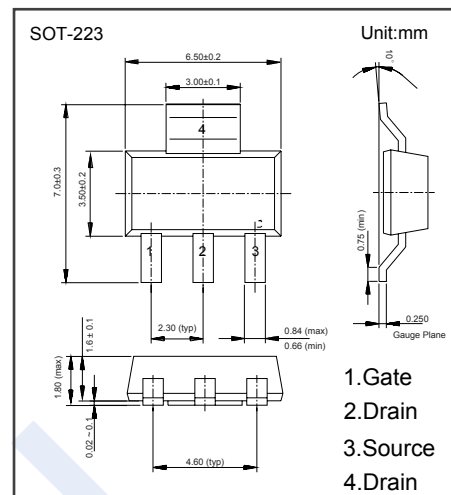
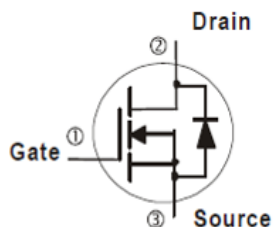


N-Channel MOSFET

NFT1N60

■ Features

- $V_{DS} (V) = 600V$
- $I_D = 0.4 A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 7.9 \Omega$ ($V_{GS} = 10V$)
- High switching speed
- Improved dv/dt capability



■ 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	0.4	A
Pulsed Drain Current	I_{DM}	1.6	
Single Pulse Avalanche Energy	E_{AS}	52	mJ
Power Dissipation $T_c = 25^\circ C$ Derate above $25^\circ C$	P_D	3.3	W
		0.026	W/ $^\circ C$
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	37.9	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

N-Channel MOSFET

NFT1N60

■ 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			1	uA
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 =0.5A			7.9	Ω
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =25V, f=1MHz		148		pF
Output Capacitance	C _{oss}			28		
Reverse Transfer Capacitance	C _{rss}			0.3		
Total Gate Charge	Q _g	V _{GS} =10V, V _{DS} =480V, I _D =1A		3.1		nC
Gate Source Charge	Q _{gs}			1.3		
Gate Drain Charge	Q _{gd}			0.4		
Turn-On DelayTime	t _{d(on)}	V _{DS} =300V, I _D =1A, R _{GEN} =25 Ω		6		ns
Turn-On Rise Time	t _r			20		
Turn-Off DelayTime	t _{d(off)}			9		
Turn-Off Fall Time	t _f			26		
Body Diode Reverse Recovery Time	t _{rr}	I _F = 1A, di/dt= 100A/us, V _{GS} =0		190		uC
Body Diode Reverse Recovery Charge	Q _{rr}			0.53		
Maximum Continuous Drain-Source Diode Forward Current	I _S				1	A
Maximum Pulsed Drain-Source Diode Forward Current	I _{SM}				4	
Diode Forward Voltage	V _{SD}	I _S =1A, V _{GS} =0V			1.4	V

