

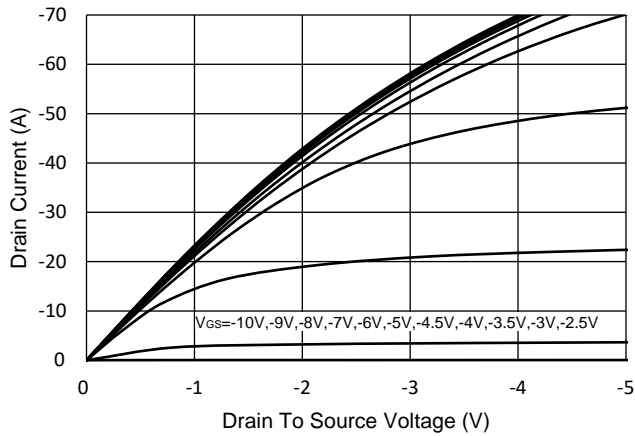


**Electrical Characteristics @ 25°C (Unless Otherwise Specified)**

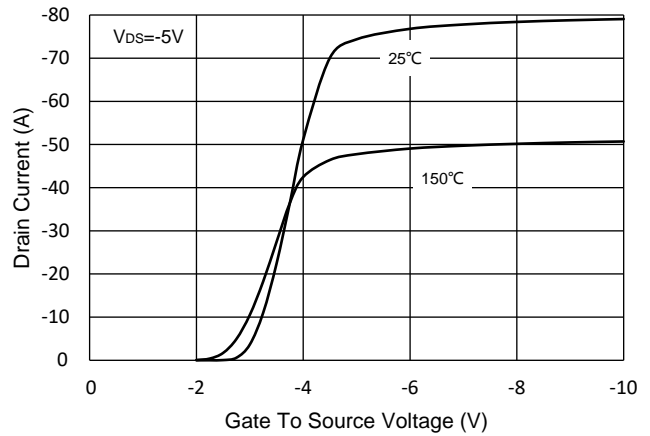
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
<b>Static Characteristics</b>						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-100			V
Gate-Source Leakage Current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 20V$			$\pm 100$	nA
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=-100V, V_{GS}=0V$			-1	$\mu A$
Gate-Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-1.5	-2	-2.5	V
Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-20A$		42	55	m $\Omega$
		$V_{GS}=-4.5V, I_D=-15A$		47	64	
Gate Resistance	$R_G$	f=1MHz, Open drain		6		$\Omega$
<b>Diode Characteristics</b>						
Continuous Body Diode Current	$I_S$				-25	A
Diode Forward Voltage	$V_{SD}$	$V_{GS}=0V, I_S=-20A$			-1.2	V
Reverse Recovery Time	$t_{rr}$	$I_F=-20A, di/dt=100A/\mu s$		32		ns
Reverse Recovery Charge	$Q_{rr}$			47		nC
<b>Dynamic Characteristics</b>						
Input Capacitance	$C_{iss}$	$V_{DS}=-50V, V_{GS}=0V, f=1MHz$		3620		pF
Output Capacitance	$C_{oss}$			145		
Reverse Transfer Capacitance	$C_{rss}$			120		
Total Gate Charge	$Q_g$	$V_{DS}=-50V, V_{GS}=-10V, I_D=-20A$		71		nC
Gate-Source Charge	$Q_{gs}$			10.8		
Gate-Drain Charge	$Q_{gd}$			16.8		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=-50V, V_{GS}=-10V, R_G=3\Omega, I_D=-20A$		13		ns
Turn-On Rise Time	$t_r$			24		
Turn-Off Delay Time	$t_{d(off)}$			120		
Turn-Off Fall Time	$t_f$			61		

