

N-Channel MOSFET

NDT06N02

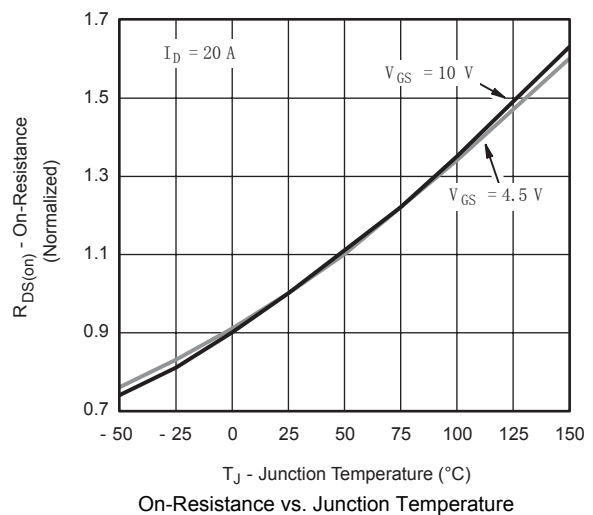
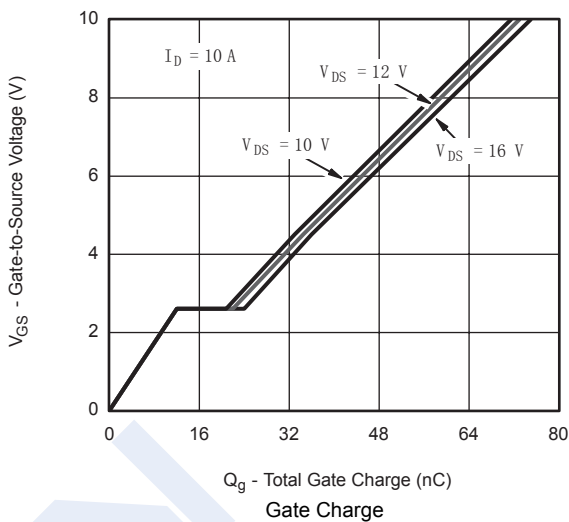
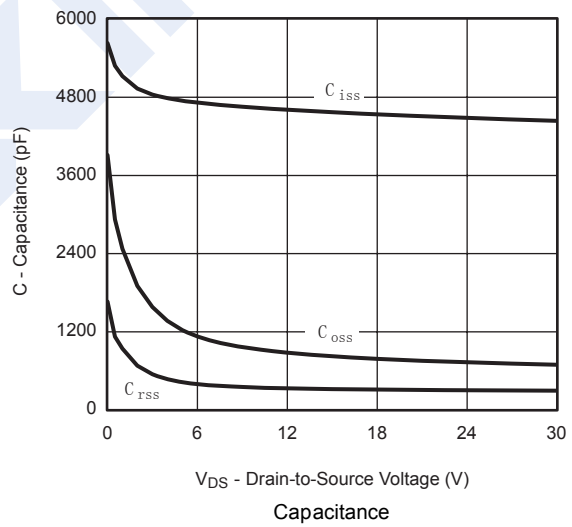
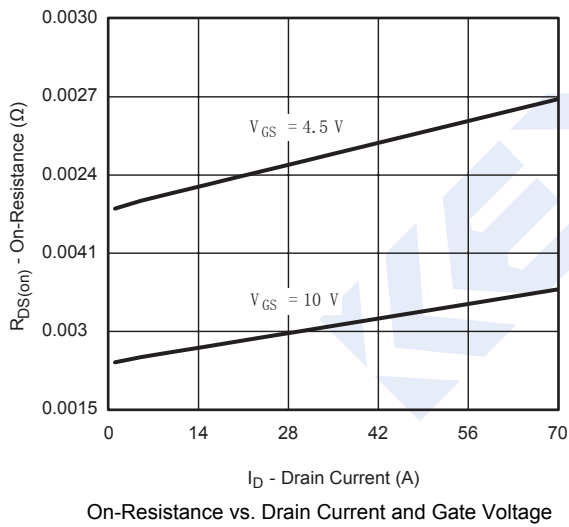
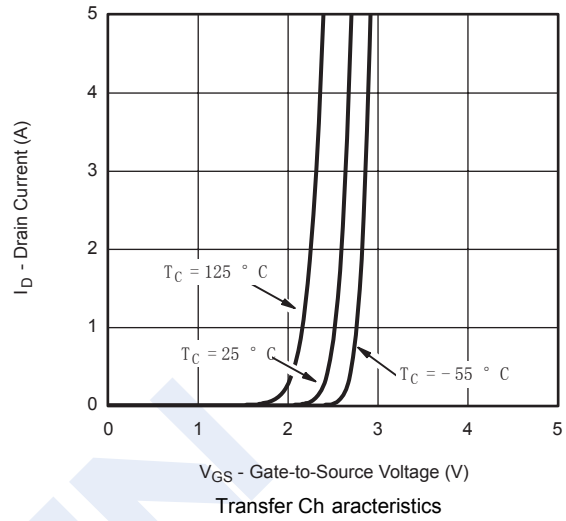
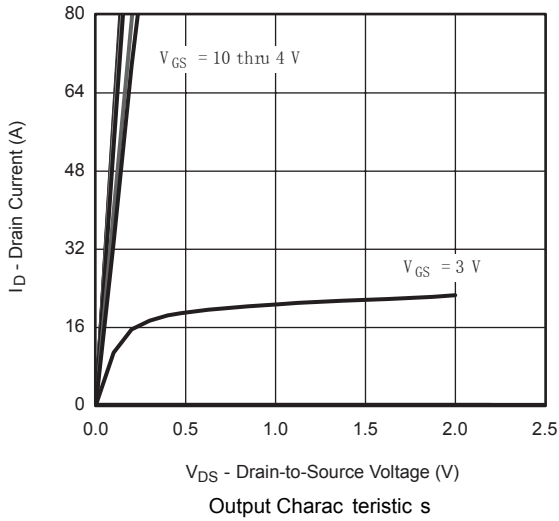
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 μA, V _{GS} =0V	22			V	
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1	μA	
		V _{DS} =20V, V _{GS} =0V, T _J =55°C			10		
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±12V			±100	nA	
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250 μA	1.2		2.5	V	
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =20A			4.1	mΩ	
		V _{GS} =4.5V, I _D =20A			5.9		
On State Drain Current	I _{D(ON)}	V _{GS} =10V, V _{DS} =5V	30			A	
Forward Transconductance	g _{FS}	V _{DS} =10V, I _D =20A		100		S	
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =12V, f=1MHz		4590		pF	
Output Capacitance	C _{oss}			810			
Reverse Transfer Capacitance	C _{rss}			320			
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz	0.2		1.6	Ω	
