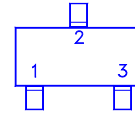
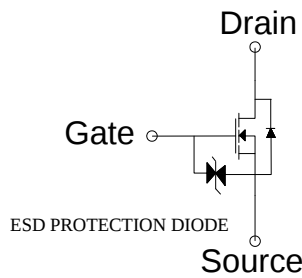


PRODUCT SUMMARY

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



1. GATE
2. DRAIN
3. SOURCE



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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	60	V
Gate-Source Voltage		V_{GS}	± 20	V
Continuous Drain Current	$T_C = 25\text{ }^\circ\text{C}$	I_D	300	mA
	$T_C = 100\text{ }^\circ\text{C}$		190	
Pulsed Drain Current ¹		I_{DM}	1	A
Power Dissipation	$T_C = 25\text{ }^\circ\text{C}$	P_D	0.35	W
	$T_C = 100\text{ }^\circ\text{C}$		0.14	
Operating Junction & Storage Temperature Range		T_J, T_{stg}	-40 to 150	$^\circ\text{C}$

THERMAL RESISTANCE RATINGS

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

¹Pulse width limited by maximum junction temperature.

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

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 100\mu A$	60			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 100\mu A$	1.0	1.8	2.5	
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
		$V_{DS} = 40V, V_{GS} = 0V, T_J = 125^\circ C$			10	
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	
		$V_{GS} = 10V, I_D = 200mA$		1.6	2	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 20V, I_D = 200mA$		0.18		S