## Curve Characteristics

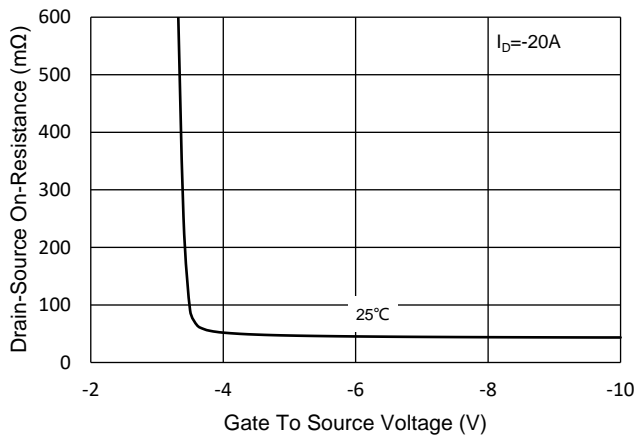
**Fig.1 - Typical Output Characteristics**



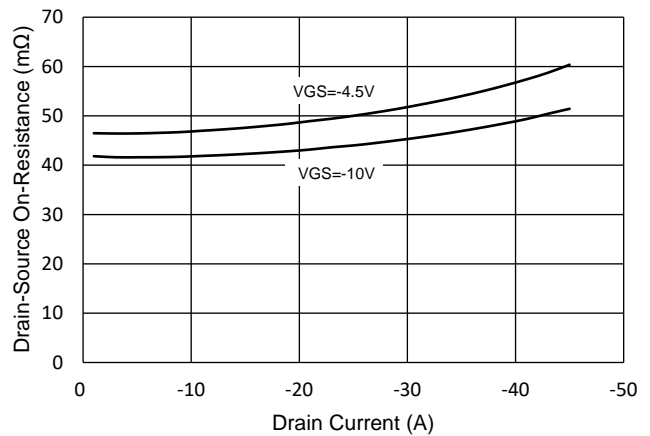
**Fig.2 - Transfer Characteristic**



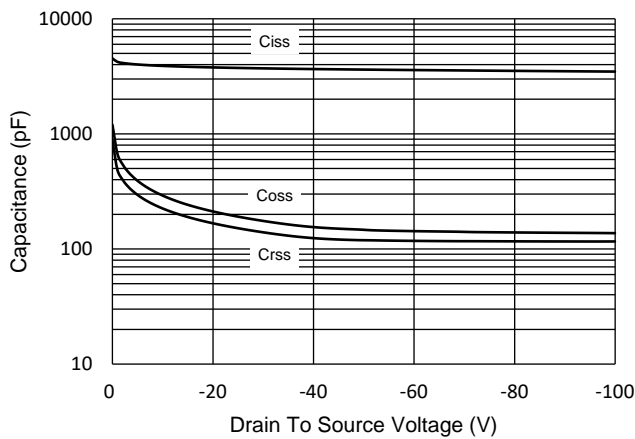
**Fig.3 -  $R_{DS(ON)}$  -  $V_{GS}$**



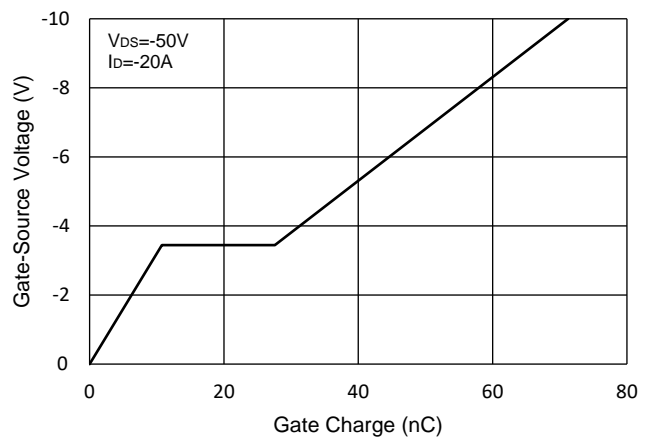
