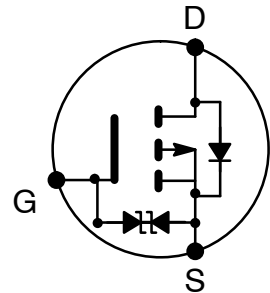




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NTE2919 MOSFET P-Ch, Enhancement Mode High Speed Switch TO-220 Full Pack Type Package



Features:

- Low ON-Resistance
- Ultra High-Speed Switching
- 4V Drive

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

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

Note 1. Pulse Width $\leq 10\mu\text{s}$, Duty Cycle $\leq 1\%$.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{V}, I_D = -1\text{A}$	-60	-	-	V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -60\text{V}, V_{GS} = 0\text{V}$	-	-	-1	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16\text{V}, V_{DS} = 0$	-	-	± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10\text{V}, I_D = -1\text{mA}$	-1.2	-	-2.6	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -10\text{V}, I_D = -10\text{A}$	11	17	-	S
Static Drain-to-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = -10\text{V}, I_D = -10\text{A}$	-	45	60	$\text{m}\Omega$
		$V_{GS} = -4\text{V}, I_D = -10\text{A}$	-	65	92	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS} = -20\text{V}, f = 1\text{MHz}$	-	2200	-	pF
Output Capacitance	C_{oss}		-	220	-	pF
Reverse Transfer Capacitance	C_{rss}		-	165	-	pF

Rev. 9-14



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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = -30\text{V}$, $I_D = -10\text{A}$, $R_L = 3\Omega$, 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	$I_D = -20\text{A}$, $V_{DS} = -30\text{V}$, $V_{GS} = -10\text{V}$	-	-	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}	$I_S = -20\text{A}$, $V_{GS} = 0$	-	-0.95	-1.2	V

Note 1. Pulse Width $\leq 10\mu\text{s}$, Duty Cycle $\leq 1\%$.

