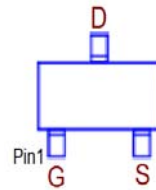
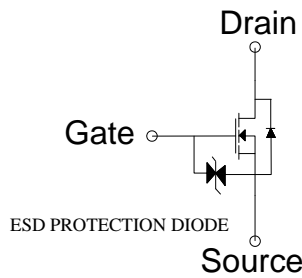




PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
60V	2Ω	300mA



G. GATE
D. DRAIN
S. SOURCE

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

PARAMETERS/TEST CONDITIONS	SYMBOL	LIMITS	UNITS
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	±25	V
Continuous Drain Current	I_D	$T_C = 25\text{ °C}$	300
		$T_C = 100\text{ °C}$	190
Pulsed Drain Current ¹	I_{DM}	1	A
Power Dissipation	P_D	$T_C = 25\text{ °C}$	0.35
		$T_C = 100\text{ °C}$	0.14
Operating Junction & Storage Temperature Range	T_j, T_{stg}	-40 to 150	°C

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient	$R_{\theta JA}$		350	°C / W

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	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 100\mu A$	60			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 100\mu A$	1.0	1.8	2.5	V
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 16V$			±30	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 48V, V_{GS} = 0V$			1	μA
		$V_{DS} = 40V, V_{GS} = 0V, T_J = 125\text{ °C}$			10	μA
On-State Drain Current ¹	$I_{D(ON)}$	$V_{DS} = 10V, V_{GS} = 10V$	1			A
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 3.5V, I_D = 10mA$		2.1	5	Ω
		$V_{GS} = 4.5V, I_D = 100mA$		1.7	3	Ω
		$V_{GS} = 10V, I_D = 200mA$		1.6	2	Ω
Forward Transconductance ¹	g_{fs}	$V_{DS} = 20V, I_D = 200mA$		0.18		S