**Fig.4 -  $R_{DS(ON)}$  -  $I_D$**



**Fig.5 - Capacitance Characteristics**

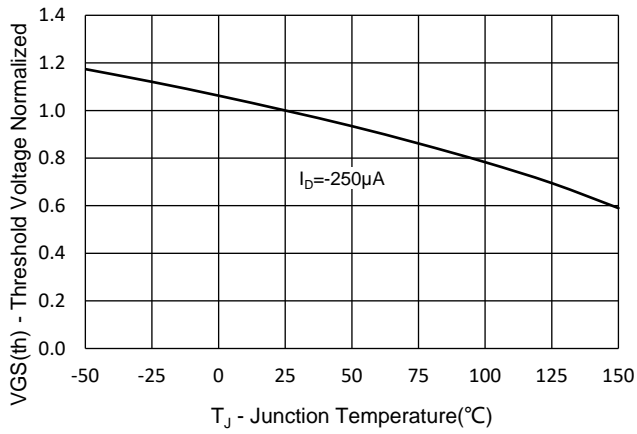


**Fig.6 - Gate Charge**

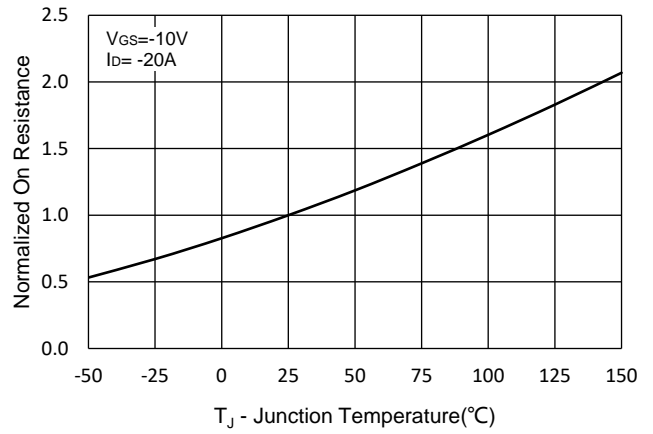


**Curve Characteristics**

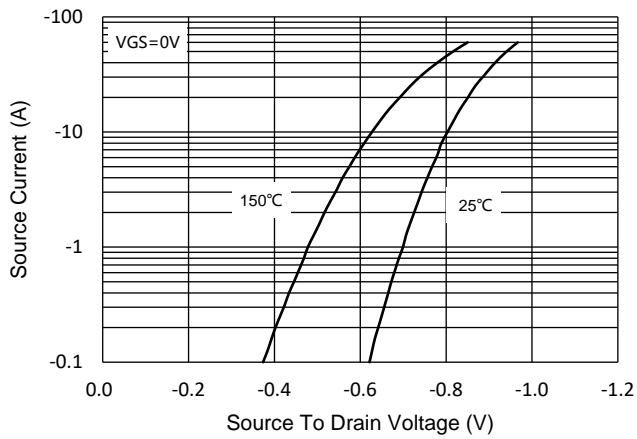
**Fig.7 - Normalized Threshold Voltage**



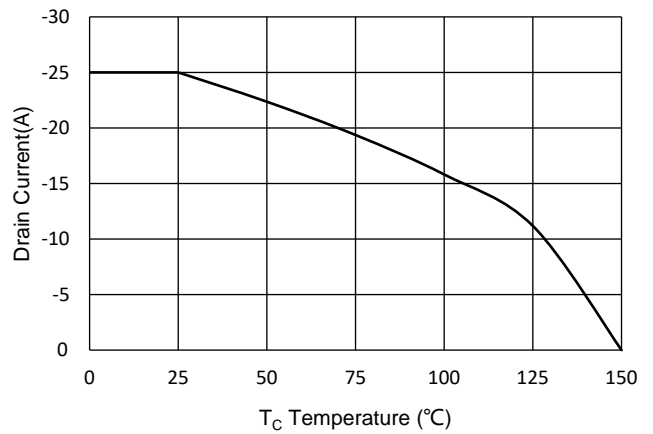
**Fig.8 - Normalized On Resistance Characteristics**



