

Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-100			V
Gate-Source Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-100V, V_{GS}=0V$			-1	μA
		$V_{DS}=-100V, V_{GS}=0V, T_J=55^\circ C$			-5	μA
Gate-Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-1	-1.8	-2.5	V
Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-10A$		90	110	m Ω
		$V_{GS}=-4.5V, I_D=-5A$		100	130	m Ω
Gate Resistance	R_g	F=1 MHz, Open drain		11		Ω
Diode Characteristics						
Continuous Body Diode Current	I_S				-18	A
Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_S=-10A$			-1.5	V
Reverse Recovery Time	t_{rr}	$I_S=-5A, di/dt=100A/\mu s$		70		ns
Reverse Recovery Charge	Q_{rr}			140		nC
Dynamic Characteristics						
Input Capacitance	C_{iss}	$V_{DS}=-80V, V_{GS}=0V, f=1MHz$		1050		pF
Output Capacitance	C_{oss}			97		
Reverse Transfer Capacitance	C_{rss}			18		
Total Gate Charge	Q_g	$V_{DS}=-50V, V_{GS}=-10V, I_D=-5A$		20		nC
Gate-Source Charge	Q_{gs}			3.9		
Gate-Drain Charge	Q_{gd}			4.3		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=-10V, V_{DD}=-50V, R_L=2.5\Omega$ $R_{GEN}=6\Omega$		10		ns
Turn-On Rise Time	t_r			30		
Turn-Off Delay Time	$t_{d(off)}$			77		
Turn-Off Fall Time	t_f			81		