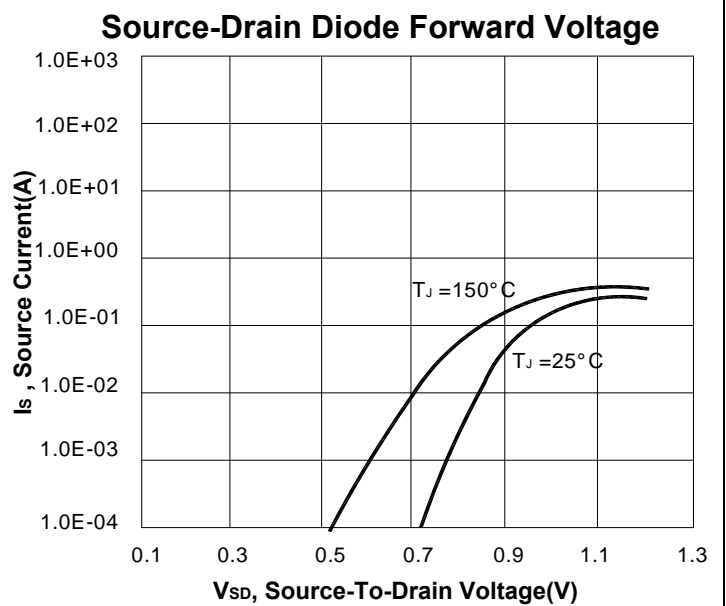
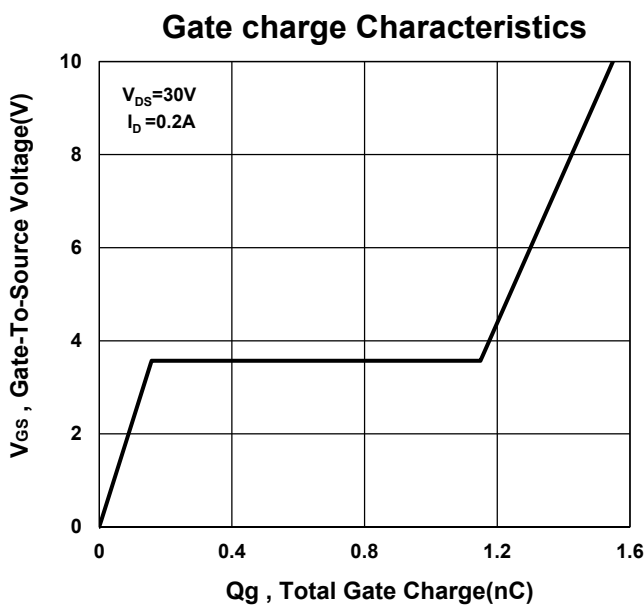
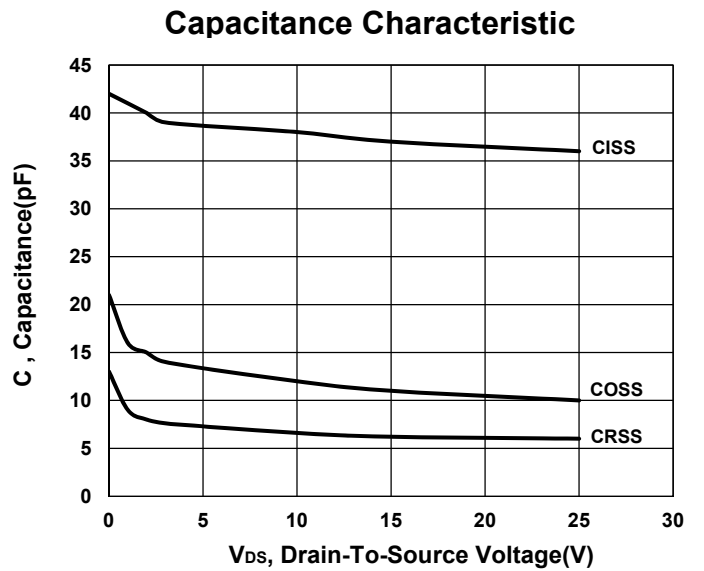
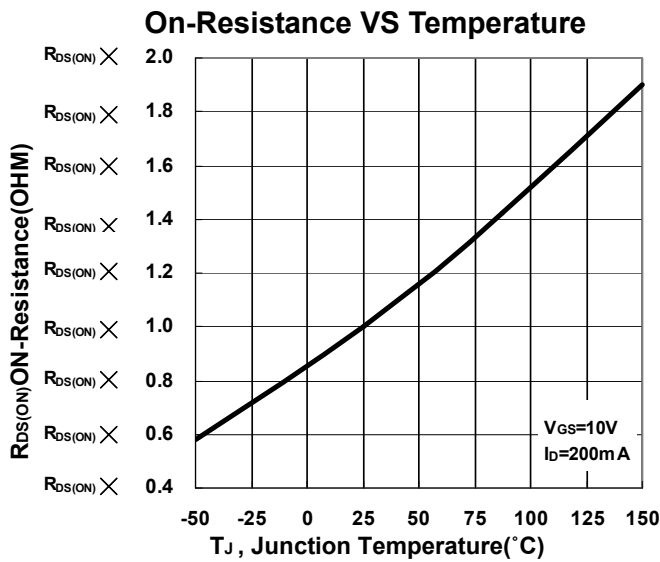
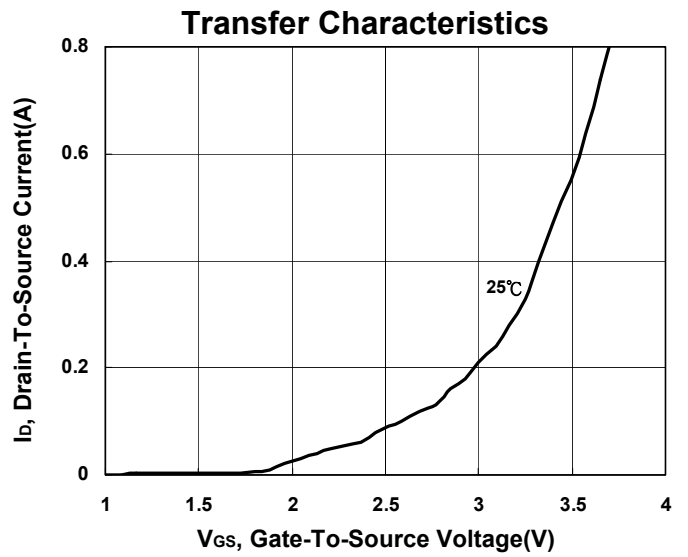
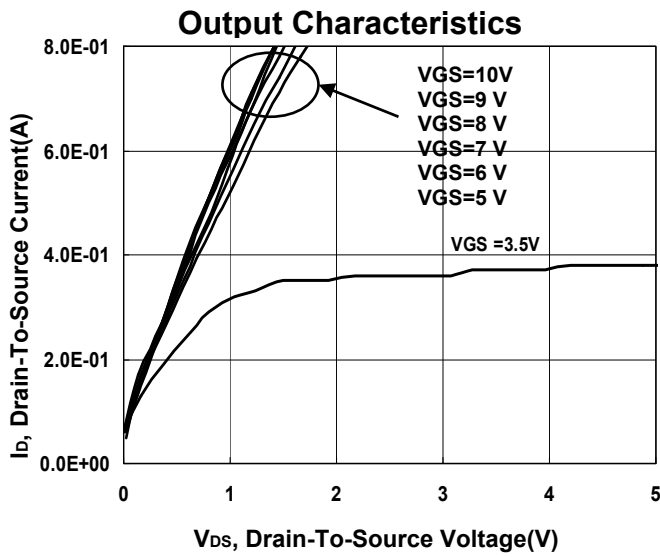
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 25V, f = 1MHz$		36		pF
Output Capacitance	C_{oss}			10		
Reverse Transfer Capacitance	C_{rss}			6		
Total Gate Charge ²	Q_g	$V_{DS} = 0.5V_{(BR)DSS}, V_{GS} = 10V,$ $I_D = 200mA$		1.6		nC
Gate-Source Charge ²	Q_{gs}			0.2		
Gate-Drain Charge ²	Q_{gd}			1		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DD} = 30V, I_D = 200mA, R_G = 10\Omega$ $V_{GS} = 10V$		30		ns
Turn-Off Delay Time ²	$t_{d(off)}$			125		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_J = 25^\circ C$)						
Continuous Current	I_S	$I_F = 200mA, V_{GS} = 0V$			300	mA
Forward Voltage ¹	V_{SD}				1.2	V