Note.:Pulse width≤300us, Duty cycle≤2%

■ Marking

Marking	1N 60
---------	-------

N-Channel MOSFET

NFT1N60

■ Typical Characteristics

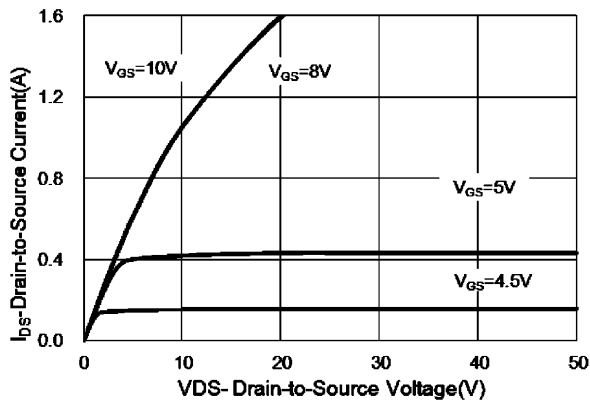


Fig.1 Output Characteristics

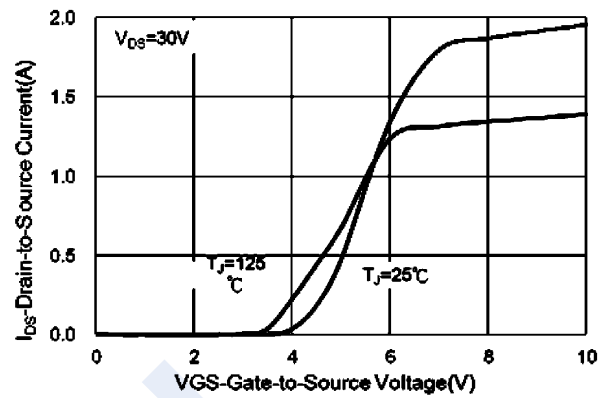


Fig.2 Transfer Characteristics

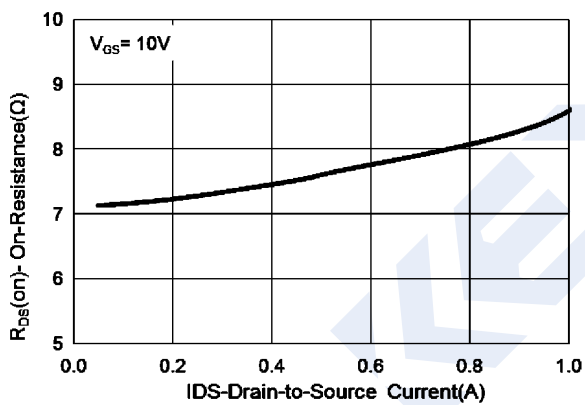


Fig.3 On-Resistance vs. Drain Current

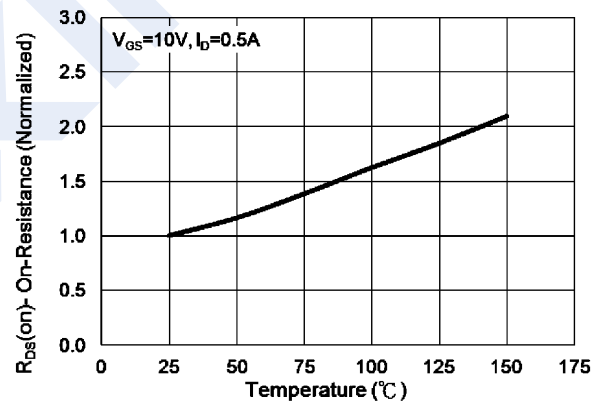


