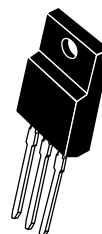




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TO-220F-3FS

NDFPD1N150C

N-Channel Power MOSFET 1500V, 0.1A, 150Ω, TO-220F-3FS

Features

- On-resistance $R_{DS(on)}=100\Omega$ (typ.)
- Input Capacitance $C_{iss}=80pF$ (typ.)
- 10V drive

Specifications

Absolute Maximum Ratings at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Drain to Source Voltage	V_{DSS}		1500	V
Gate to Source Voltage	V_{GSS}		± 30	V
Drain Current (DC)	I_D		0.1	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu s$, duty cycle $\leq 1\%$	0.2	A
Allowable Power Dissipation	P_D		2.0	W
		$T_c = 25^\circ C$	20	W
Channel Temperature	T_{ch}		150	$^\circ C$
Storage Temperature	T_{stg}		- 55 to +150	$^\circ C$

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

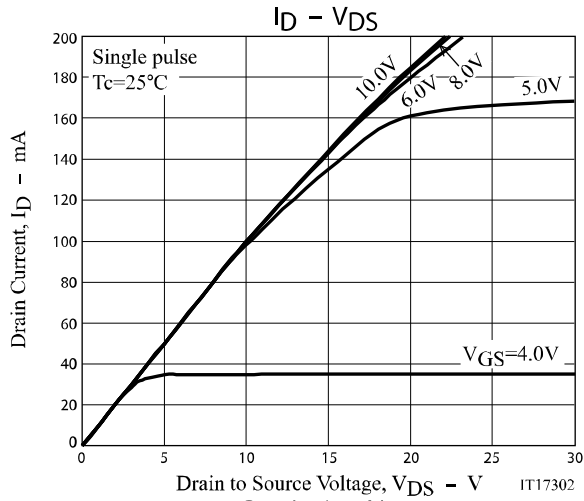
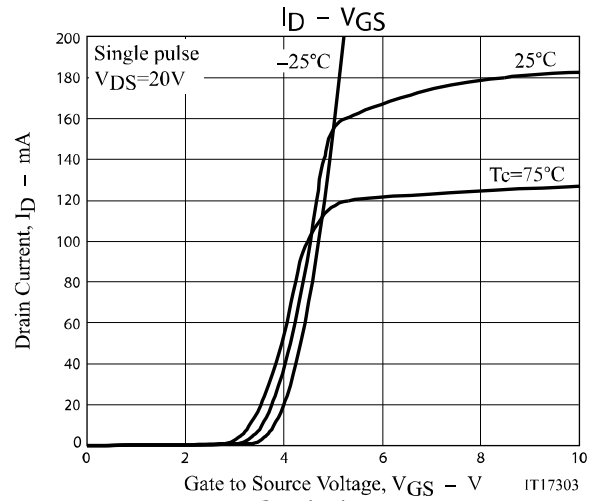
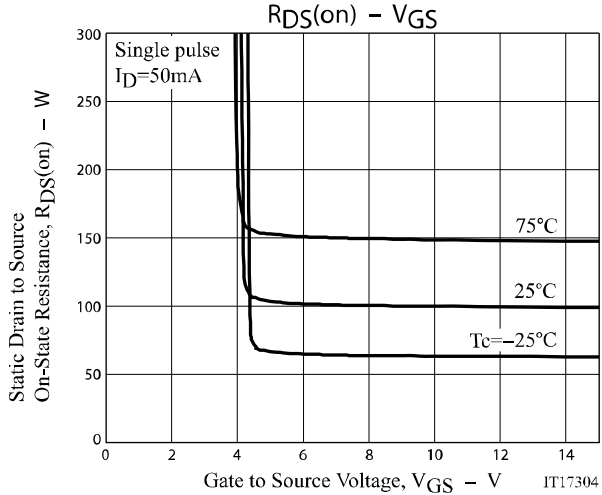
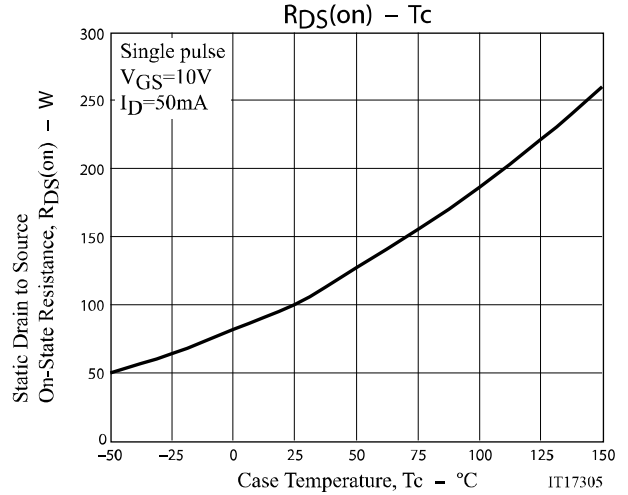
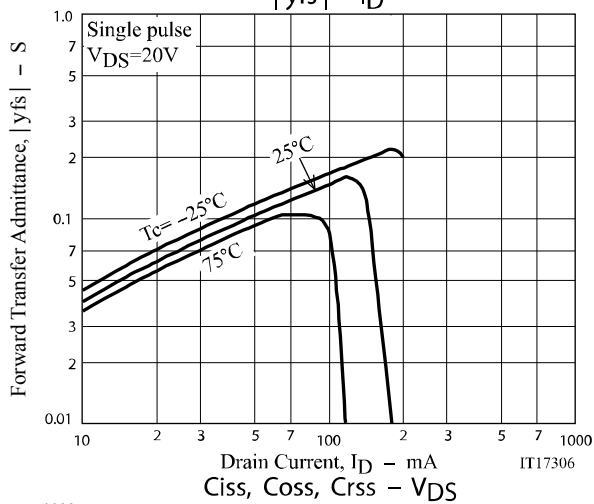
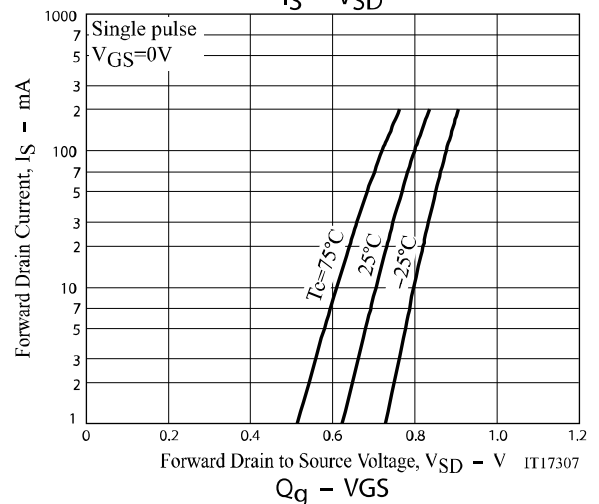
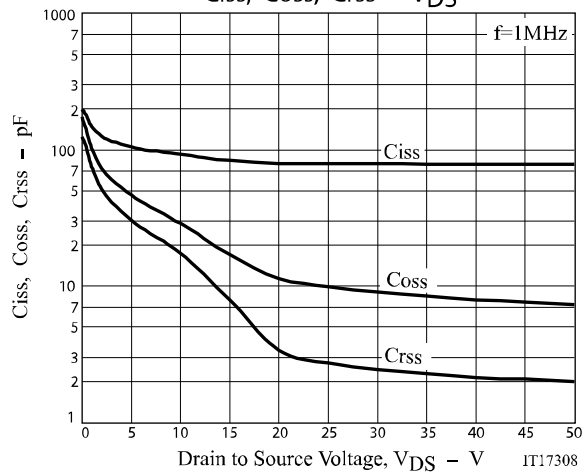
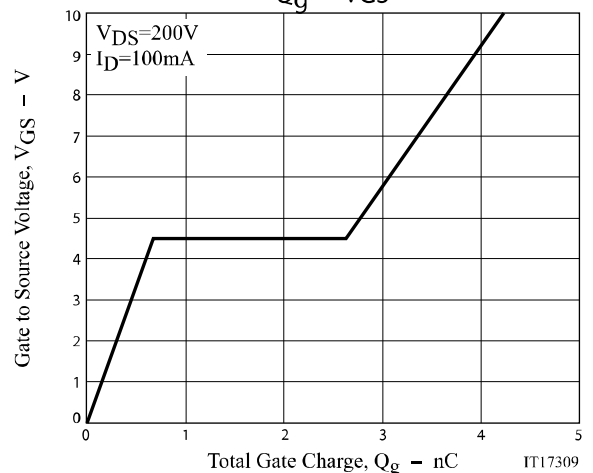
