RoHS
2002/95/EC

NTE2914
MOSFET
N−Channel, Enhancement Mode
High Speed Switch
TO220FM Type Package

Features:
- Low On−Resistance: R_{DS} = 0.026Ω Typ.
- High Speed Switching
- 4V Gate Drive Device can be Driven from 5V Source

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

Drain−to−Source Voltage, V_{DSS} 60V
Gate−to−Source Voltage, V_{GSS} .... ±20V
Continuous Drain Current, I_D 25A
Peak Drain Current (Note 1), $I_{D(pulse)}$ 100A
Body−Drain Diode Reverse Drain Current, I_{DR} 25A
Avalanche Current (Note 2), I_{AP} 20A
Avalanche Energy (Note 2), E_{AR} 34mJ
Channel Dissipation (T_C = +25°C), P_{CH} 25W
Channel Temperature, T_{CH} .... +150°C
Storage Temperature Range, T_{stg} .... −55° to +150°C

Note 1. Pulse width ≤ 10μs; duty cycle ≤ 1%.
Note 2. T_{CH} = +25°C, R_g = 50Ω

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain−to−Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D = 10mA	60	–	–	V
Gate−to−Source Breakdown Voltage	$V_{(BR)GSS}$	V_{DS} = 0V, I_G = ±100μA	±20	–	–	V
Gate−Source Leakage Current	I_{GSS}	V_{GS} = ±16V, V_{DS} = 0	–	–	±10	μA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 60V, V_{GS} = 0V	–	–	10	μA
Gate−to−Source Cutoff Voltage	$V_{GS(off)}$	V_{DS} = 10V, I_D = 1mA	1.5	–	2.5	V
Static Drain−to−Source On−Resistance	$R_{DS(on)}$	V_{GS} = 10V, I_D = 15A, Note 3	–	0.026	0.034	Ω
		V_{GS} = 4V, I_D = 15A, Note 3	–	0.045	0.070	Ω

Note 3. Pulse Test.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Transfer Admittance	$|y_{fs}|$	V_{DS} = 10V, I_D = 15A, Note 3	11	17	–	S
Input Capacitance	C_{iss}	V_{GS} = 0V, V_{DS} = 10V, f = 1MHz	–	740	–	pF
Output Capacitance	C_{oss}		–	380	–	pF
Reverse Transfer Capacitance	C_{rss}		–	140	–	pF
Turn–On Delay Time	$t_{d(on)}$	V_{GS} = 10V, I_D = 15A, R_L = 2Ω	–	10	–	ns
Rise Time	t_r		–	160	–	ns
Turn–Off Delay Time	$t_{d(off)}$		–	100	–	ns
Fall Time	t_f		–	150	–	ns
Body–Drain Diode Forward Voltage	V_{DF}	V_{GS} = 0, I_F = 25A	–	0.95	–	V
Body–Drain Diode Reverse Recovery Time	t_{rr}	V_{GS} = 0, I_F = 25A, diF/dt = 50Aμs	–	40	–	ns

Note 3. Pulse Test.