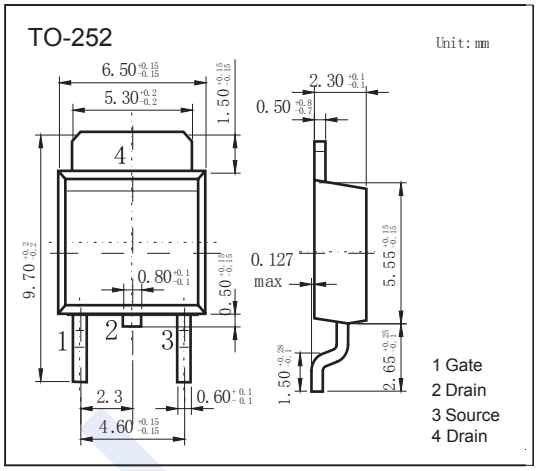
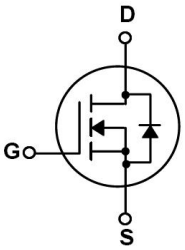
N-Channel MOSFET
NDT18N06



■ Features

- $V_{DS\ (V)}$ = 60V
- I_D = 18 A (V_{GS} = 10V)
- $R_{DS(ON)}$ < 55mΩ (V_{GS} = 10V)
- $R_{DS(ON)}$ < 68mΩ (V_{GS} = 4.5V)



■ Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	60	V
Gate-Source Voltage		V_{GS}	±20	
Continuous Drain Current	Tc=25℃	I_D	18	A
	Tc=70℃		14.5	
Pulsed Drain Current		I_{DM}	72	
Power Dissipation	Tc=25℃	P_D	36	W
	Tc=70℃		23	
Single Pulsed Avalanche Energy		E_{AS}	25	mJ
Junction Temperature		T_J	150	℃
Storage Temperature Range		T_{stg}	-55 to 150	

N-Channel MOSFET
NDT18N06

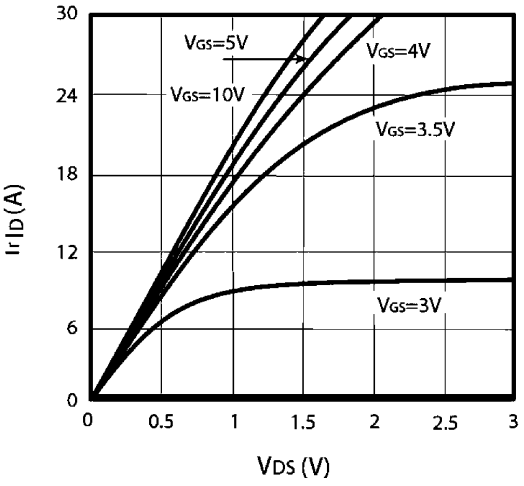
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	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}=48V, V_{GS}=0V			1	uA
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	$R_{DS(ON)}$	V_{GS}=10V, I_D=18A			55	mΩ
		V_{GS}=4.5V, I_D=16.2A			68	
Forward Transconductance	g_{FS}	V_{DS}=30V, I_D=18A		16		S
Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}=30V, f=1MHz		825		pF
Output Capacitance	C_{oss}			72		
Reverse Transfer Capacitance	C_{rss}			48		
Turn-On DelayTime	$t_{d(on)}$	V_{DD}=30V I_D=1A V_{GS}=10V R_{GEN}=3.3Ω		13		ns
Turn-On Rise Time	t_r			12.5		
Turn-Off DelayTime	$t_{d(off)}$			38		
Turn-Off Fall Time	t_f			6		
Diode Forward Voltage	V_{SD}	I_S=1.7A,V_{GS}=0V			1.3	V