Curve Characteristics

Fig. 1 - Typical Output Characteristics

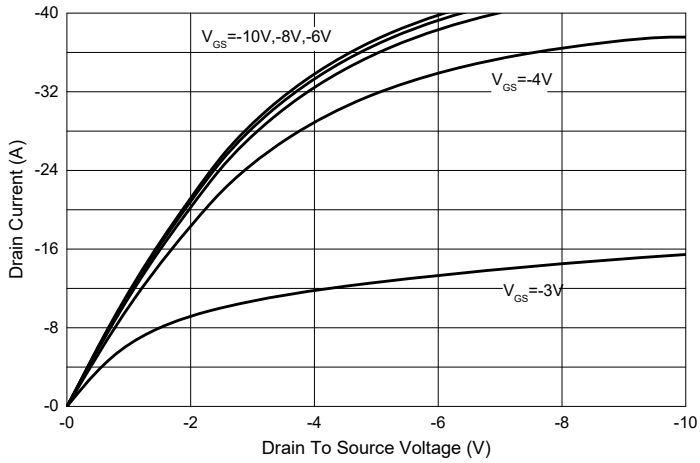


Fig. 2 - Transfer Characteristics

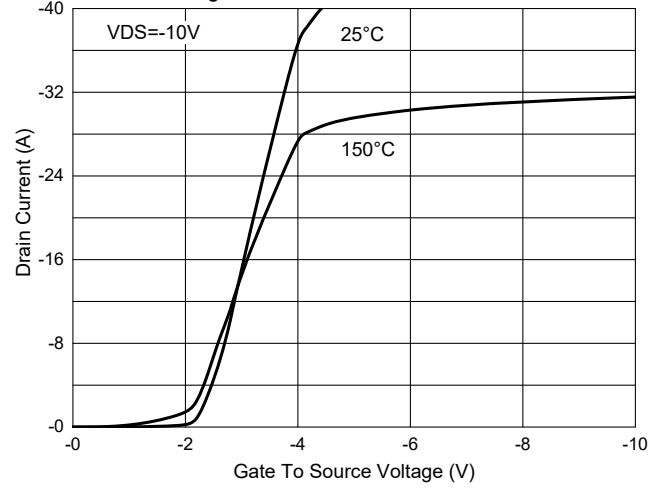


Fig. 3 - $R_{DS(ON)} - V_{GS}$

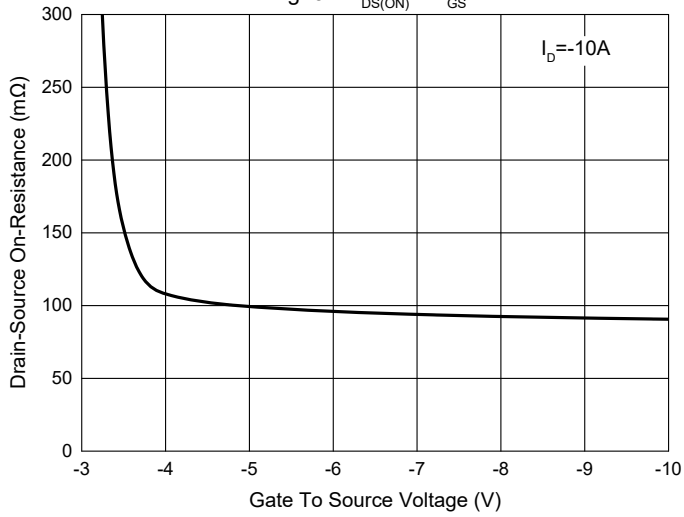


Fig. 4 - Normalized On Resistance Characteristics

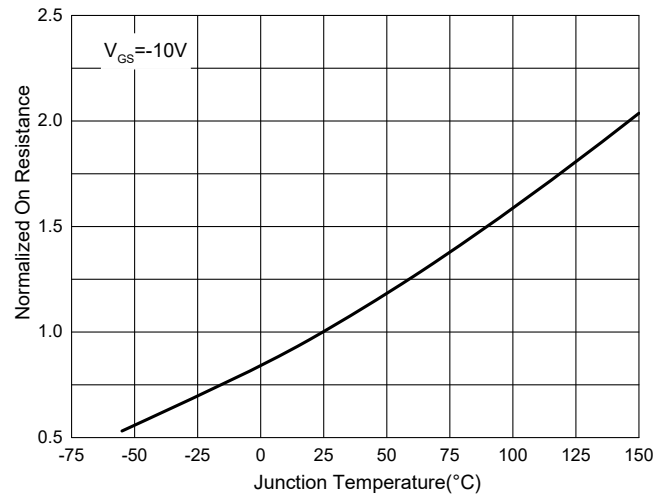


