ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

NTE2973
MOSFET
N–Channel, Enhancement Mode
High Speed Switch

Applications:

- SMPS
- DC–DC Converter
- Battery Charger
- Power Supply of Printer
- Copier
- HDD, FDD, TV, VCR
- Personal Computer

Absolute Maximum Ratings: (T_C = +25°C unless otherwise specified)

Drain–Source Voltage (V_{GS} = 0V), V_{DSS} 900V
Gate–Source Voltage (V_{DS} = 0V), V_{GS} . . . . . ±30V
Drain Current, I_D
Continuous 14A
Pulsed 42A
Maximum Power Dissipation, P_D 275W
Channel Temperature Range, T_{ch} . . . . . –55° to +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C
Thermal Resistance, Channel–to–Case, $R_{th(ch–c)}$ . . . . . 0.45°C/W

Electrical Characteristics: (T_{ch} = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	V_{DS} = 0V, I_D = 1mA	900	–	–	V
Gate–Source Breakdown Voltage	$V_{(BR)GSS}$	V_{DS} = 0V, I_G = ±100μA	±30	–	–	V
Gate–Source Leakage	I_{GSS}	V_{GS} = ±25V, V_{DS} = 0V	–	–	±10	μA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 900V, V_{GS} = 0	–	–	1.0	mA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = 10V, I_D = 1mA	2.0	3.0	4.0	V
Static Drain–Source ON Resistance	$R_{DS(on)}$	V_{GS} = 10V, I_D = 7A	–	0.63	0.85	Ω
Drain–Source On–State Voltage	$V_{DS(on)}$	V_{GS} = 10V, I_D = 7A	–	4.41	5.95	V
Forward Transfer Admittance	$\|y_{fs}\|$	V_{GS} = 10V, I_D = 7A	9	15	–	S

Electrical Characteristics (Cont'd): (T_{ch} = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	C_{iss}	V_{GS} = 0V, V_{DS} = 25V, f = 1MHz	–	2900	–	pF
Output Capacitance	C_{oss}		–	290	–	pF
Reverse Transfer Capacitance	C_{rss}		–	50	–	pF
Turn–On Delay Time	$t_{d(on)}$	V_{DD} = 200V, I_D = 7A, V_{GS} = 10V, R_{GEN} = R_{GS} = 50Ω	–	45	–	ns
Rise Time	t_r		–	65	–	ns
Turn–Off Delay Time	$t_{d(off)}$		–	325	–	ns
Fall Time	t_f		–	100	–	ns
Diode Forward Voltage	V_{SD}	I_S = 7A, V_{GS} = 0V	–	1.0	1.5	V