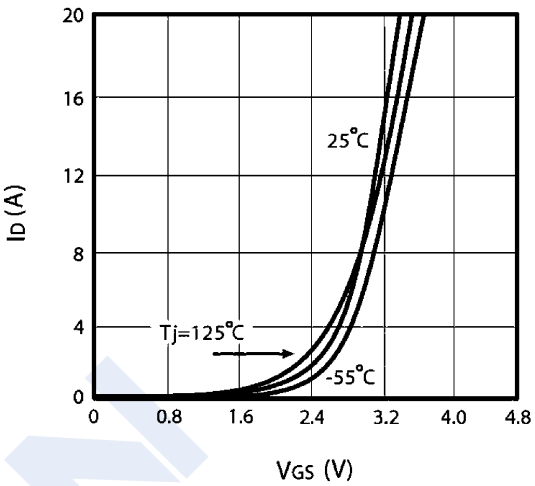
N-Channel MOSFET
NDT18N06

■ Typical Characterisitics

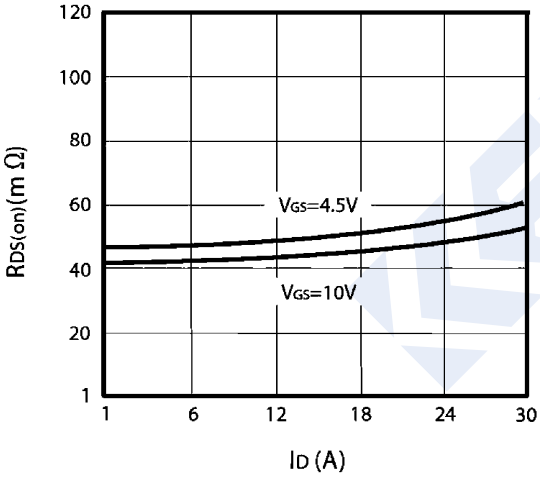
ID — VDS



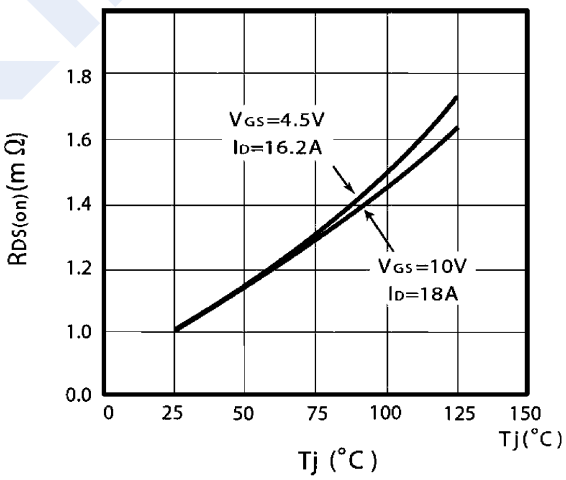
ID— VGS



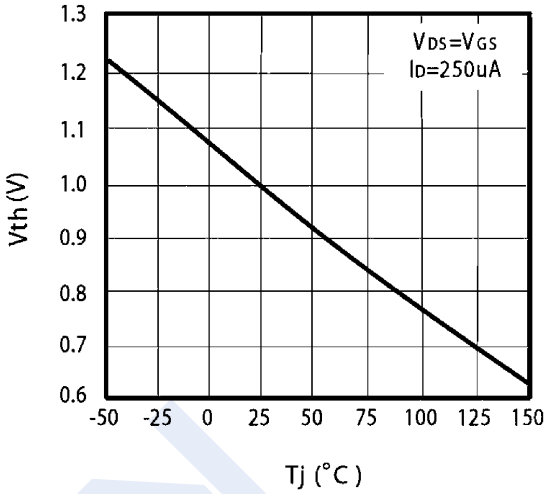
RDS(on) — ID



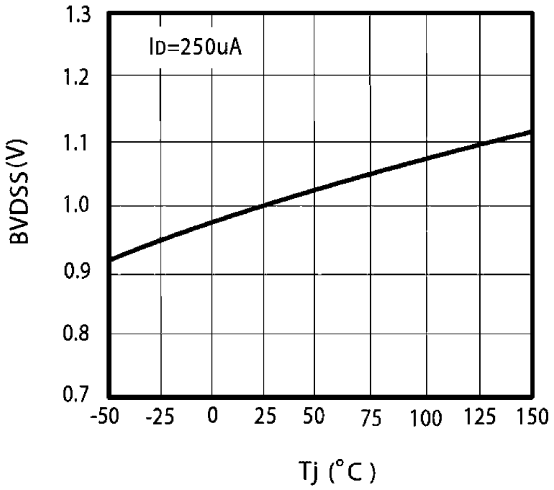
RDS(on) — Tj



Vth — Tj