Electrical Characteristics at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain to Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 10mA$, $V_{GS} = 0V$	1500			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 1200V$, $V_{GS} = 0V$			1	mA
Gate to Source Leakage Current	I_{GSS}	$V_{GS} = \pm 30V$, $V_{DS} = 0V$			± 100	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10V$, $I_D = 1mA$	2		4	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 20V$, $I_D = 50mA$		0.1		S
Static Drain to Source On-State Resistance	$R_{DS(on)}$	$I_D = 50mA$, $V_{GS} = 10V$		100	150	Ω
Input Capacitance	C_{iss}	$V_{DS} = 30V$, $f = 1MHz$		80		pF
Output Capacitance	C_{oss}			9		pF
Reverse Transfer Capacitance	C_{rss}			2.5		pF
Turn-ON Delay Time	$t_d(on)$			8		ns
Rise Time	t_r	See Fig.1		13		ns
Turn-OFF Delay Time	$t_d(off)$			43		ns
Fall Time	t_f			280		ns
Total Gate Charge	Q_g	$V_{DS} = 200V$, $V_{GS} = 10V$, $I_D = 0.1A$		4.2		nC
Gate to Source Charge	Q_{gs}			0.7		nC
Gate to Drain "Miller" Charge	Q_{gd}			2		nC
Diode Forward Voltage	V_{SD}	$I_S = 0.1A$, $V_{GS} = 0V$		0.8	1.5	V