Fig.4 On-Resistance vs. Junction Temperature

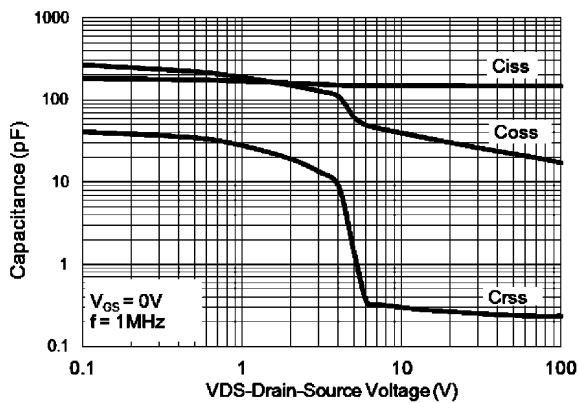


Fig.5 Capacitance vs. Drain-Source Voltage

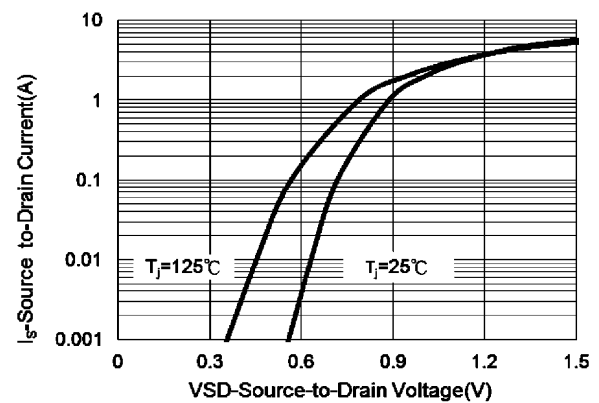


Fig.6 Source-Drain Diode Forward Voltage

N-Channel MOSFET

NFT1N60

■ Typical Characteristics

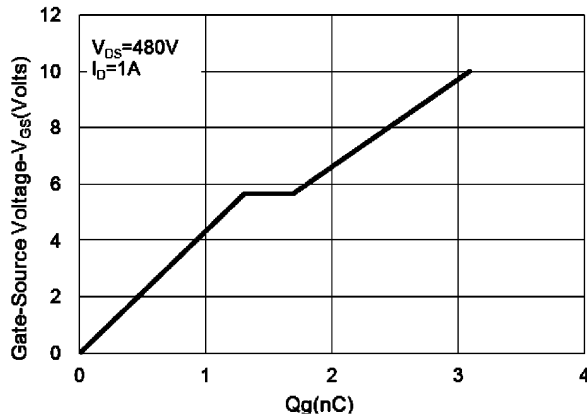


Fig.7 Gate Charge

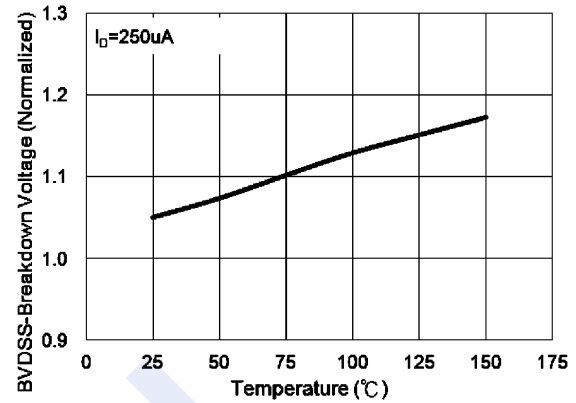
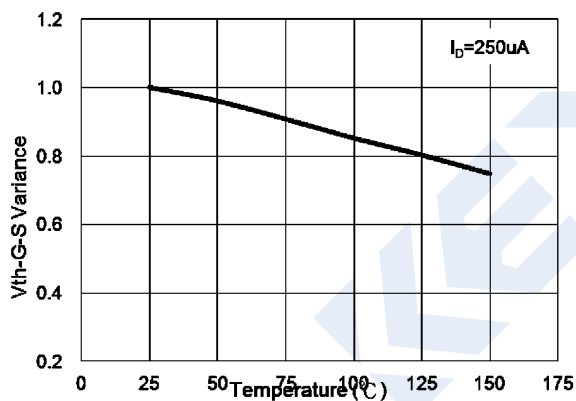
Fig.8 BV_{DSS} vs. Junction Temperature