Total Gate Charge	Q _g	V _{DS} = 12 V, V _{GS} = 10 V, I _D = 20 A		74	110	nC	
				34	51		
Gate Source Charge	Q _{gs}	V _{GS} =4.5V, V _{DS} =12V, I _D =20A		12			
Gate Drain Charge	Q _{gd}			10			
Turn-On DelayTime	t _{d(on)}	V _{DD} = 12 V, R _L = 1.5 Ω I _D = 10 A, V _{GEN} = 10 V, R _g = 1 Ω		19	35	ns	
Turn-On Rise Time	t _r			5	10		
Turn-Off DelayTime	t _{d(off)}			45	85		
Turn-Off Fall Time	t _f			5	10		
Turn-On DelayTime	t _{d(on)}	V _{DD} = 10 V, R _L = 1 Ω I _D = 10 A, V _{GEN} = 4.5 V, R _g = 1 Ω		45	85	ns	
Turn-On Rise Time	t _r			18	45		
Turn-Off DelayTime	t _{d(off)}			60	110		
Turn-Off Fall Time	t _f			30	60		
Body Diode Reverse Recovery Time	t _{rr}	I _F = 10A, di/dt= 100A/μs, T _J = 25°C		33	50	nC	
Body Diode Reverse Recovery Charge	Q _{rr}			25	40		
Reverse Recovery Fall Time	t _a			16			nS
Reverse Recovery Rise Time	t _b			17			
Maximum Body-Diode Continuous Current	I _S				60	A	
Pulse Diode Forward Current	I _{SM}				80		
Diode Forward Voltage	V _{SD}	I _S =4A, V _{GS} =0V			1.1	V	

