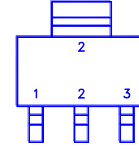
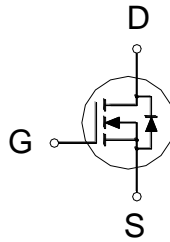




PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
100V	110mΩ	3A



- 1. GATE
- 2. DRAIN
- 3. SOURCE

ABSOLUTE MAXIMUM RATINGS ($T_A = 25\text{ °C}$ Unless Otherwise Noted)

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	$T_C = 25\text{ °C}$	I_D	6	A
	$T_A = 25\text{ °C}$		3.2	
	$T_A = 100\text{ °C}$		2	
Pulsed Drain Current ¹		I_{DM}	15	
Avalanche Current		I_{AS}	6.6	
Avalanche Energy	$L = 0.1\text{mH}$	E_{AS}	2.2	mJ
Power Dissipation	$T_A = 25\text{ °C}$	P_D	2.5	W
	$T_A = 100\text{ °C}$		1	
Operating Junction & Storage Temperature Range		T_j, T_{stg}	-55 to 150	°C

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient ²	$R_{\theta JA}$		50	°C / W
Junction-to-Case	$R_{\theta JC}$		14	

¹Pulse width limited by maximum junction temperature.

²The value of $R_{\theta JA}$ is measured with the device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with $T_A = 25\text{ °C}$.

ELECTRICAL CHARACTERISTICS ($T_J = 25\text{ °C}$, Unless Otherwise Noted)

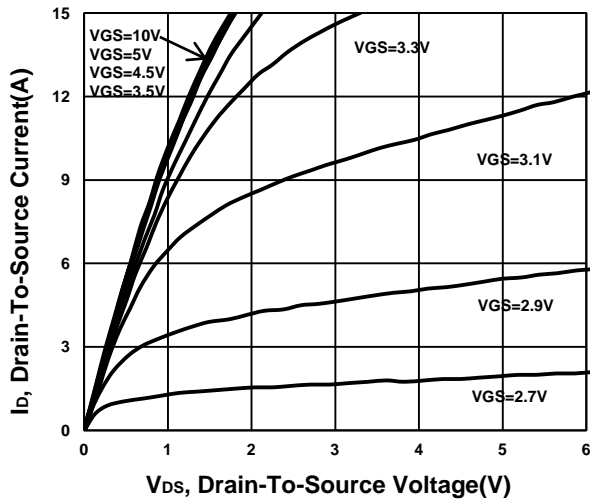
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	100			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1	1.8	3	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 80V, V_{GS} = 0V$			1	μA
		$V_{DS} = 80V, V_{GS} = 0V, T_J = 125\text{ °C}$			10	

Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 4.5V, I_D = 6A$	85	120	mΩ
		$V_{GS} = 10V, I_D = 6A$	80	110	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 5V, I_D = 6A$	22		S
DYNAMIC					
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 25V, f = 1MHz$	579		pF
Output Capacitance	C_{oss}		57		
Reverse Transfer Capacitance	C_{rss}		31		
Gate Resistance	R_g	$V_{GS} = 0V, V_{DS} = 0V, f = 1MHz$	1.4		Ω
Total Gate Charge ²	Q_g	$V_{DS} = 50V, V_{GS} = 10V, I_D = 6A$	14		nC
Gate-Source Charge ²	Q_{gs}		1.8		
Gate-Drain Charge ²	Q_{gd}		4.6		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DS} = 50V, I_D \cong 6A, V_{GS} = 10V, R_{GS} = 6\Omega$	16		nS
Rise Time ²	t_r		5		
Turn-Off Delay Time ²	$t_{d(off)}$		36		
Fall Time ²	t_f		10		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_J = 25\text{ }^\circ\text{C}$)					
Continuous Current	I_S			1.7	A
Forward Voltage ¹	V_{SD}	$I_F = 6A, V_{GS} = 0V$		1.4	V
Reverse Recovery Time	t_{rr}	$I_F = 6A, di/dt = 100 A/\mu s$	22		nS
Reverse Recovery Charge	Q_{rr}		15		nC

