$_{on}$	V$_{DS}$ = 20V, I$_D$ = 5A	–	100	–	ns
Turn–Off Time	t$_{off}$		–	50	–	ns

.135 (3.45) Max

.350 (8.89)

.875 (22.2) Dia Max

Seating Plane

.312 (7.93) Min

.040 (1.02)

Drain

1.187 (30.16)

.215 (5.45)

.665 (16.9)

.156 (3.96) Dia (2 Holes)

.430 (10.92)

.188 (4.8) R Max

.525 (13.35) R Max

Gate

Source/Case