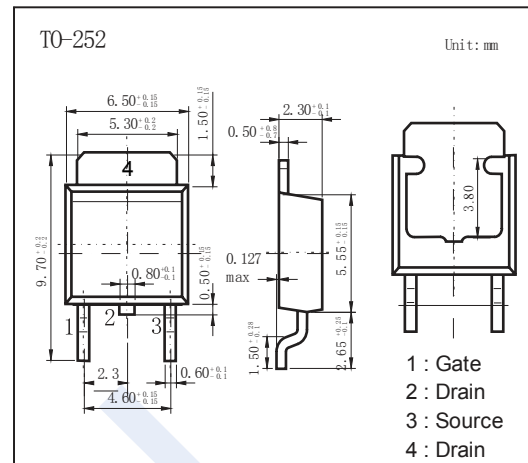
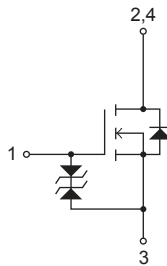


## N-Channel Enhancement MOSFET

## NDT35N06

## ■ Features

- $V_{DS}$  (V) = 60V
- $I_D$  = 35 A
- $R_{DS(ON)} < 23m\Omega$  ( $V_{GS} = 10V$ )
- $R_{DS(ON)} < 33m\Omega$  ( $V_{GS} = 4.5V$ )
- $R_{DS(ON)} < 37m\Omega$  ( $V_{GS} = 4V$ )

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	60	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	
Continuous Drain Current	$I_D$	35	A
Pulsed Drain Current (Note.1)	$I_{DP}$	105	
Avalanche Current (Note.2)	$I_{AV}$	18	
Avalanche Energy (Single Pulse) (Note.3)	$E_{AS}$	19	mJ
Power Dissipation $T_c=25^\circ\text{C}$	$P_D$	40	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

Note.1 :  $PW \leq 10 \mu\text{s}$ , duty cycle  $\leq 1\%$

Note.2 :  $L \leq 100\mu\text{H}$ , Single pulse

Note.3 :  $V_{DD}=10V$ ,  $L=100\mu\text{H}$ ,  $I_{AV}=18A$

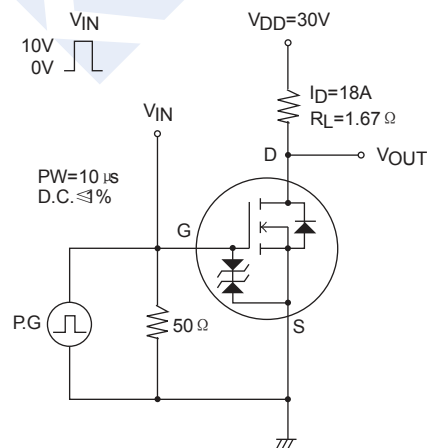
## N-Channel Enhancement MOSFET

## NDT35N06

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V <sub>DSS</sub>	I <sub>D</sub> =1mA, V <sub>GS</sub> =0V	60			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =60V, V <sub>GS</sub> =0V			1	μA
Gate-Body Leakage Current	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±16V			±10	
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =1mA	1.2		2.6	V
Forward Transfer Admittance	Y <sub>fs</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =18A		35		S
Static Drain-Source On-Resistance	R <sub>DS(on)1</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =18A		17	23	mΩ
	R <sub>DS(on)2</sub>	V <sub>GS</sub> =4.5V, I <sub>D</sub> =9A		23	33	
	R <sub>DS(on)3</sub>	V <sub>GS</sub> =4.0V, I <sub>D</sub> =5A		25	37	
Input Capacitance	C <sub>iss</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =20V, f=1MHz		1820		pF
Output Capacitance	C <sub>oss</sub>			150		
Reverse Transfer Capacitance	C <sub>rss</sub>			100		
Total Gate Charge	Q <sub>g</sub>	V <sub>GS</sub> =10V, V <sub>DS</sub> =30V, I <sub>D</sub> =35A		34.5		nC
Gate Source Charge	Q <sub>gs</sub>			6.5		
Gate Drain Charge	Q <sub>gd</sub>			6.8		
Turn-On DelayTime	t <sub>d(on)</sub>	See specified Test Circuit		16		ns
Turn-On Rise Time	t <sub>r</sub>			110		
Turn-Off DelayTime	t <sub>d(off)</sub>			125		
Turn-Off Fall Time	t <sub>f</sub>			87		
Maximum Body-Diode Continuous Current	I <sub>S</sub>				35	A
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =35A, V <sub>GS</sub> =0V		0.96	1.2	V