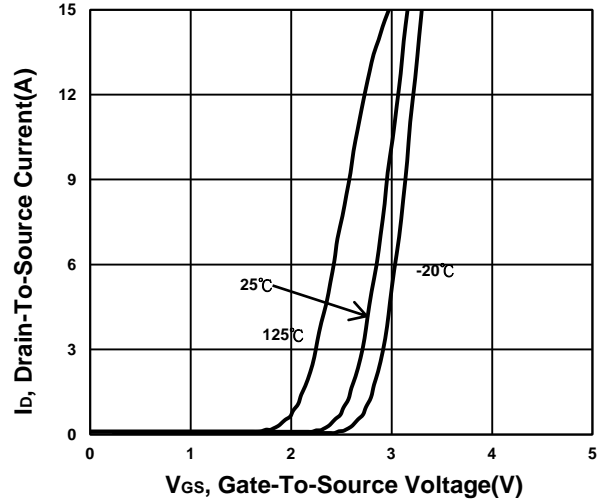
¹Pulse test : Pulse Width $\leq 300\ \mu\text{sec}$, Duty Cycle $\leq 2\%$.

²Independent of operating temperature.

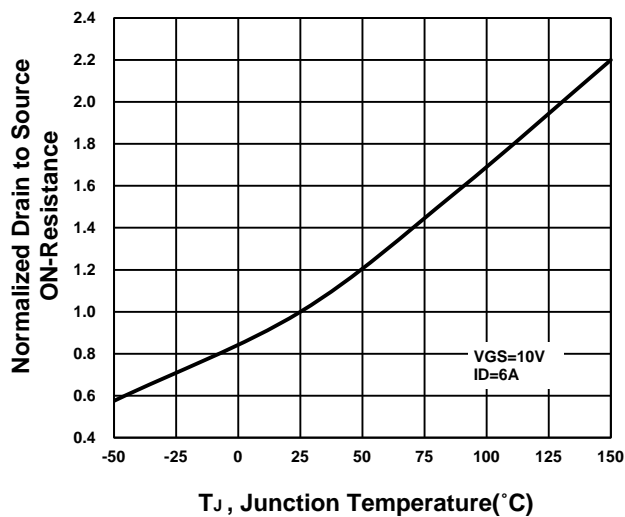
Output Characteristics



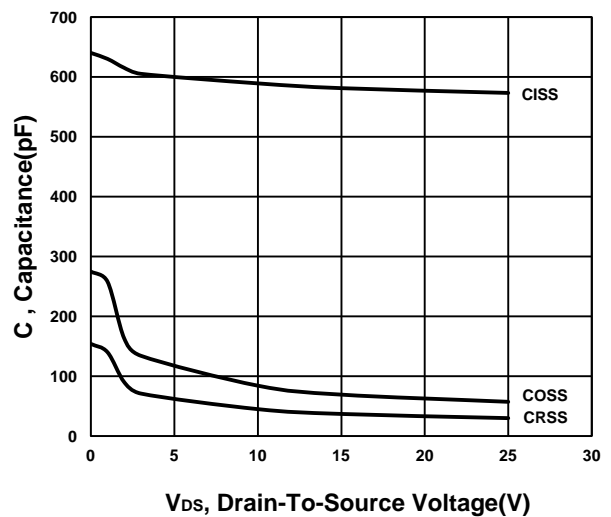
Transfer Characteristics



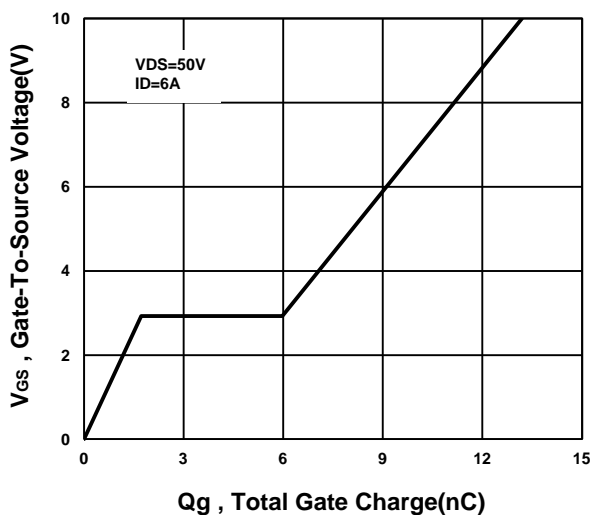