Note.Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2 %.

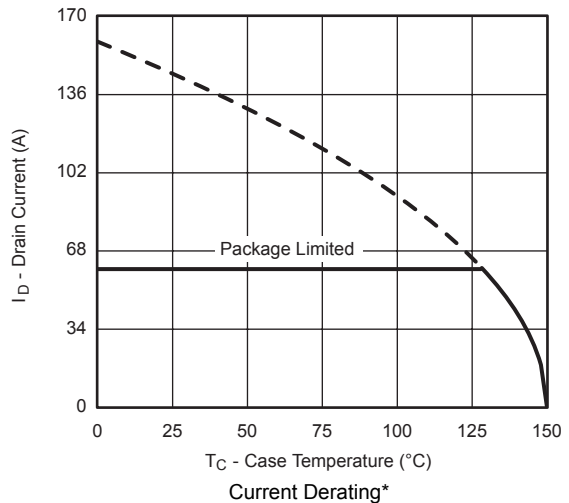
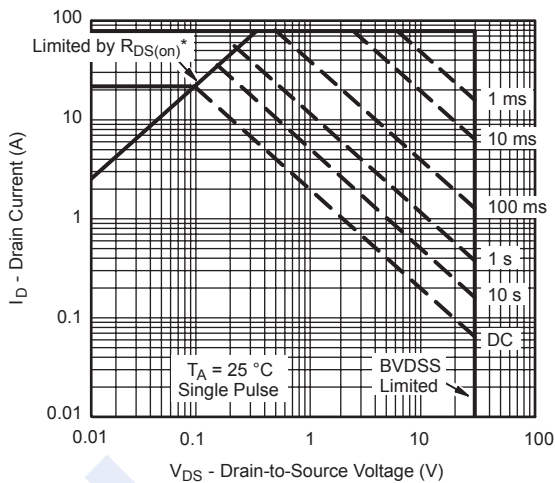
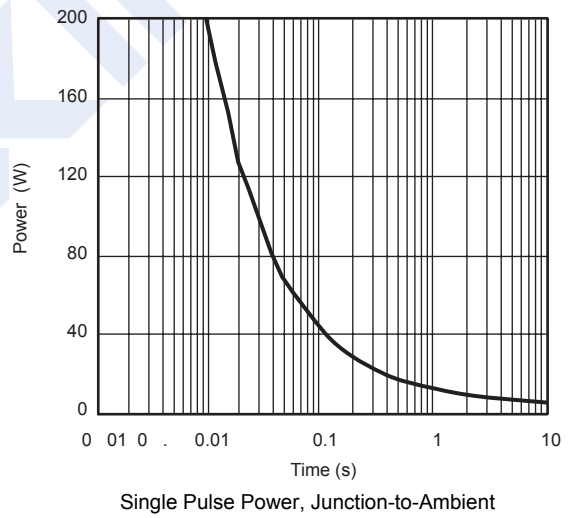
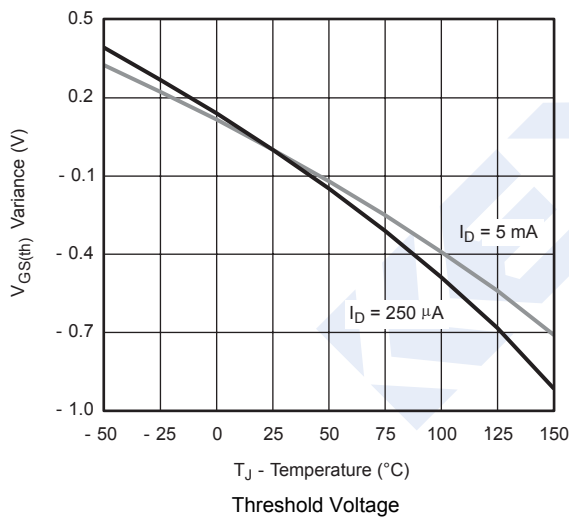
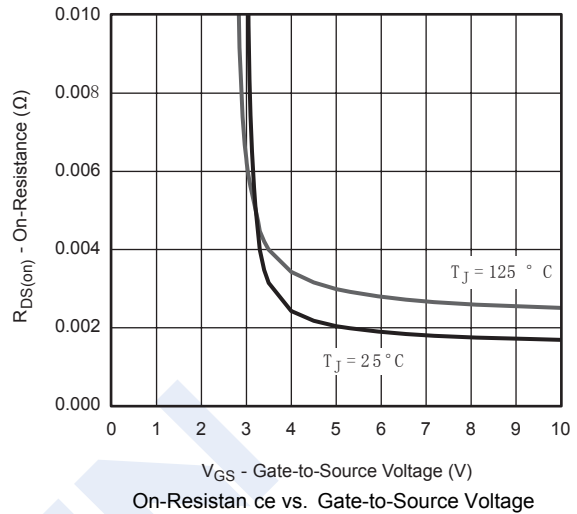
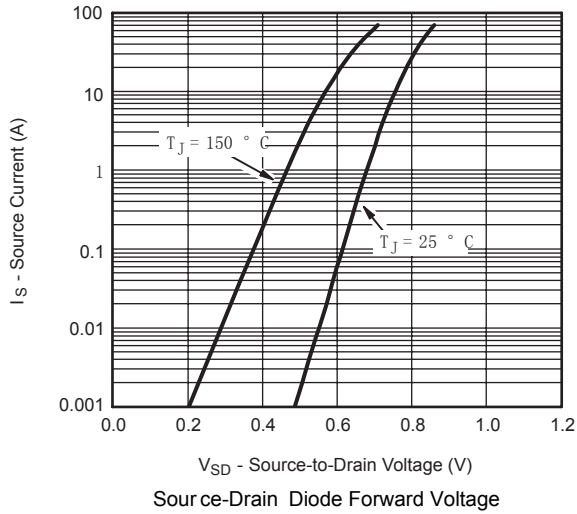
N-Channel MOSFET NDT06N02

Typical Characteristics



N-Channel MOSFET NDT06N02

■ Typical Characteristics



* $V_{GS} >$ minimum V_{GS} at which $R_{DS(on)}$ is specified

N-Channel MOSFET NDT06N02

■ Typical Characteristics