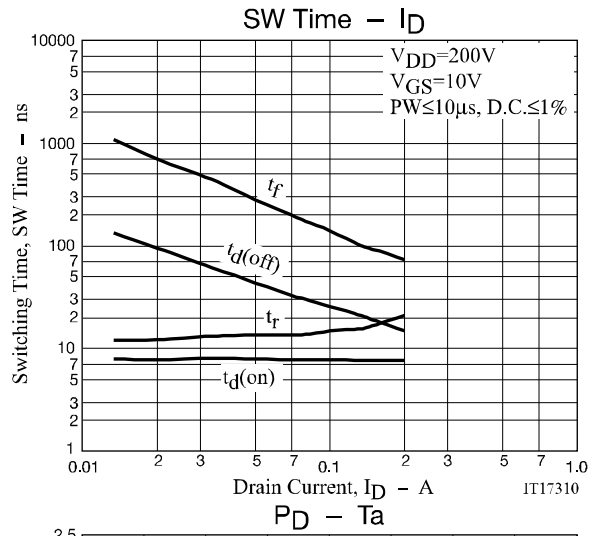
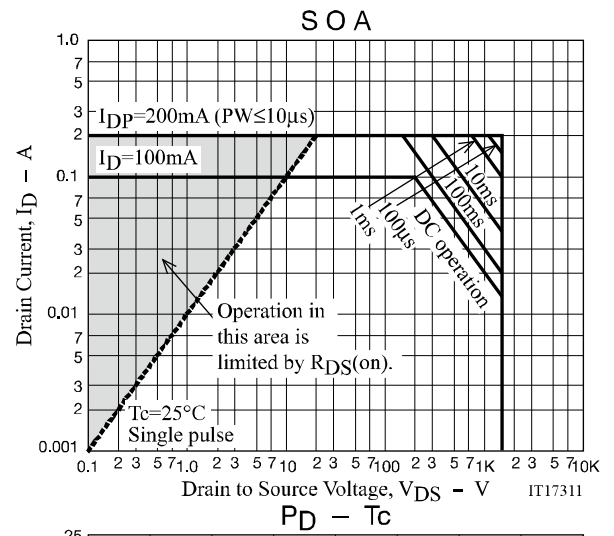
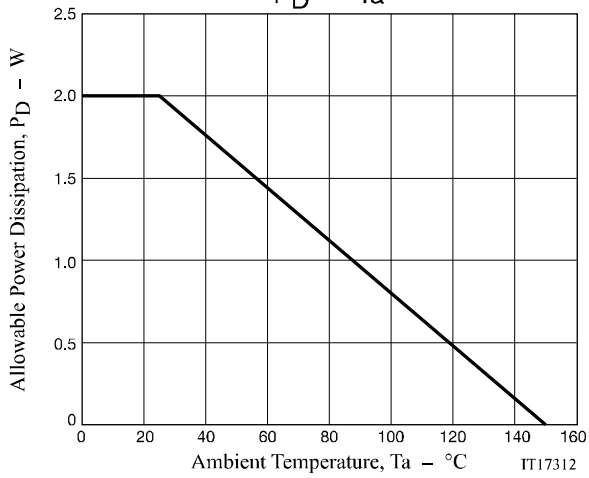
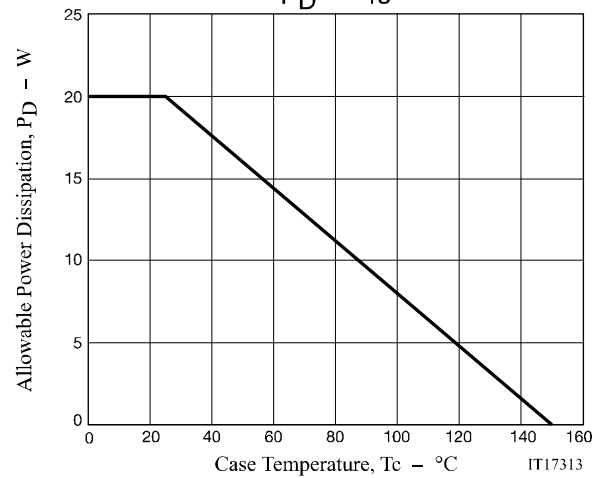
ORDERING INFORMATION

See detailed ordering and shipping information on page 4 of this data sheet.

NDFPD1N150C



NDFPD1N150C



Note on usage : Since the NDFPD1N150C is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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