Fig.9 Threshold Voltage Variation with Temperature

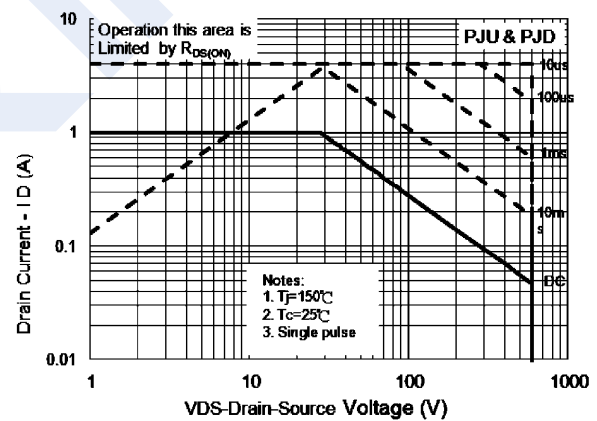


Fig.10 Maximum Safe Operating Area

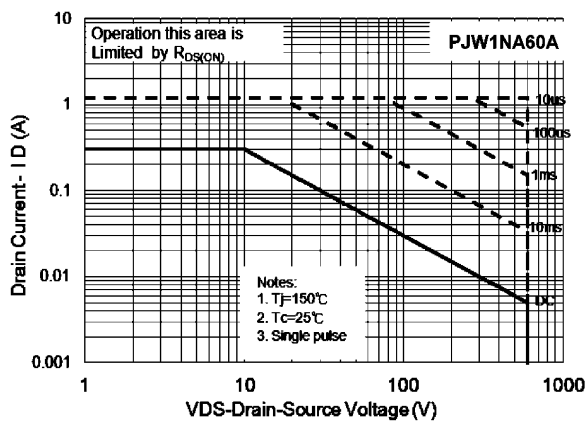


Fig.11 Maximum Safe Operating Area

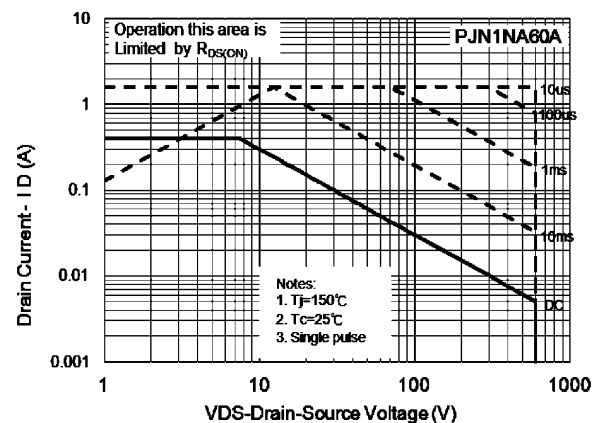


Fig.12 Maximum Safe Operating Area

N-Channel MOSFET

NFT1N60

Typical Characteristics