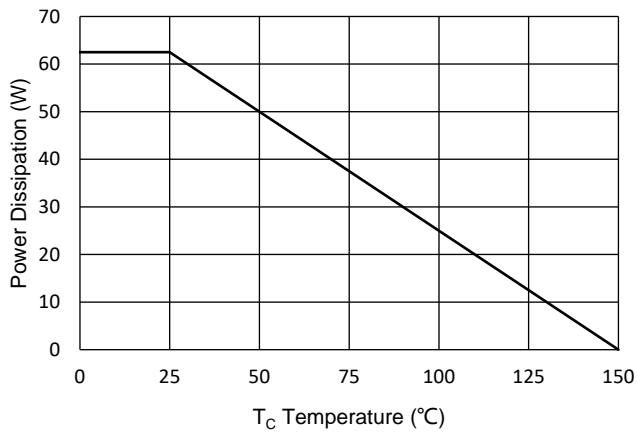
**Fig.9 - I<sub>S</sub> - V<sub>SD</sub>**



**Fig.10 - Drain Current**



**Fig.11 - PD Dissipation**



Curve Characteristics

Fig.12 - Safe Operation Area

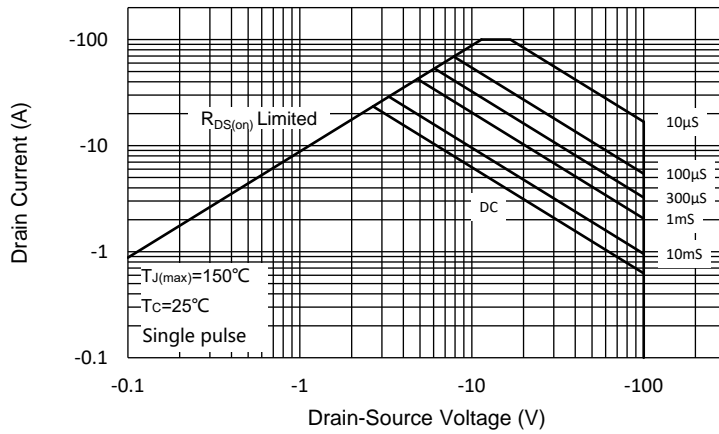
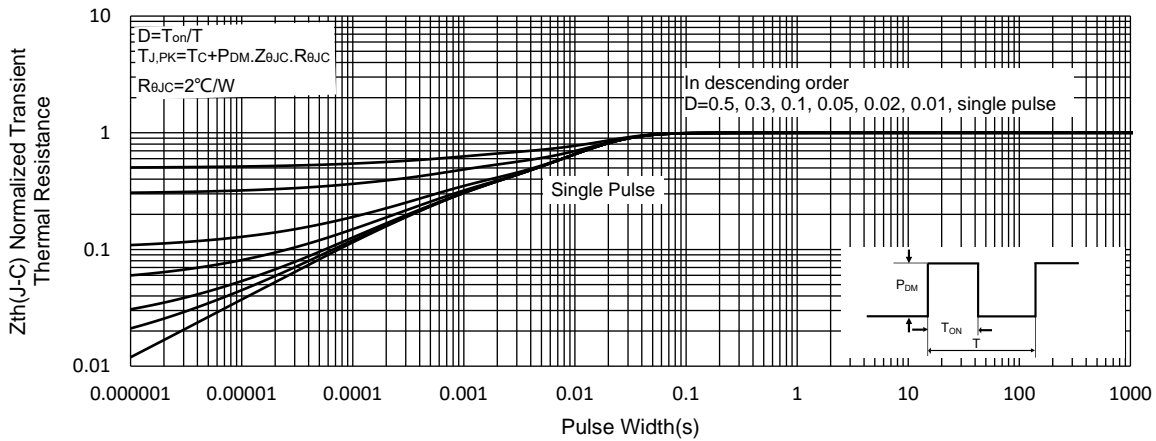


Fig.13 - Normalized Transient Thermal Impedance



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 5Kpcs/Reel

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