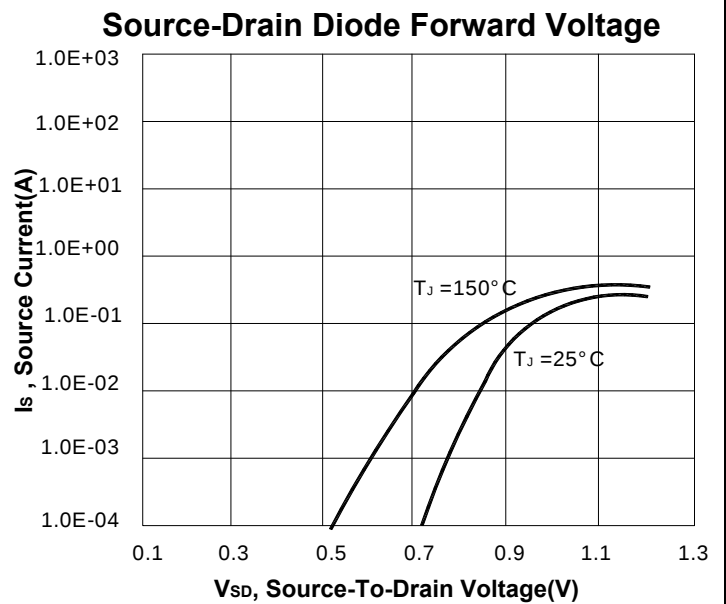
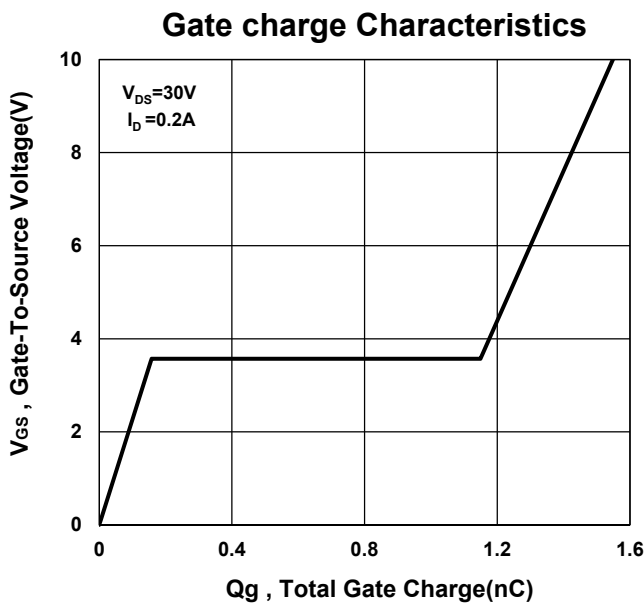
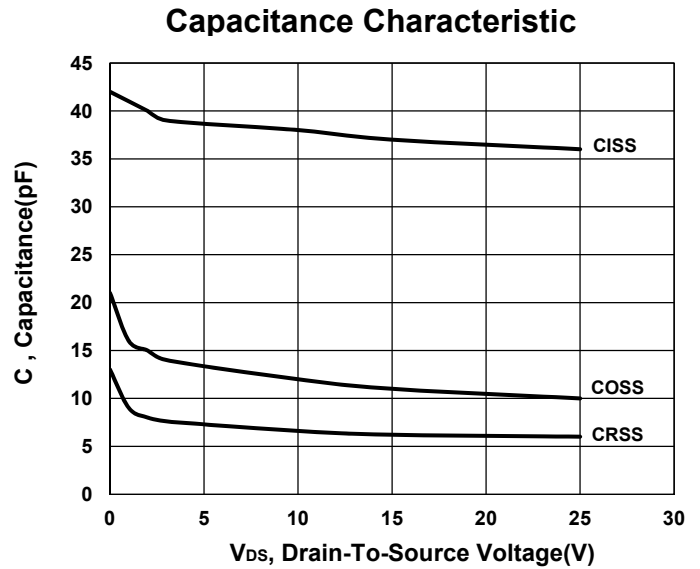
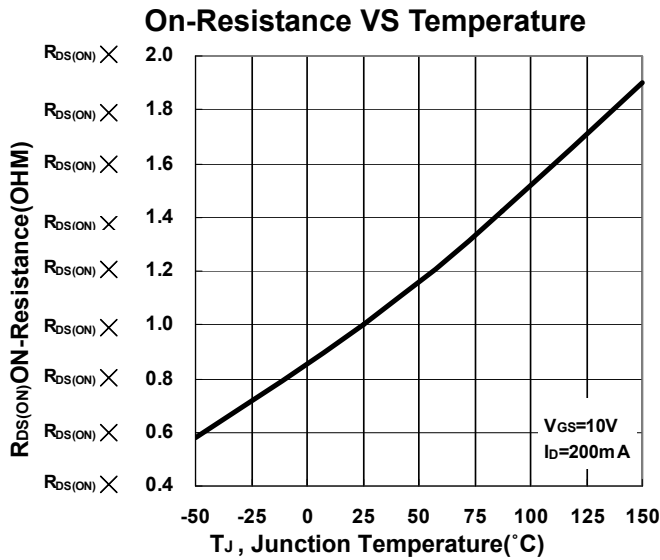
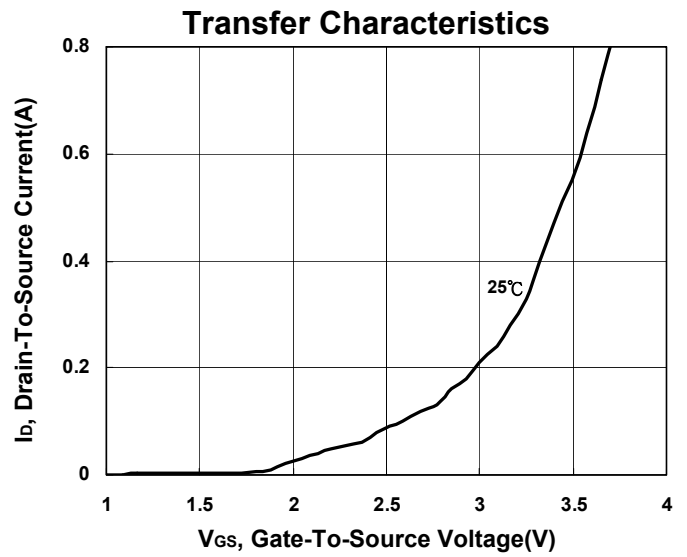
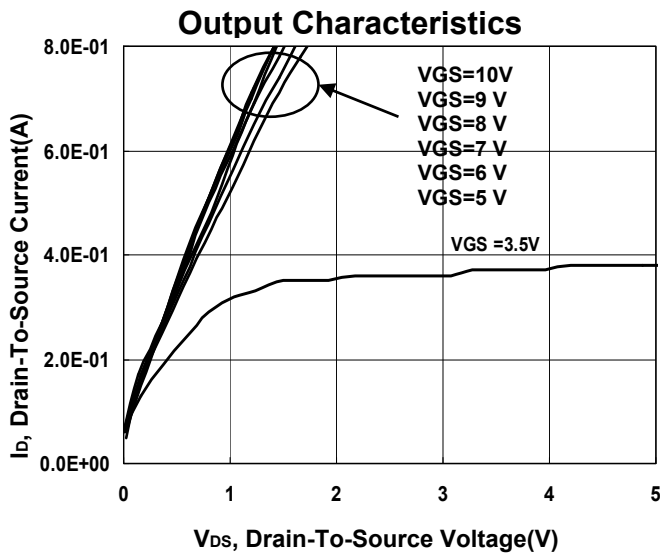
DYNAMIC						
Input Capacitance	C _{iSS}	V _{GS} = 0V, V _{DS} = 25V, f = 1MHz		36		pF
Output Capacitance	C _{oSS}			10		
Reverse Transfer Capacitance	C _{rSS}			6		
Total Gate Charge ²	Q _g	V _{DS} = 0.5V _{(BR)DSS} , V _{GS} = 10V, I _D = 200mA		1.6		nC
Gate-Source Charge ²	Q _{gs}			0.2		
Gate-Drain Charge ²	Q _{gd}			1		
Turn-On Delay Time ²	t _{d(on)}	V _{DD} = 30V, I _D =200mA, R _G =10Ω V _{GS} = 10V		30		ns
Turn-Off Delay Time ²	t _{d(off)}			125		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T _J = 25 ° 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 $\leq 2\%$.