On-Resistance VS Temperature



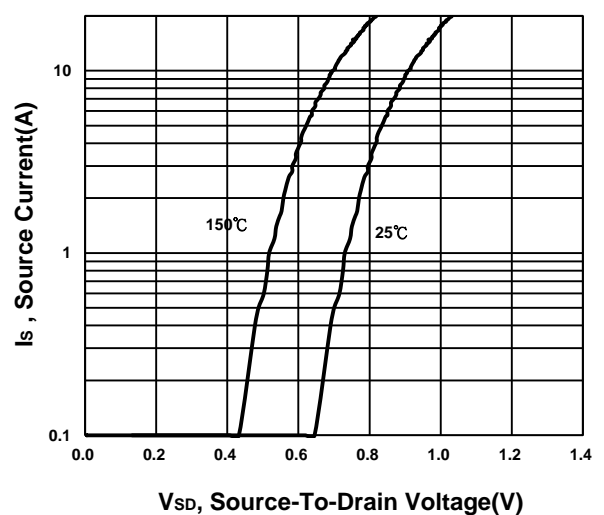
Capacitance Characteristic



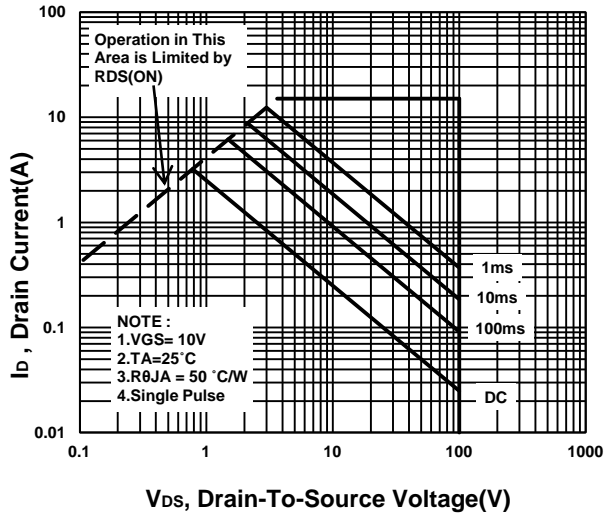
Gate charge Characteristics



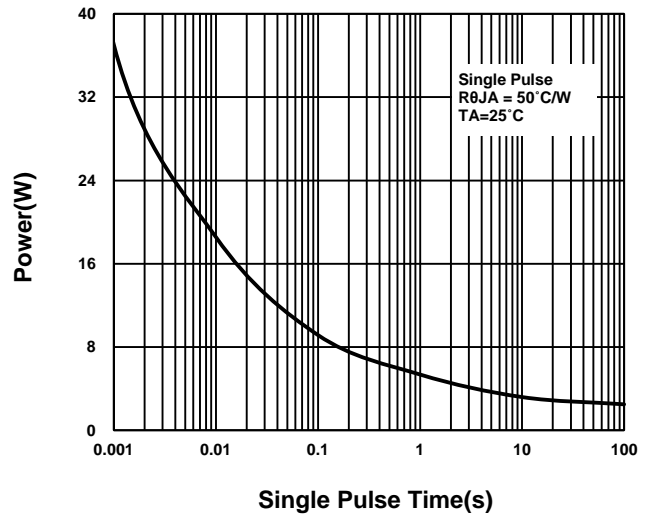
Source-Drain Diode Forward Voltage



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

