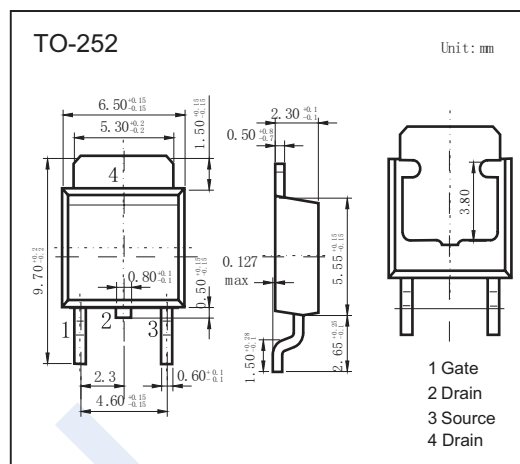
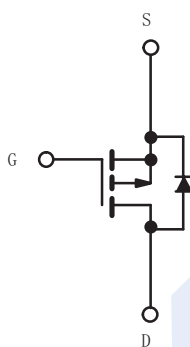


P-Channel MOSFET

NDT8P06

■ Features

- $V_{DS} (V) = -60V$
- $I_D = -8.4 A (V_{GS} = -10V)$
- $I_D = -7.4 A (V_{GS} = -4.5V)$
- $R_{DS(ON)} < 0.155\Omega (V_{GS} = -10V)$
- $R_{DS(ON)} < 0.28\Omega (V_{GS} = -4.5V)$

■ Absolute Maximum Ratings ($T_c = 25^\circ C$, unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-60	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	$T_c = 25^\circ C$	A
		$T_c = 100^\circ C$	
Pulsed Drain Current	I_{DM}	-18	
Continuing Source Current (Diode Conduction)	I_S	-8.4	
Avalanche Current	I_{AS}	-12	mJ
Single Pulse Avalanche Energy	E_{AS}	7.2	
Power Dissipation	P_D	$T_c = 25^\circ C$	W
		$T_A = 25^\circ C$	
Thermal Resistance.Junction- to-Ambient	R_{thJA}	$t \leq 10 s$	$^\circ C/W$
		Steady State	
Thermal Resistance.Junction- to-Case	R_{thJC}	6	$^\circ C$
Junction Temperature	T_J	150	
Storage Temperature Range	T_{stg}	-55 to 150	

Notes:

- See SOA curve for voltage derating.
- Surface mounted on 1" x 1" FR-4 board.

P-Channel MOSFET

NDT8P06

■ Electrical Characteristics (T_J = 25°C, unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ ^a	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =-250μA, V _{GS} =0V	-60			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-60V, V _{GS} =0V			-1	μA
		V _{DS} =-60V, V _{GS} =0V, T _J =125°C			-50	
		V _{DS} =-60V, V _{GS} =0V, T _J =150°C			-150	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-1		-3	V
Static Drain-Source On-Resistance ^b	R _{DS(on)}	V _{GS} =-10V, I _D =-5A			0.155	Ω
		V _{GS} =-10V, I _D =-5A, T _J =125°C			0.28	
		V _{GS} =-10V, I _D =-5A, T _J =150°C			0.35	
		V _{GS} =-4.5V, I _D =-2A			0.28	
On State Drain Current ^b	I _{D(ON)}	V _{GS} =-10V, V _{DS} =-5V	-10			A
Forward Transconductance ^b	g _{FS}	V _{DS} =-15V, I _D =-5A		8		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-25V, f=1MHz		450		pF
Output Capacitance	C _{oss}			65		
Reverse Transfer Capacitance	C _{rss}			40		
Gate Resistance	R _g	f = 1MHz		8		Ω
Total Gate Charge	Q _g	V _{GS} =-10V, V _{DS} =-30V, I _D =-8.4A		12.5	19	nC
Gate Source Charge	Q _{gs}			2.3		
Gate Drain Charge	Q _{gd}			3.2		
Turn-On Delay Time ^c	t _{d(on)}	V _{DD} =-30V, R _L =3.57Ω, I _D ≧ - 8.4 A, V _{GEN} = - 10 V, R _G = 2.5Ω			10	ns
Turn-On Rise Time ^c	t _r				25	
Turn-Off Delay Time ^c	t _{d(off)}				25	
Turn-Off Fall Time ^c	t _f				12	
Body Diode Reverse Recovery Time	t _{rr}	I _F =-8A, di/dt=100A/μs			80	ns
Body Diode Reverse Recovery Charge	Q _{rr}				120	nC
Maximum Body-Diode Pulsed Current	I _{SM}				-20	A
Diode Forward Voltage ^b	V _{SD}	I _S =-2A, V _{GS} =0V			-1.3	V