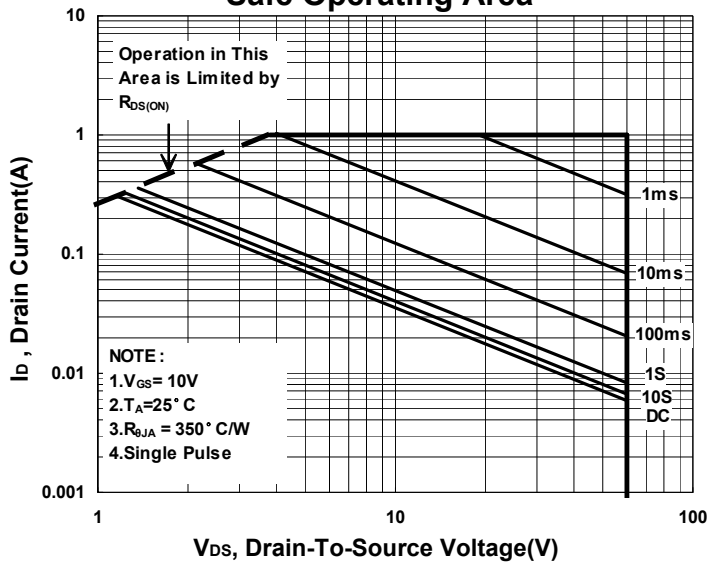
²Independent of operating temperature.

³Pulse width limited by maximum junction temperature.