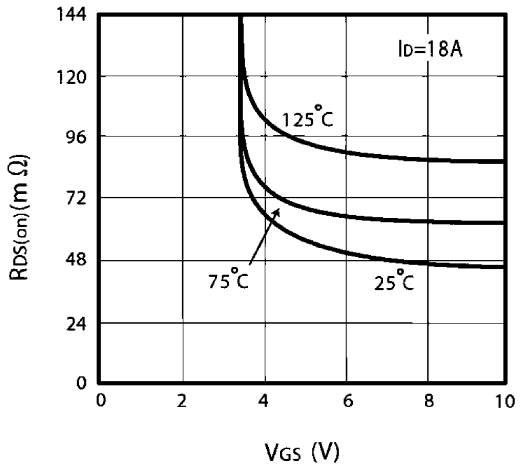
BVDSS — Tj



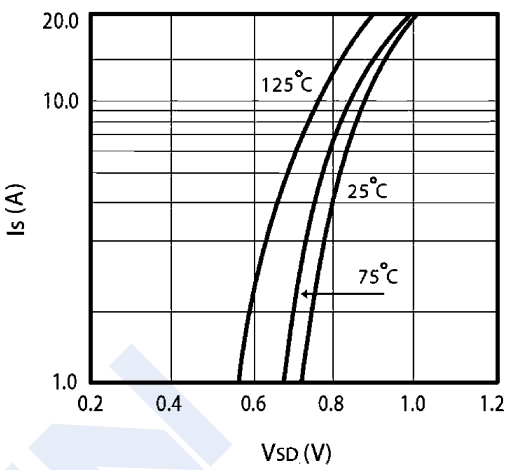
N-Channel MOSFET
NDT18N06

■ Typical Characterisitics

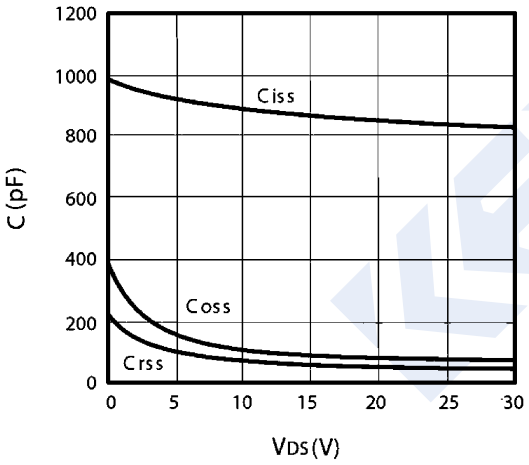
RDS(on) — VGS



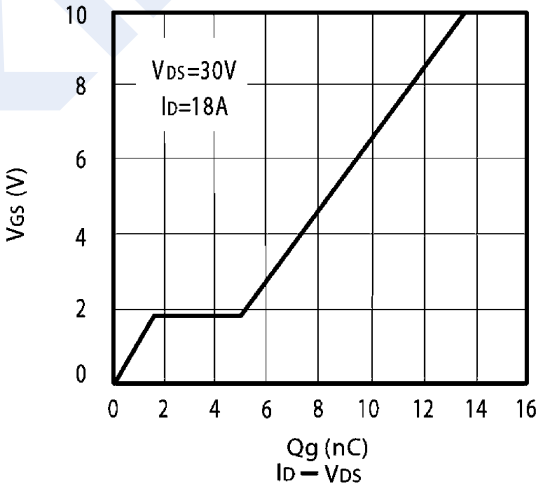
Is — VSD



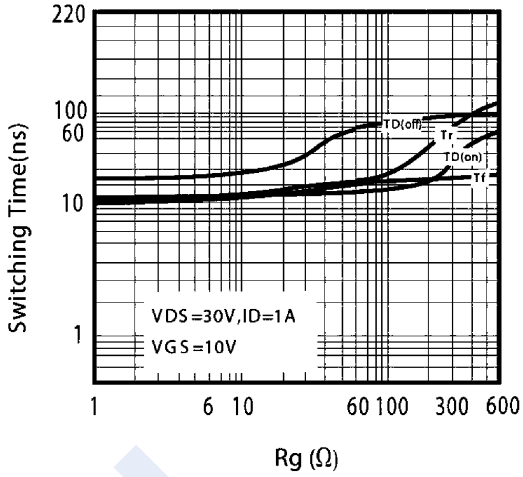
C — VDS



VGS — Qg



Switching Time(ns) — Rg (Ω)



ID — VDS