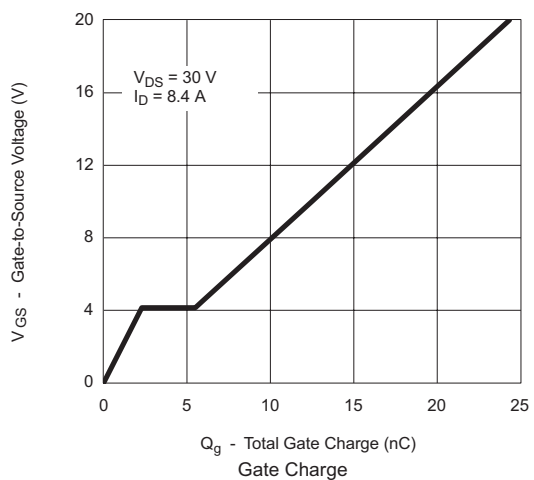
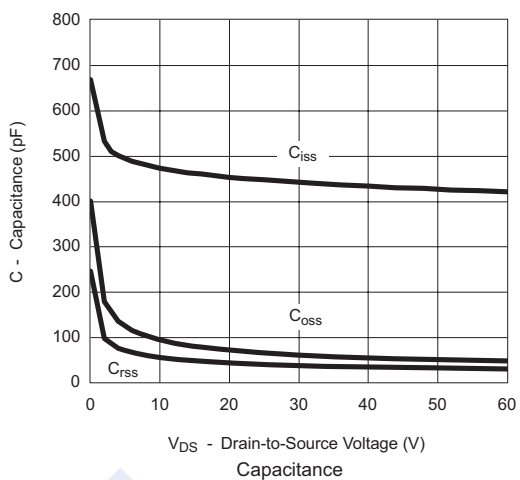
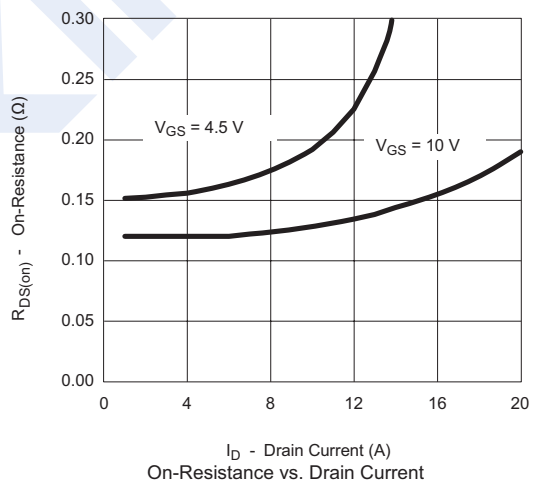
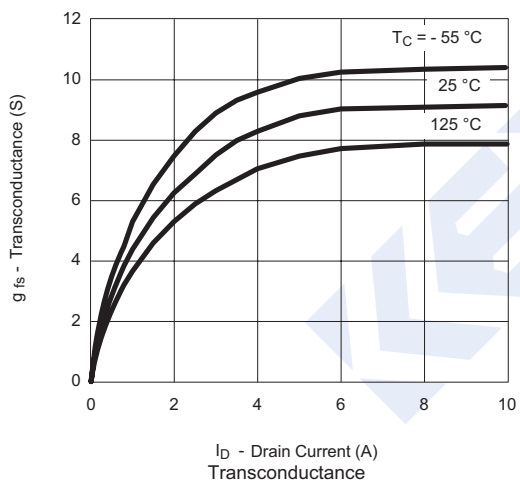
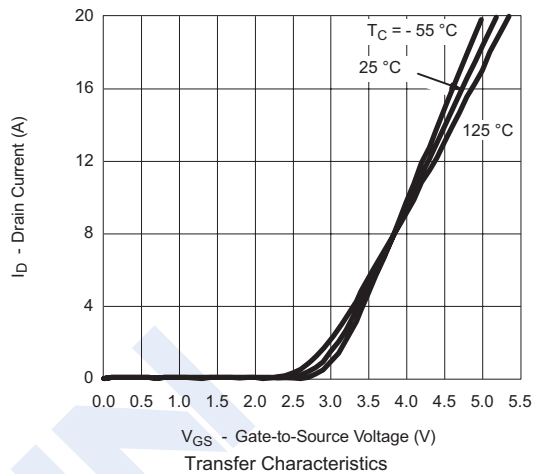
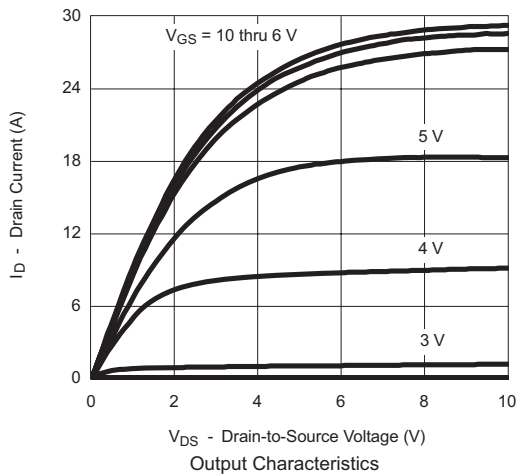
Notes:

- Guaranteed by design, not subject to production testing.
- Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2 %.
- Independent of operating temperature.

P-Channel MOSFET

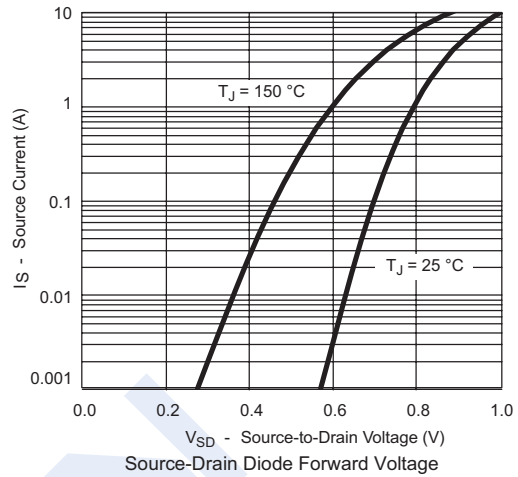
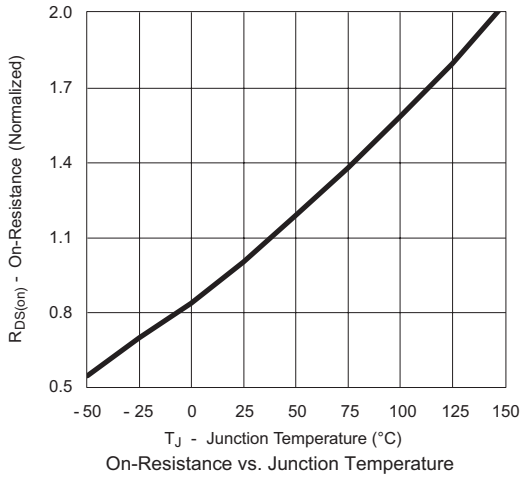
NDT8P06

■ Typical Characteristics



P-Channel MOSFET

NDT8P06



Thermal Ratings

