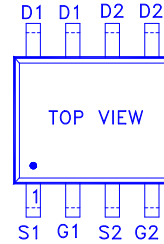
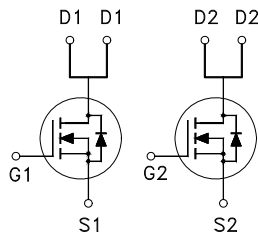


PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
100V	190mΩ	1.7A



G: GATE
D: DRAIN
S: SOURCE

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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	100	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	$T_A = 25^\circ\text{C}$	I_D	1.7	A
	$T_A = 70^\circ\text{C}$		1.4	
Pulsed Drain Current ¹		I_{DM}	12	
Avalanche Current		I_{AS}	2	
Avalanche Energy	L = 1mH	E_{AS}	2.1	mJ
Power Dissipation	$T_A = 25^\circ\text{C}$	P_D	1.25	W
	$T_A = 70^\circ\text{C}$		0.8	
Junction & Storage Temperature Range		T_J, T_{stg}	-55 to 150	°C

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient	$R_{\theta JA}$		90	°C / W
Junction-to-Case	$R_{\theta JC}$		30	

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 $T_A = 25^\circ\text{C}$.

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

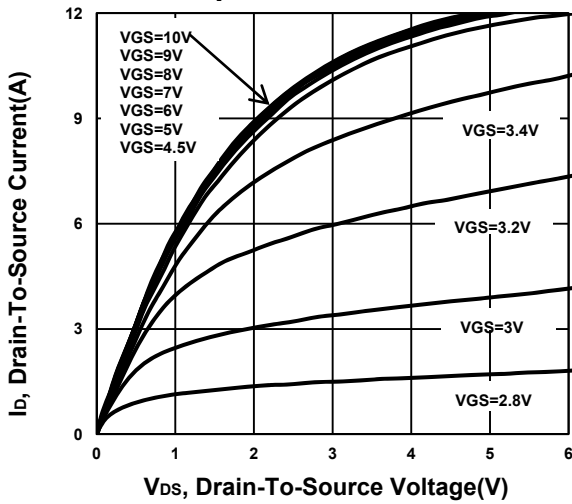
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	100			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.3	1.88	2.3	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 80V, V_{GS} = 0V$			1	μA
		$V_{DS} = 80V, V_{GS} = 0V, T_J = 70^\circ\text{C}$			10	
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 4.5V, I_D = 1.7A$		153	205	mΩ
		$V_{GS} = 10V, I_D = 1.7A$		143	190	

Forward Transconductance ¹	g_{fs}	$V_{DS} = 5V, I_D = 1.7A$		11		S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 25V, f = 1MHz$		304		pF
Output Capacitance	C_{oss}			31		
Reverse Transfer Capacitance	C_{rss}			20		
Gate Resistance	R_g	$V_{GS} = 0V, V_{DS} = 0V, f = 1MHz$		2.2		Ω
Total Gate Charge ²	$Q_{g(VGS=10V)}$	$V_{DS} = 50V, I_D = 1.7A$		8.1		nC
	$Q_{g(VGS=4.5V)}$			5		
Gate-Source Charge ²	Q_{gs}			0.9		
Gate-Drain Charge ²	Q_{gd}			3.1		
Turn-On Delay Time ²	$t_{d(on)}$		$V_{DS} = 50V, I_D \cong 1.7A, V_{GS} = 10V, R_{GEN} = 6\Omega$		6	
Rise Time ²	t_r			23		
Turn-Off Delay Time ²	$t_{d(off)}$			15		
Fall Time ²	t_f			22		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_J = 25^\circ C$)						
Continuous Current	I_S			1.2		A
Forward Voltage ¹	V_{SD}	$I_F = 1.7A, V_{GS} = 0V$		1.4		V
Diode Reverse Recovery Time	t_{rr}	$I_F = 1.7A, dI/dt = 100A/\mu s$		17		nS
Diode Reverse Recovery Charge	Q_{rr}			8.7		nC

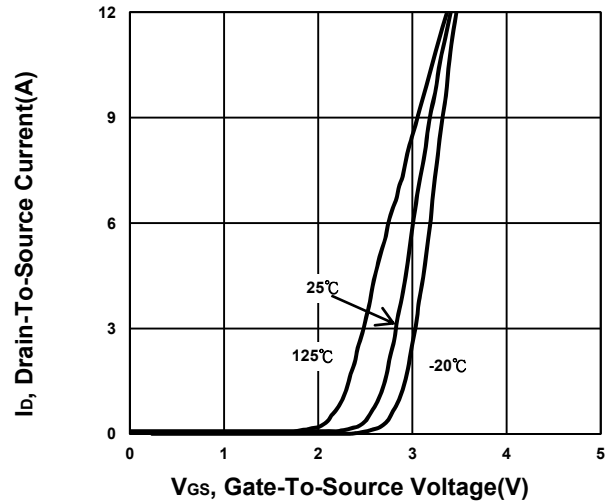
¹Pulse test : Pulse Width $\leq 300 \mu sec$, Duty Cycle $\leq 2\%$.