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

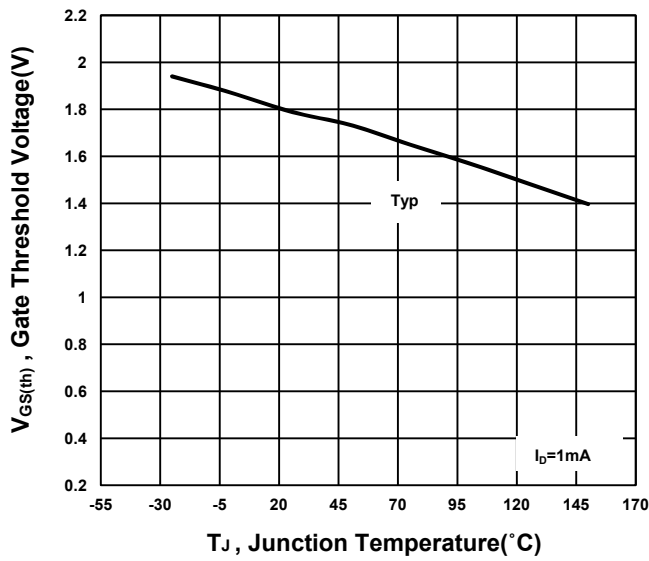
²Independent of operating temperature.

³Pulse width limited by maximum junction temperature.

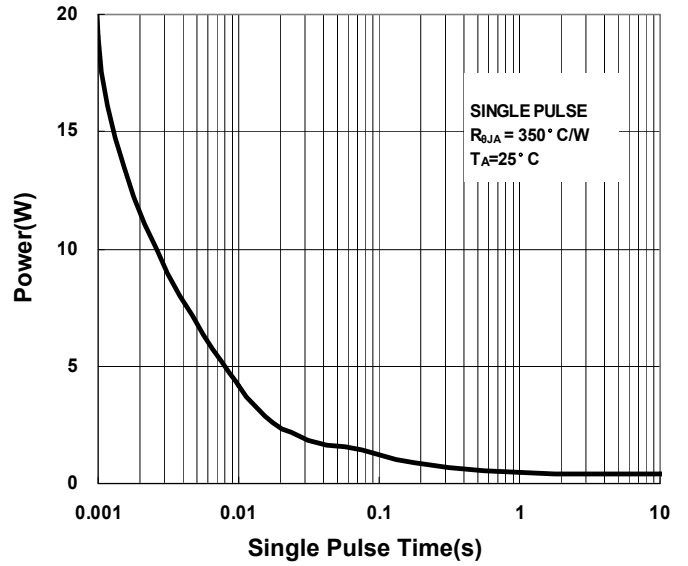
REMARK: ESD Protected Gate, 2KV HBM



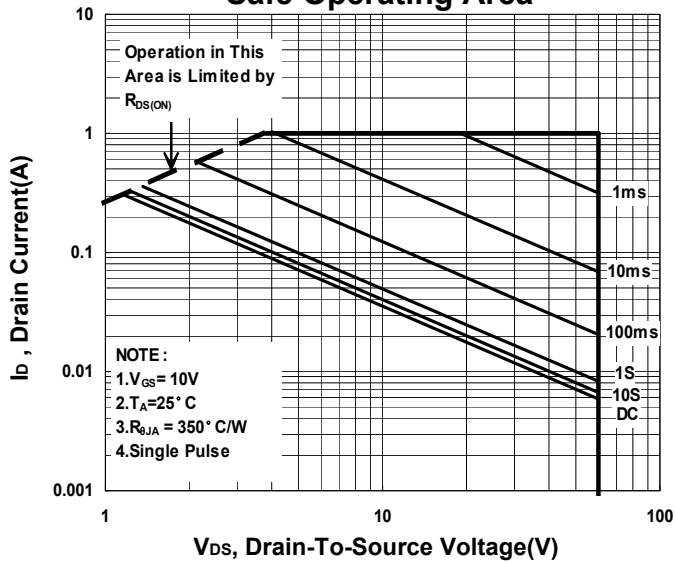
Gate Threshold Voltage VS Temperature



Single Pulse Maximum Power Dissipation



Safe Operating Area



Transient Thermal Response Curve