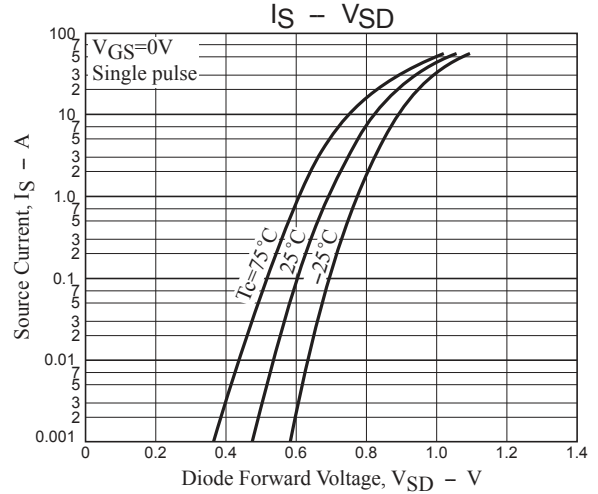
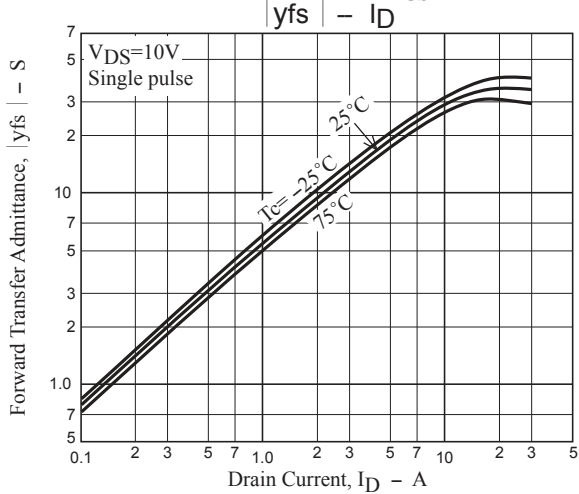
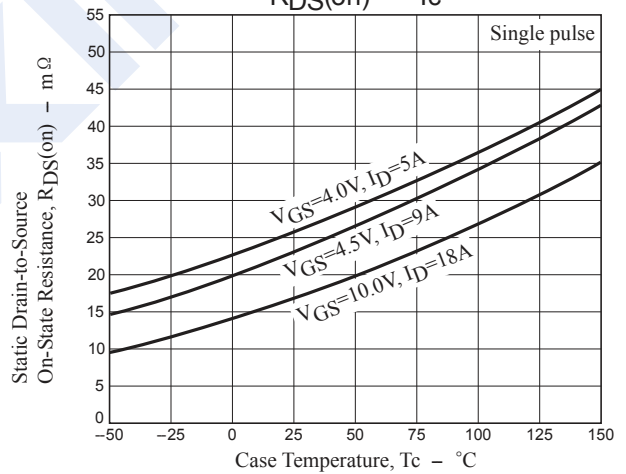
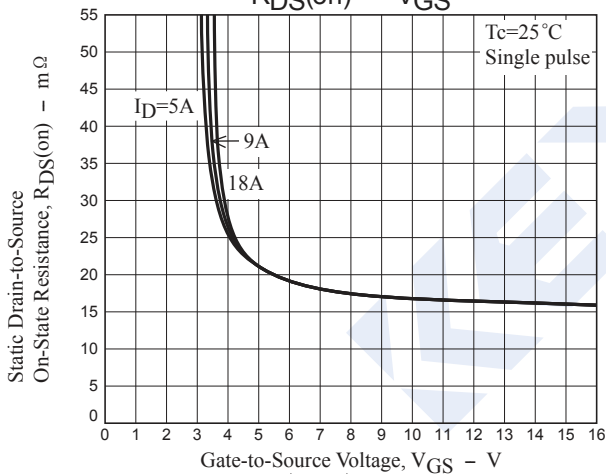
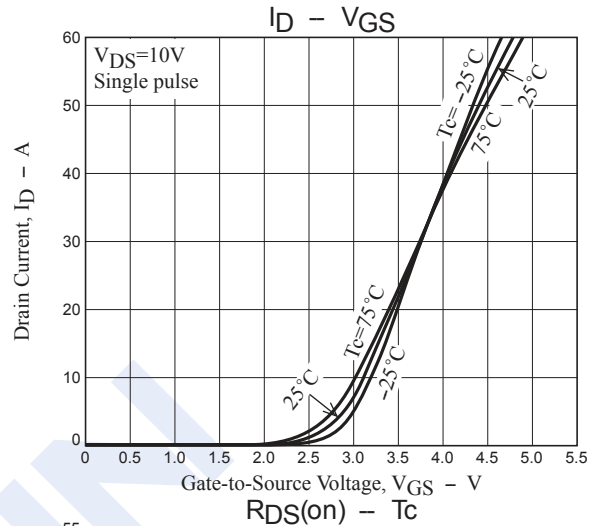
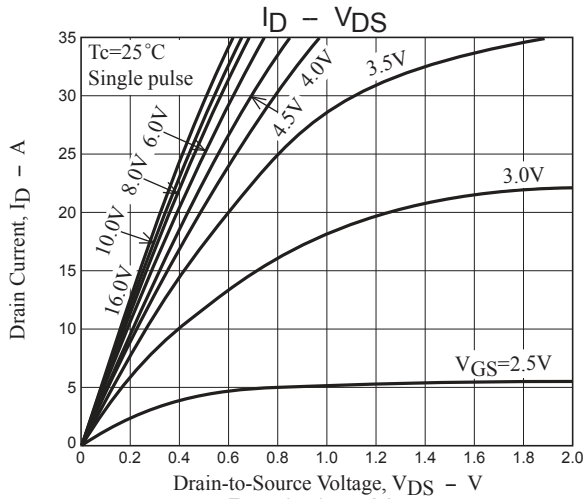
## Switching Time Test Circuit:



# N-Channel Enhancement MOSFET

## NDT35N06

### Typical Characteristics



## N-Channel Enhancement MOSFET

### NDT35N06

#### Typical Characteristics

