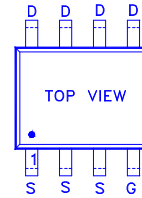
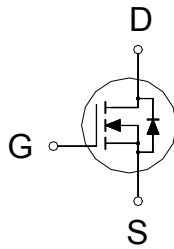




PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
30V	12mΩ	11A



4 :GATE
5,6,7,8 :DRAIN
1,2,3 :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	$T_A = 25\text{ °C}$	I_D	11	A
	$T_A = 70\text{ °C}$		7	
Pulsed Drain Current ¹		I_{DM}	40	
Avalanche Current		I_{AS}	28	
Avalanche Energy	L = 0.1mH	E_{AS}	40	mJ
Power Dissipation	$T_A = 25\text{ °C}$	P_D	2.5	W
	$T_A = 70\text{ °C}$		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-Case	$R_{\theta JC}$		25	°C / W
Junction-to-Ambient	$R_{\theta JA}$		50	

¹Pulse width limited by maximum junction temperature.

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

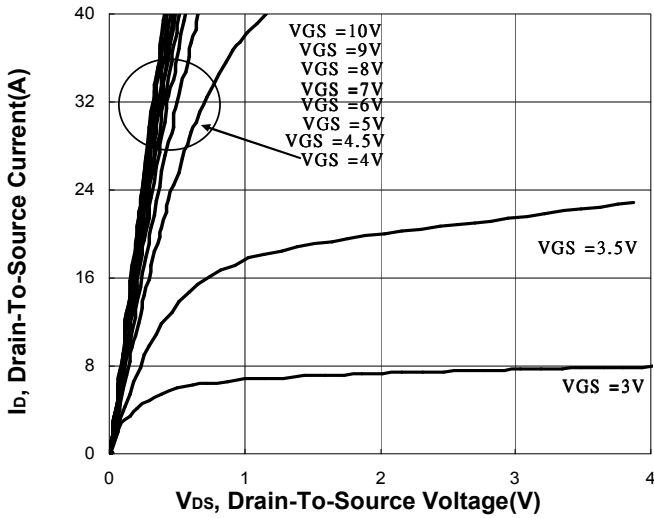
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.2	1.5	3	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 24V, V_{GS} = 0V$			1	μA
		$V_{DS} = 20V, V_{GS} = 0V, T_C = 125\text{ °C}$			10	
On-State Drain Current ¹	$I_{D(ON)}$	$V_{DS} = 10V, V_{GS} = 10V$	40			A
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 4.5V, I_D = 11A$		14	17.5	mΩ
		$V_{GS} = 10V, I_D = 11A$		9.6	12	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 5V, I_D = 11A$		40		S

DYNAMIC							
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 15V, f = 1MHz$		1100		pF	
Output Capacitance	C_{oss}			170			
Reverse Transfer Capacitance	C_{rss}			108			
Gate Resistance	R_G	$V_{GS} = 0V, f = 1MHz$		1.8	2.7	Ω	
Total Gate Charge ²	Q_g	$V_{DS} = 0.5V_{(BR)DSS}, I_D = 11A$	($V_{GS}=10V$)	21		nC	
			($V_{GS}=4.5V$)	10			
Gate-Source Charge ²	Q_{gs}		3.9				
Gate-Drain Charge ²	Q_{gd}		5.3				
Turn-On Delay Time ²	$t_{d(on)}$		$V_{DS} = 15V, I_D \cong 11A,$ $V_{GS} = 10V, R_{GEN} = 6\Omega$		12		nS
Rise Time ²	t_r				33		
Turn-Off Delay Time ²	$t_{d(off)}$				51		
Fall Time ²	t_f				25		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_J = 25^\circ C$)							
Continuous Current	I_S				1.9	A	
Forward Voltage ¹	V_{SD}	$I_F = 11A, V_{GS} = 0V$			1.3	V	
Reverse Recovery Time	t_{rr}	$I_F = 11 A, di_F/dt = 100A / \mu S$		18		nS	
Reverse Recovery Charge	Q_{rr}			8		nC	

