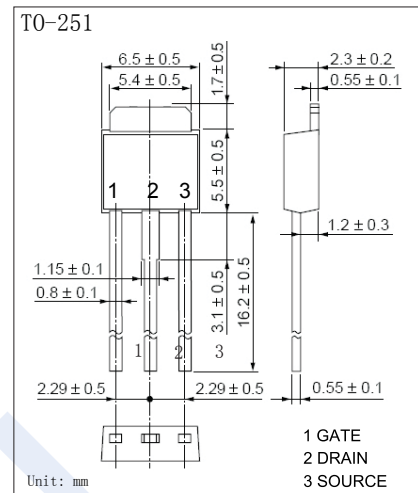
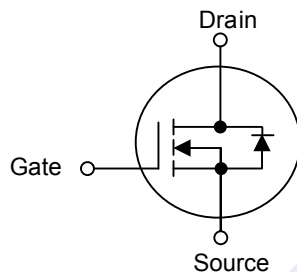


N-Channel MOSFET

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}	± 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

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■ 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	600			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =600V, V _{GS} =0V			10	μA
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±30V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250 μA	2		4	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =3.1A			1.5	Ω
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =25V, f=1MHz			1000	pF
Output Capacitance	C _{oss}				120	
Reverse Transfer Capacitance	C _{rss}				13	
Total Gate Charge	Q _g	V _{GS} =10V, V _{DS} =480V, I _D =6.2A (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} = 300V, I _D =6.2A, R _G =25 Ω (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 = 6.2A, V _{GS} =0, di/dt= 100A/μs (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 =6.2A, V _{GS} =0V			1.4	V

Note.1: Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%

N-Channel MOSFET

NDT6N60P

■ Typical Characteristics