²Independent of operating temperature.

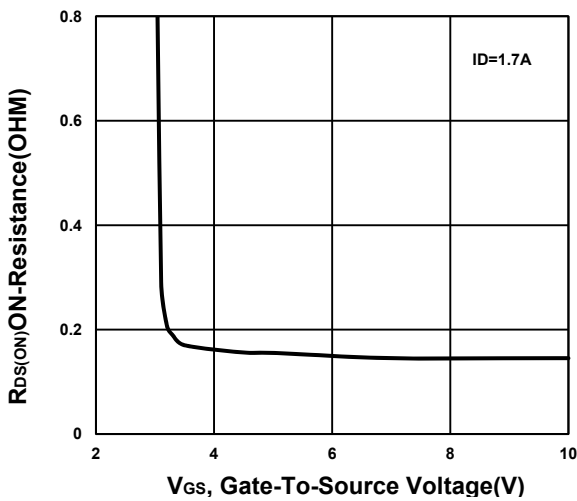
Output Characteristics



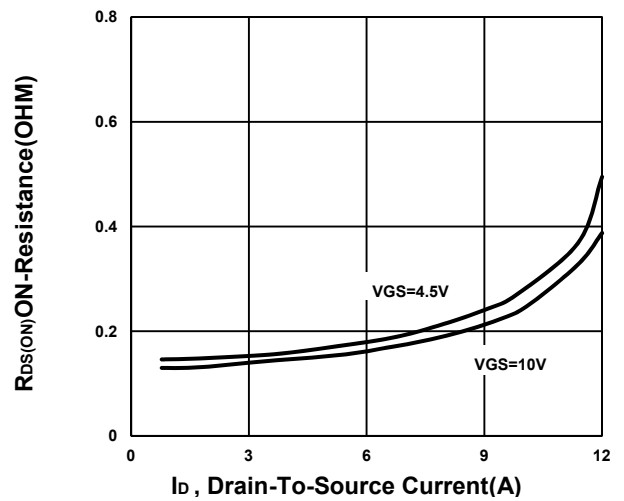
Transfer Characteristics



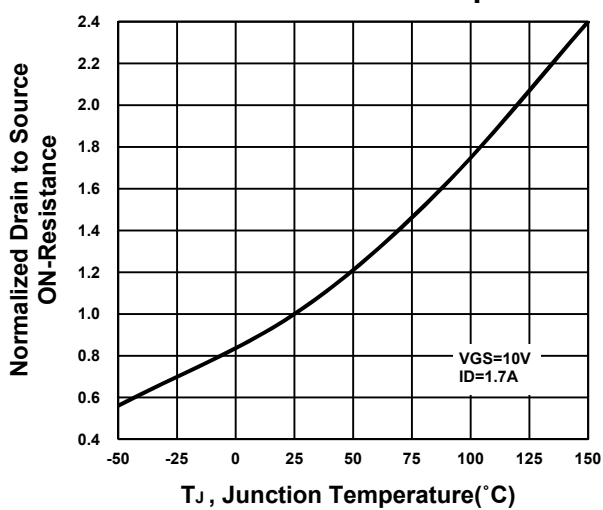
On-Resistance VS Gate-To-Source Voltage



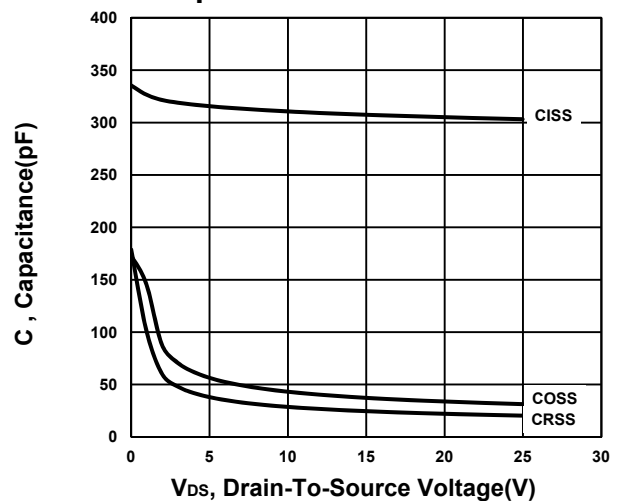
On-Resistance VS Drain Current