Fig. 5 - Capacitance Characteristics

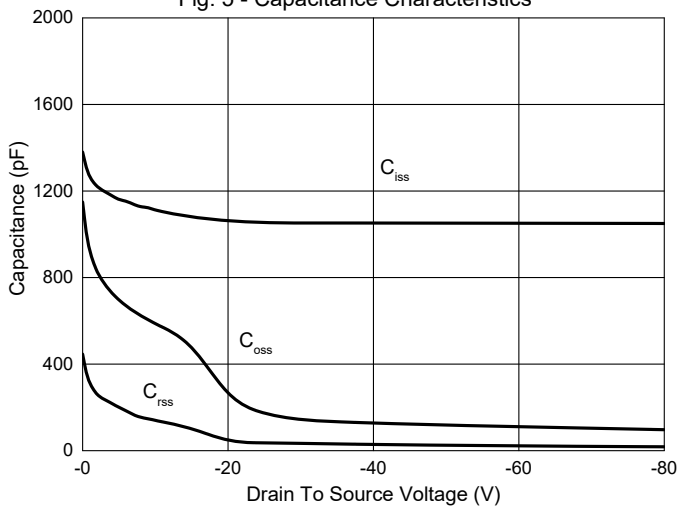
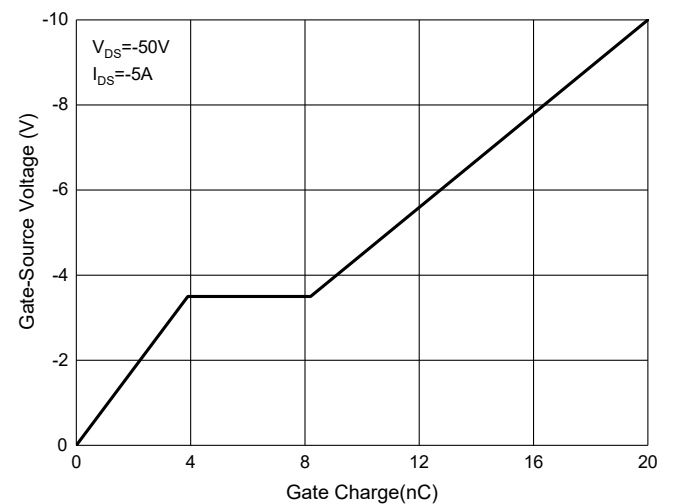
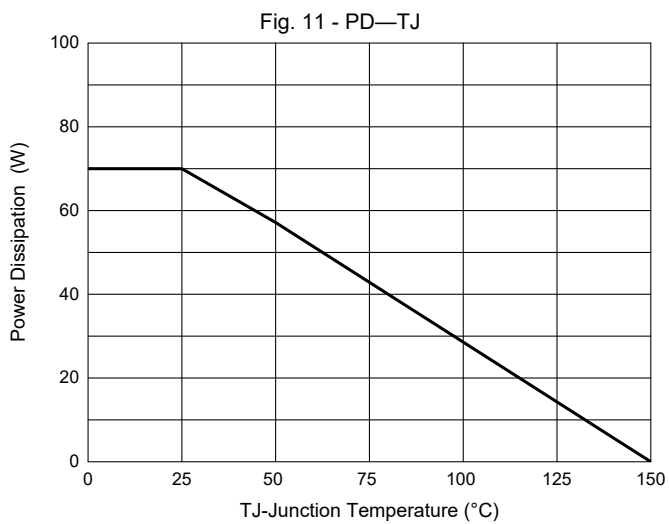
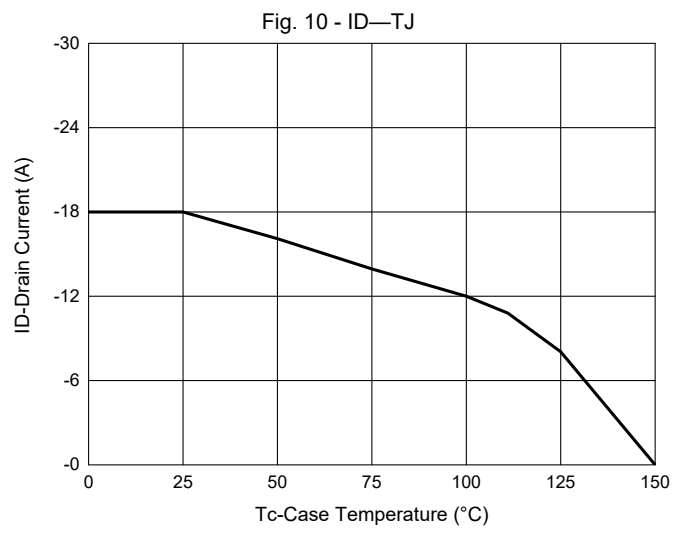
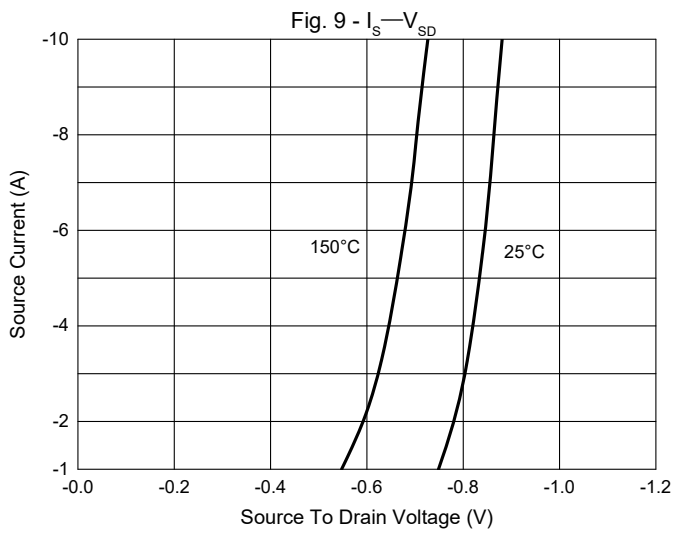
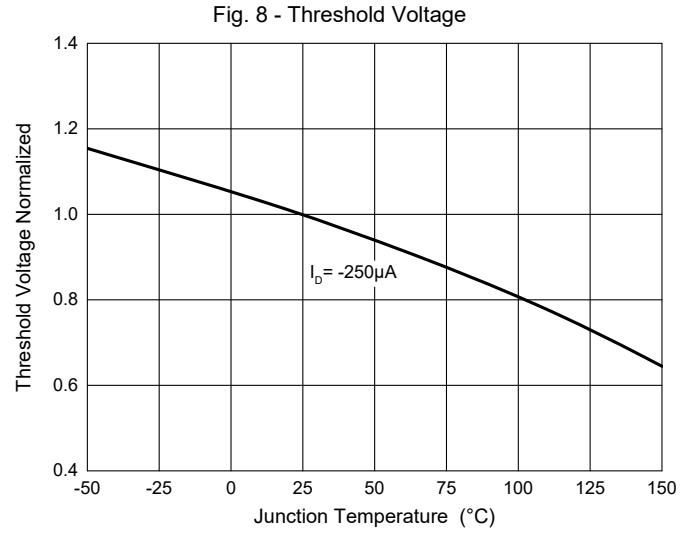
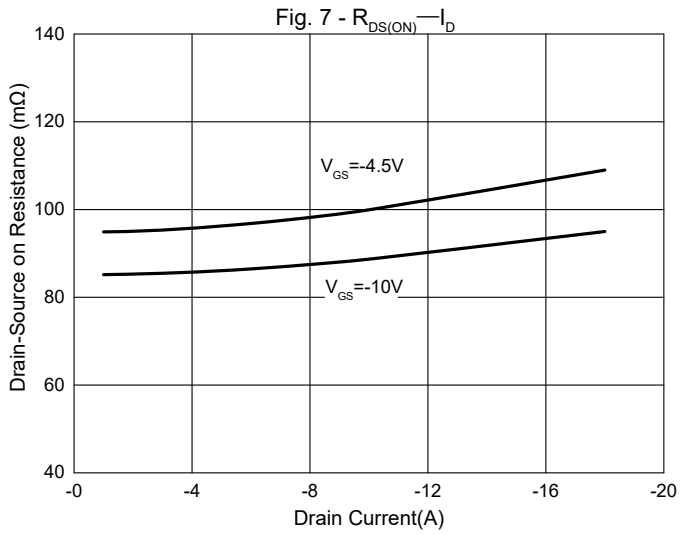