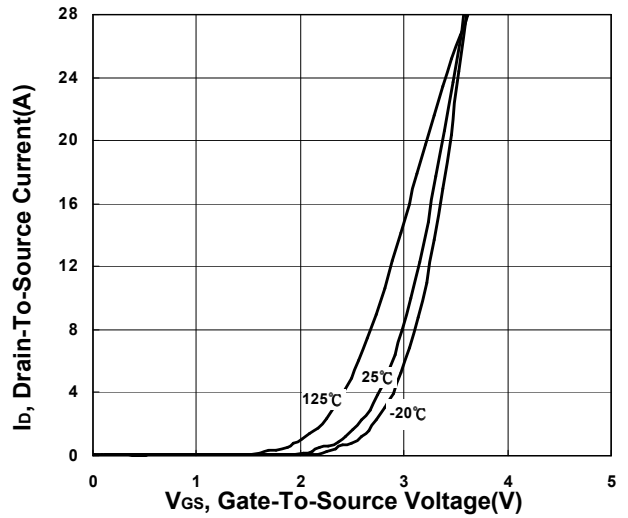
¹Pulse test : Pulse Width $\leq 300 \mu sec$, Duty Cycle $\leq 2\%$.

²Independent of operating temperature.

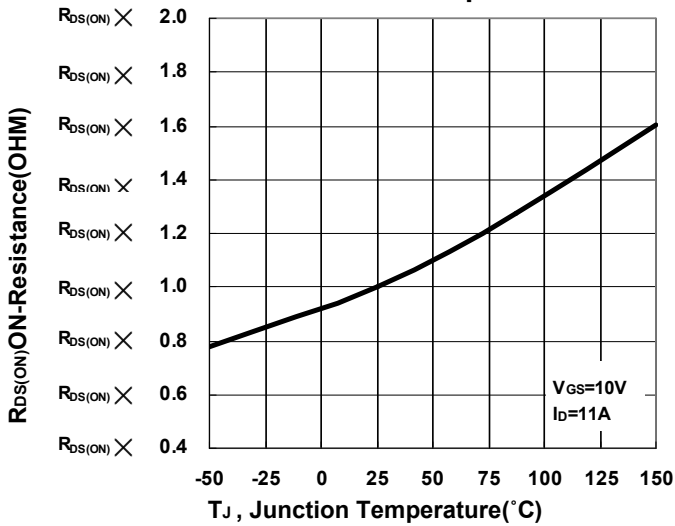
Output Characteristics



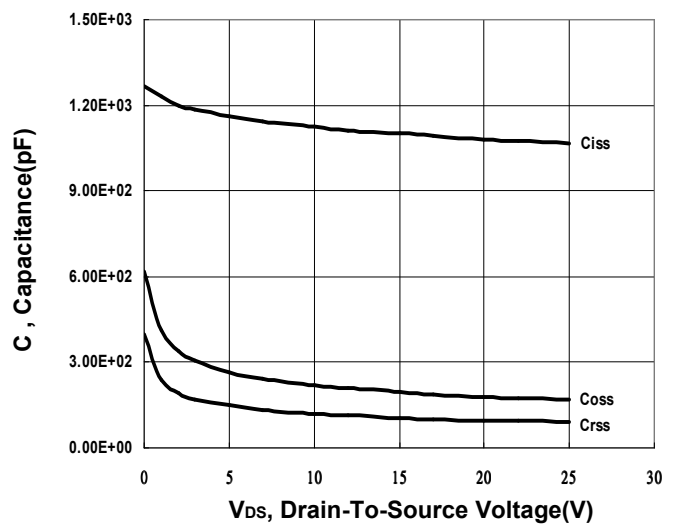
Transfer Characteristics



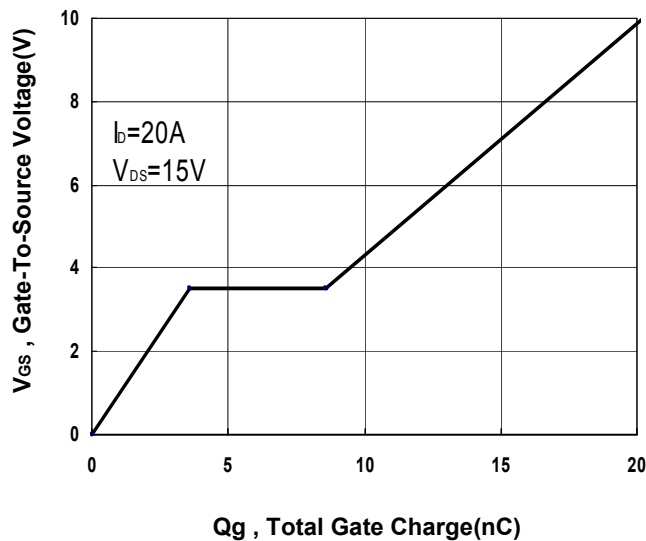