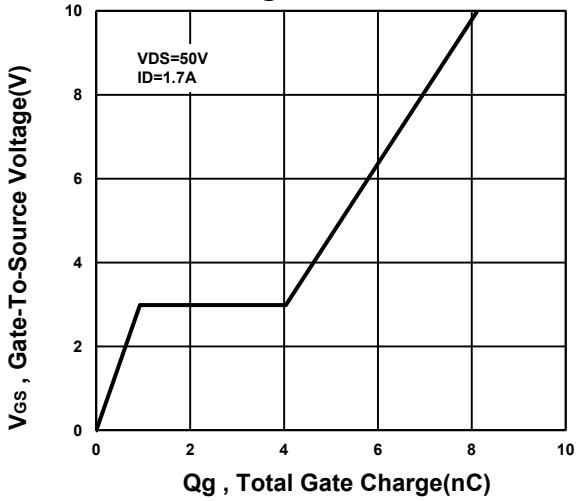
On-Resistance VS Temperature



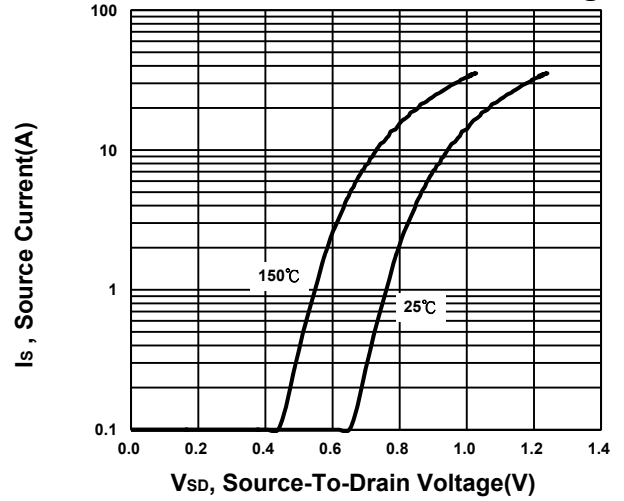
Capacitance Characteristic



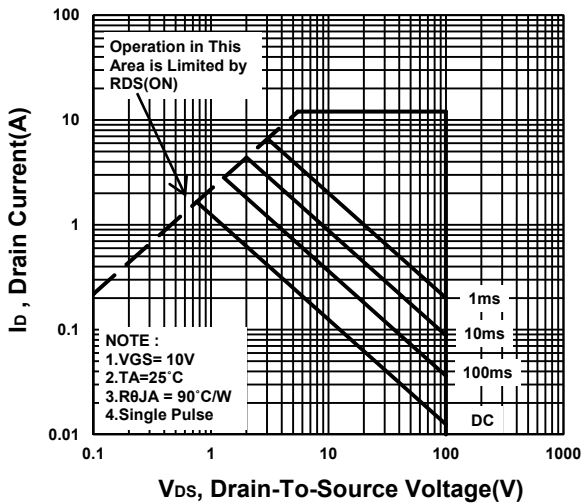
Gate charge Characteristics



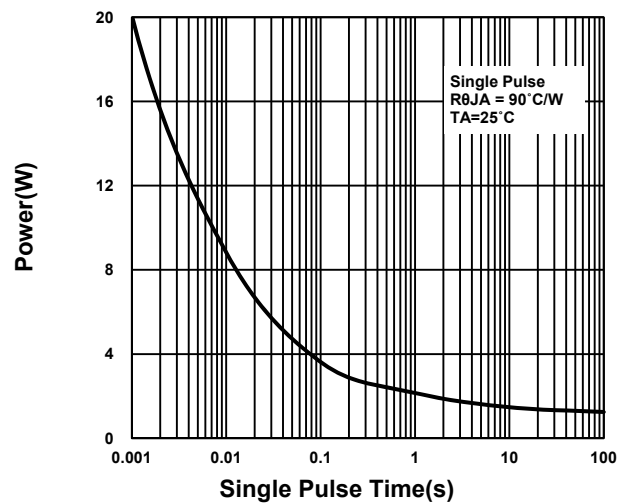
Source-Drain Diode Forward Voltage



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