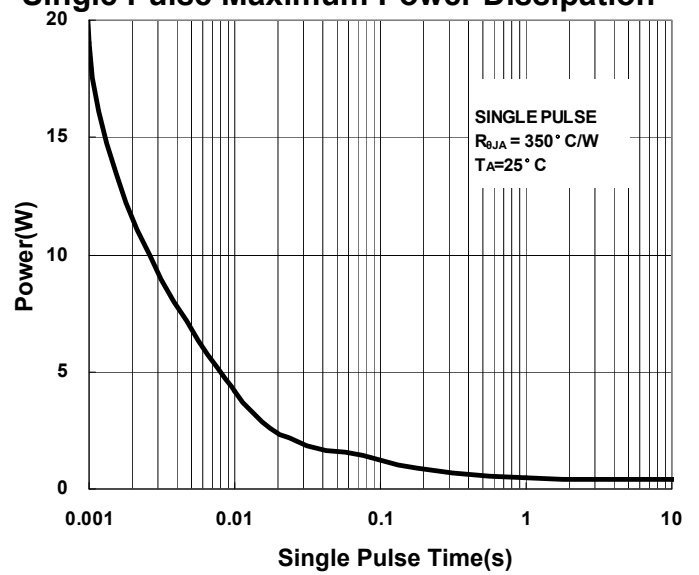
REMARK: ESD Protected Gate, 2KV HBM



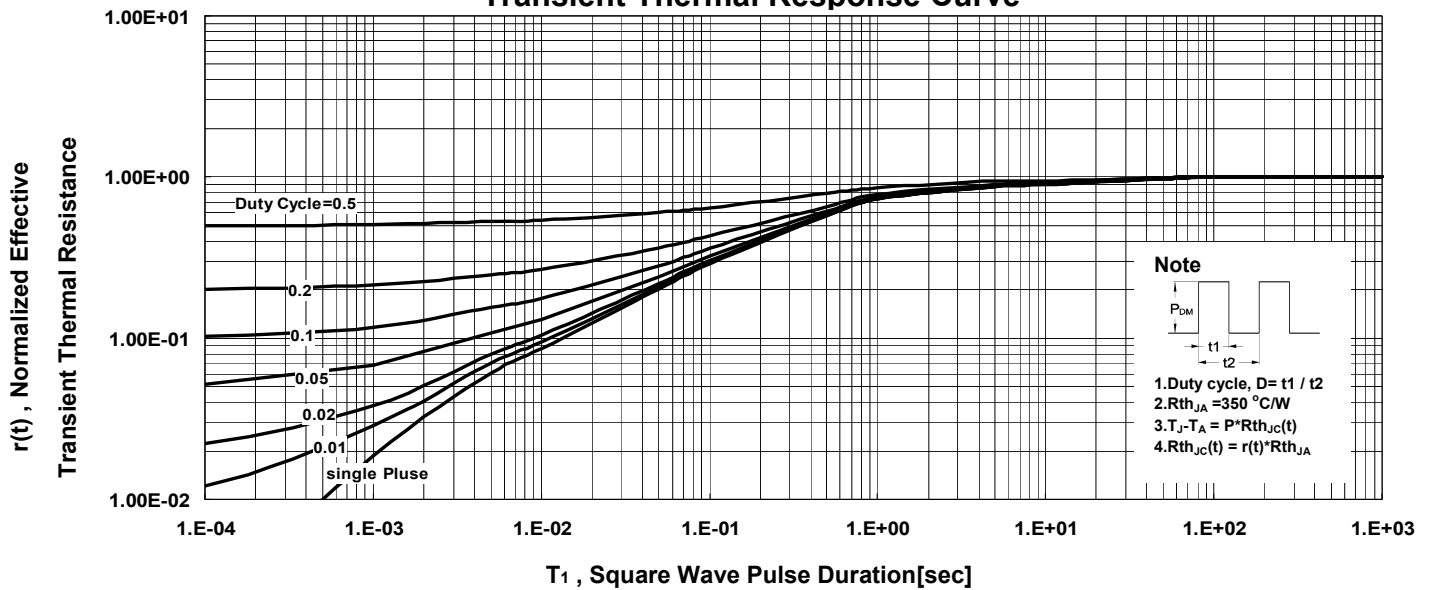
Safe Operating Area



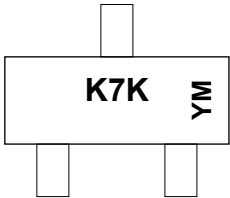
Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve



Marking Information



K7K = Product Type Marking Code
YM = Date Code Marking
Y = Year ex: X = 2010
M = Month ex: 2 = February

Date Code Key

Year	2006	2007	2008	2009	2010	2011	2012
Code	T	U	V	W	X	Y	Z

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	10	11	12