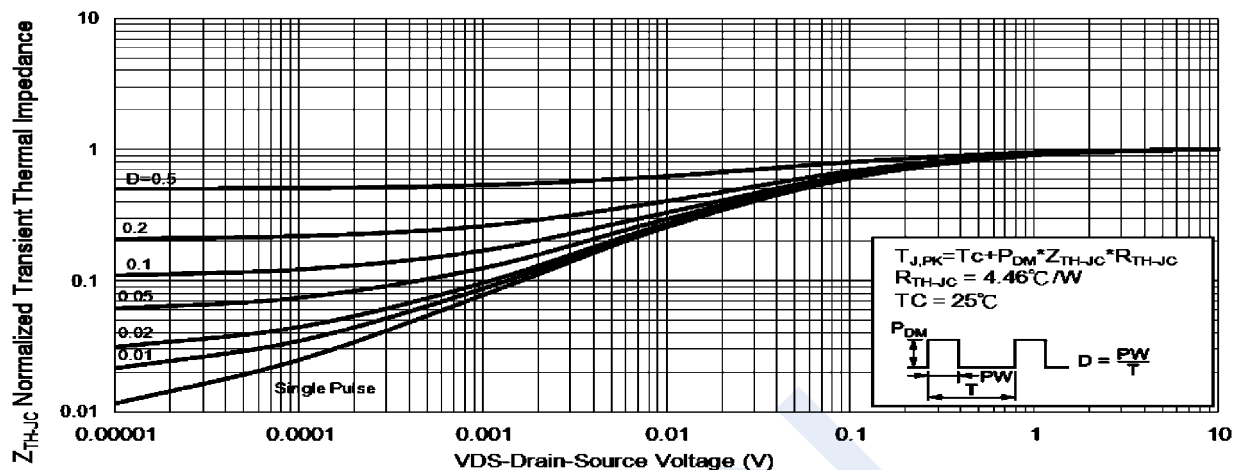


Fig.12 PJU/PJD Normalized Transient Thermal Impedance vs. Pulse Width

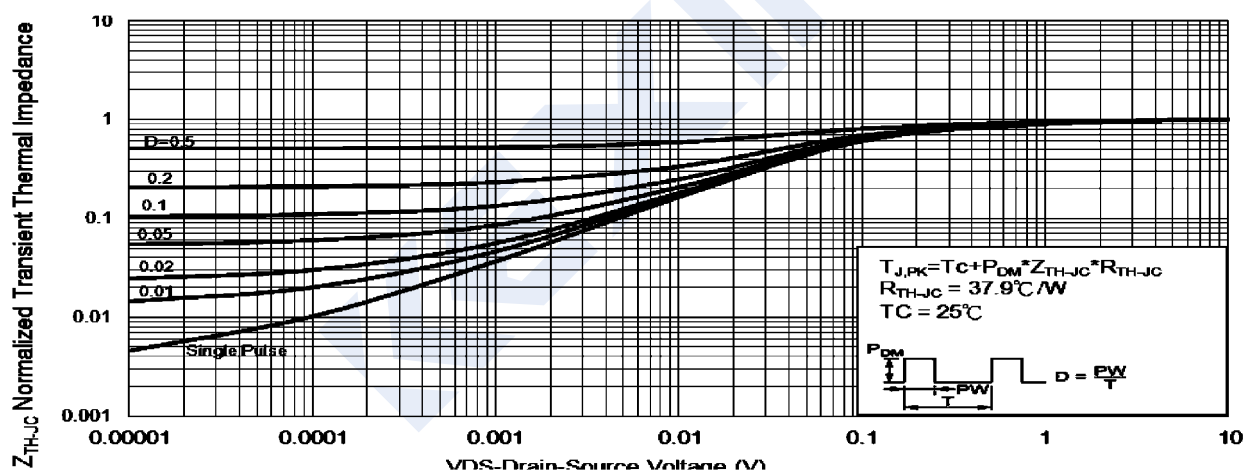


Fig.13 PJW1NA60A Normalized Transient Thermal Impedance vs. Pulse Width

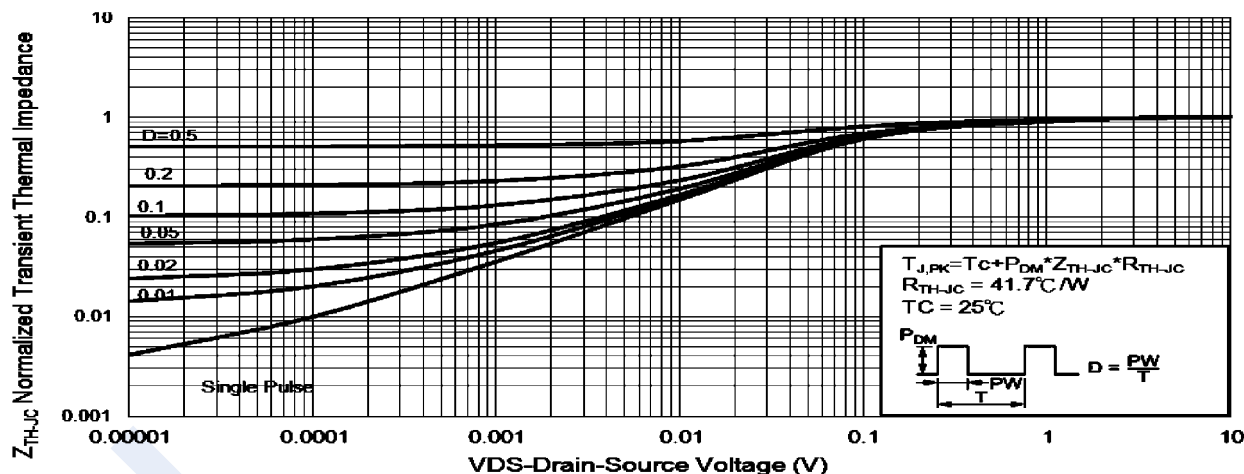


Fig.15 PJN1NA60 Normalized Transient Thermal Impedance vs. Pulse Width