On-Resistance VS Temperature



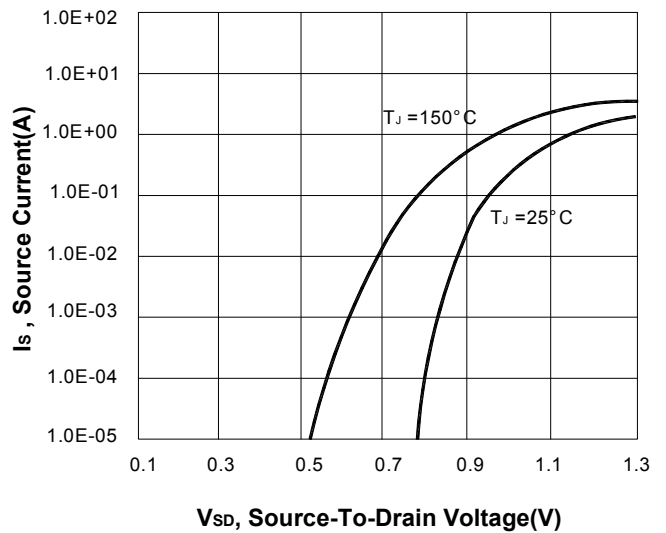
Capacitance Characteristic



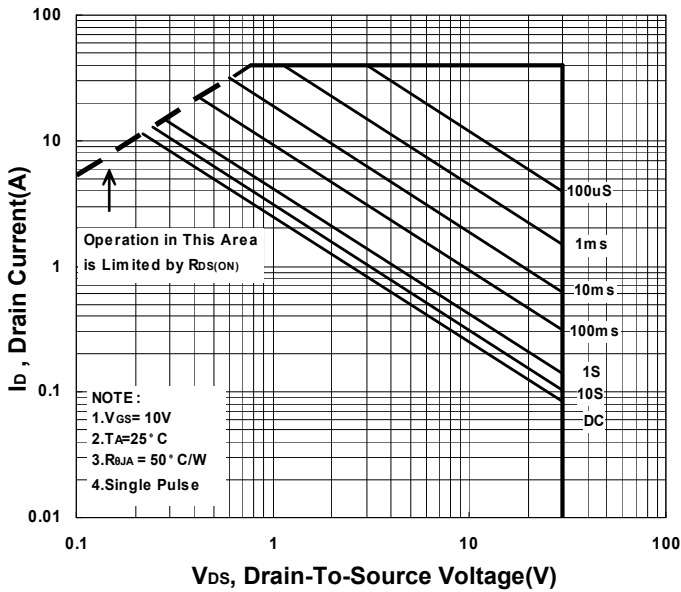
Gate charge Characteristics



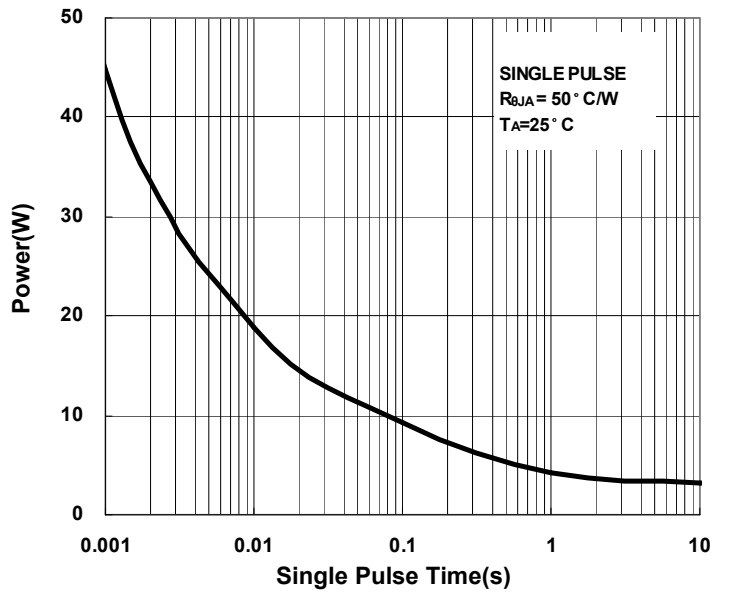
Source-Drain Diode Forward Voltage



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

