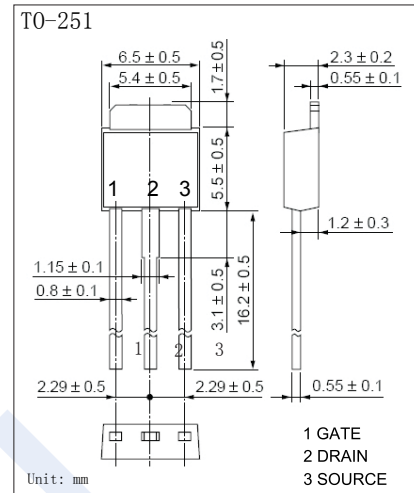
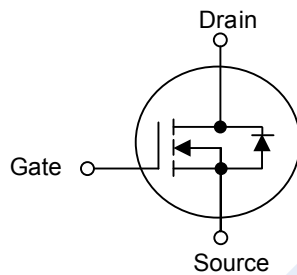


## N-Channel MOSFET

### NDT6N60P

#### ■ Features

- $V_{DS} (V) = 600V$
- $I_D = 6.2 A (V_{GS} = 10V)$
- $R_{DS(ON)} < 1.5 \Omega (V_{GS} = 10V)$
- Fast switching capability
- Low reverse transfer Capacitance



#### ■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		$V_{DS}$	600	V
Gate-Source Voltage		$V_{GS}$	$\pm 30$	
Continuous Drain Current		$I_D$	6.2	A
Pulsed Drain Current		$I_{DM}$	24.8	
Avalanche Current		$I_{AR}$	6.2	
Power Dissipation		$P_D$	55	W
Avalanche Energy	Single Pulsed (Note 1)	$E_{AS}$	440	mJ
	Repetitive	$E_{AR}$	13	
Peak Diode Recovery $dv/dt$ (Note.2)		$dv/dt$	4.5	ns
Thermal Resistance.Junction- to-Ambient		$R_{thJA}$	110	$^\circ C/W$
Thermal Resistance.Junction- to-Case		$R_{thJC}$	2.27	
Junction Temperature		$T_J$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55 to 150	

Note.1:  $L = 14mH$ ,  $I_{AS} = 6A$ ,  $V_{DD} = 90V$ ,  $R_G = 25 \Omega$ , Starting  $T_J = 25^\circ C$

Note.2:  $I_{SD} \leq 6.2A$ ,  $di/dt \leq 200A/\mu s$ ,  $V_{DD} \leq BV_{DSS}$ , Starting  $T_J = 25^\circ C$

## N-Channel MOSFET

### NDT6N60P

#### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{DSS}$	$I_D=250\ \mu\text{A}$ , $V_{GS}=0\text{V}$	600			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=600\text{V}$ , $V_{GS}=0\text{V}$			10	$\mu\text{A}$
Gate-Body Leakage Current	$I_{GSS}$	$V_{DS}=0\text{V}$ , $V_{GS}=\pm 30\text{V}$			$\pm 100$	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ , $I_D=250\ \mu\text{A}$	2		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}$ , $I_D=3.1\text{A}$			1.5	$\Omega$
Input Capacitance	$C_{iss}$	$V_{GS}=0\text{V}$ , $V_{DS}=25\text{V}$ , $f=1\text{MHz}$			1000	pF
Output Capacitance	$C_{oss}$				120	
Reverse Transfer Capacitance	$C_{rss}$				13	
Total Gate Charge	$Q_g$	$V_{GS}=10\text{V}$ , $V_{DS}=480\text{V}$ , $I_D=6.2\text{A}$ (Note.1)		20	25	nC
Gate Source Charge	$Q_{gs}$			4.9		
Gate Drain Charge	$Q_{gd}$			9.4		
Turn-On DelayTime	$t_{d(on)}$	$V_{DS}=300\text{V}$ , $I_D=6.2\text{A}$ , $R_G=25\ \Omega$ (Note.1)			50	ns
Turn-On Rise Time	$t_r$				150	
Turn-Off DelayTime	$t_{d(off)}$				90	
Turn-Off Fall Time	$t_f$				100	
Body Diode Reverse Recovery Time	$t_{rr}$	$I_F=6.2\text{A}$ , $V_{GS}=0$ , $di/dt=100\text{A}/\mu\text{s}$ (Note.1)		290		nC
Body Diode Reverse Recovery Charge	$Q_{rr}$			2.35		
Maximum Body-Diode Continuous Current	$I_S$				6.2	A
Maximum Pulsed Drain-Source Diode Forward Current	$I_{SM}$				24.8	
Diode Forward Voltage	$V_{SD}$	$I_S=6.2\text{A}$ , $V_{GS}=0\text{V}$			1.4	V

Note.1: Pulse Test: Pulse width  $\leq 300\ \mu\text{s}$ , Duty cycle  $\leq 2\%$

## N-Channel MOSFET NDT6N60P

■ Typical Characteristics

