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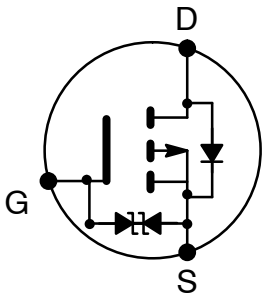
NTE2919
MOSFET
P–Ch, Enhancement Mode
High Speed Switch
TO–220 Full Pack Type Package



Features:
- Low ON–Resistance
- Ultra High–Speed Switching
- 4V Drive

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

Drain–to–Source Voltage, V_{DSS} . . . . . –60V
Gate–to–Source Voltage, V_{GS} . . . . . ±20V
Drain Current, I_D
  Continuous . . . . . –20A
  Pulsed (Note 1) . . . . . –80A
Allowable Power Dissipation (T_C = +25°C), P_D
  T_A = +25°C 2.0W
  T_C = +25°C 25W
Channel Temperature, T_{ch} . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

Note 1. Pulse Width ≤ 10μs, Duty Cycle ≤ 1%.

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 = –1A	–60	–	–	V
Zero–Gate Voltage Drain Current	I_{DSS}	V_{DS} = –60V, V_{GS} = 0V	–	–	–1	μA
Gate–to–Source Leakage Current	I_{GSS}	V_{GS} = ±16V, V_{DS} = 0	–	–	±10	μA
Cutoff Voltage	$V_{GS(off)}$	V_{DS} = –10V, I_D = –1mA	–1.2	–	–2.6	V
Forward Transfer Admittance	$\|y_{fs}\|$	V_{DS} = –10V, I_D = –10A	11	17	–	S
Static Drain–to–Source On–Resistance	$R_{DS(on)}$	V_{GS} = –10V, I_D = –10A	–	45	60	mΩ
		V_{GS} = –4V, I_D = –10A	–	65	92	mΩ
Input Capacitance	C_{iss}	V_{DS} = –20V, f = 1MHz	–	2200	–	pF
Output Capacitance	C_{oss}		–	220	–	pF
Reverse Transfer Capacitance	C_{rss}		–	165	–	pF

Rev. 9–14

RoHS 2002/95/EC

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn−On Delay Time	$t_{d(on)}$	V_{DD} = −30V, I_D = −10A, R_L = 3Ω, Note 1	–	18	–	ns
Rise Time	t_r		–	115	–	ns
Turn−Off Delay Time	$t_{d(off)}$		–	190	–	ns
Fall Time	t_f		–	120	–	ns
Total Gate Charge	Q_g	I_D = −20A, V_{DS} = −30V, V_{GS} = −10V	–	–	45	nC
Gate−to−Source Charge	Q_{gs}		–	–	7.4	nC
Gate−to−Drain ("Miller") Charge	Q_{gd}		–	–	9	nC
Diode Forward Voltage	V_{SD}	I_S = −20A, V_{GS} = 0	–	−0.95	−1.2	V

Note 1. Pulse Width ≤ 10μs, Duty Cycle ≤ 1%.