Fig. 6 - Gate Charge



Curve Characteristics



Curve Characteristics

Fig. 12 - Safe Operation Area

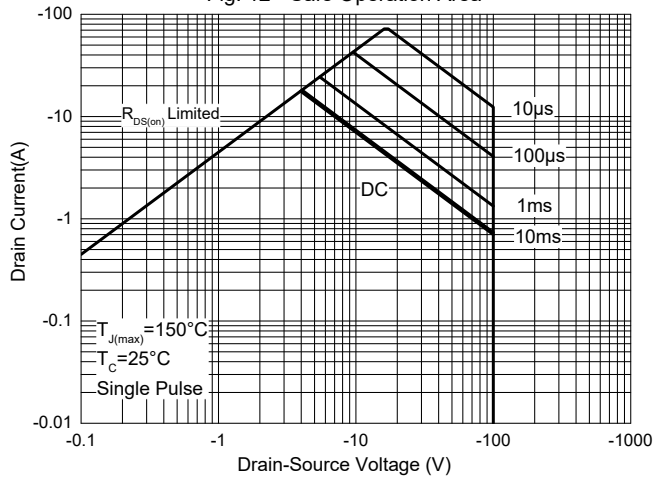
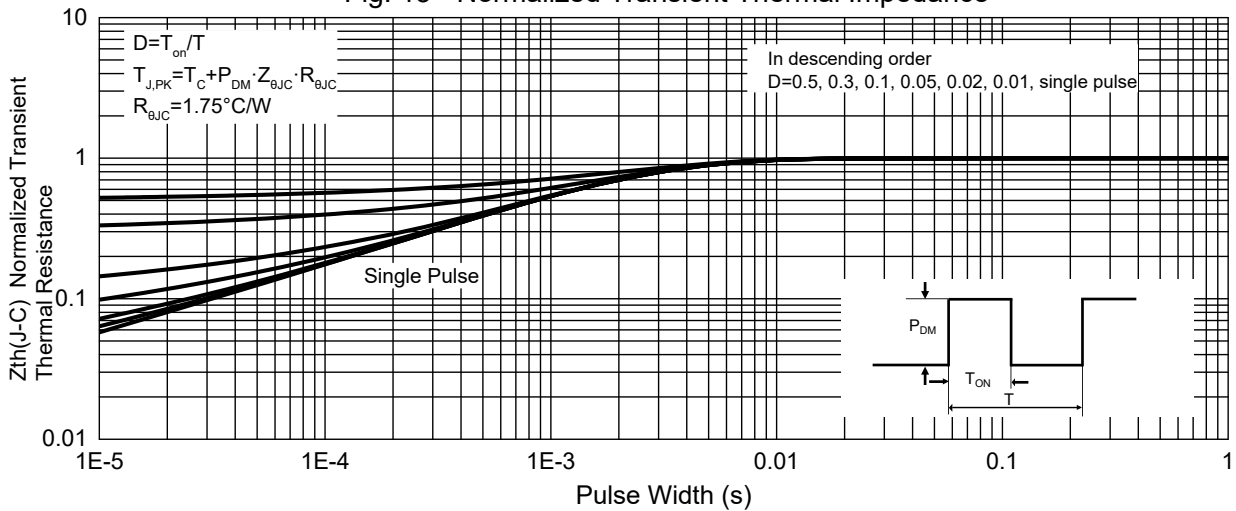


Fig. 13 - Normalized Transient Thermal Impedance



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

Note : Adding "-HF" Suffix for Halogen Free, eg. Part Number-TP-HF

Revision History

Datasheet status	Version No	Release date	Update content
New product datasheet	Rev4-1	20230102	

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