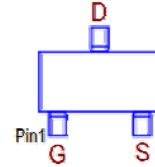
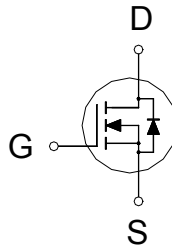




G: GATE
D: DRAIN
S: SOURCE

PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
100V	190mΩ	1.6A



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	I_D	$T_A = 25\text{ °C}$	1.6
		$T_A = 70\text{ °C}$	1.3
Pulsed Drain Current ¹	I_{DM}	7	A
Power Dissipation ³	P_D	$T_A = 25\text{ °C}$	1.25
		$T_A = 70\text{ °C}$	0.8
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	$R_{\theta JA}$		100	°C/W
Junction-to-Ambient ²	$R_{\theta JA}$		147	

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 $T_A = 25\text{ °C}$.

³The Power dissipation is based on $R_{\theta JA} t \leq 10s$ value.

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

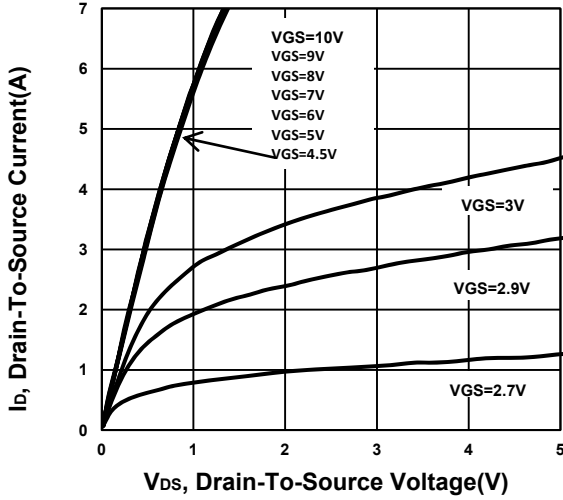
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	100			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.3	1.9	2.3	

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
		$V_{DS} = 80V, V_{GS} = 0V, T_J = 100\text{ }^\circ C$			10	
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 10V, I_D = 1.6A$		148	190	m Ω
		$V_{GS} = 4.5V, I_D = 1.6A$		159	205	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 5V, I_D = 1.6A$		7		S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 25V, f = 1MHz$		301		μF
Output Capacitance	C_{oss}			29		
Reverse Transfer Capacitance	C_{rss}			19		
Gate Resistance	R_g	$V_{GS} = 0V, V_{DS} = 0V, f = 1MHz$		2.3		Ω
Total Gate Charge ²	Q_g	$V_{DS} = 50V, V_{GS} = 10V, I_D = 1.6A$		8.1		nC
Gate-Source Charge ²	Q_{gs}			0.9		
Gate-Drain Charge ²	Q_{gd}			3.1		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DD} = 50V, I_D \cong 1.6A, V_{GEN} = 10V, R_{GS} = 6\Omega$		6		nS
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 ($T_J = 25\text{ }^\circ C$)						
Continuous Current	I_S				0.9	A
Forward Voltage ¹	V_{SD}	$I_F = 1.6A, V_{GS} = 0V$			1.4	V
Reverse Recovery Time	t_{rr}	$I_F = 1.6A, di_F/dt = 100A / \mu S$		17.8		nS
Reverse Recovery Charge	Q_{rr}			8.8		nC

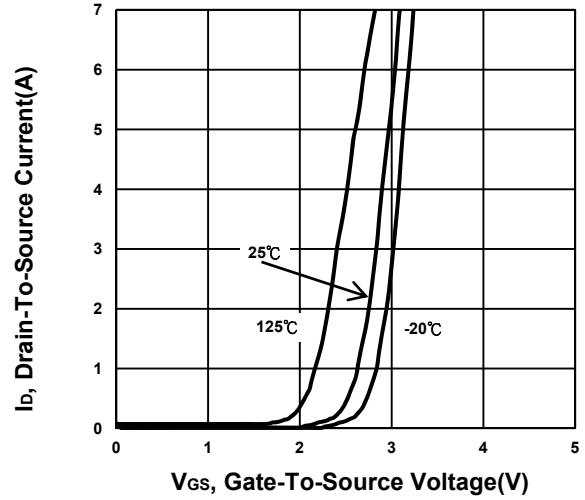
¹Pulse test : Pulse Width $\leq 300\text{ }\mu sec$, Duty Cycle $\leq 2\%$.

²Independent of operating temperature

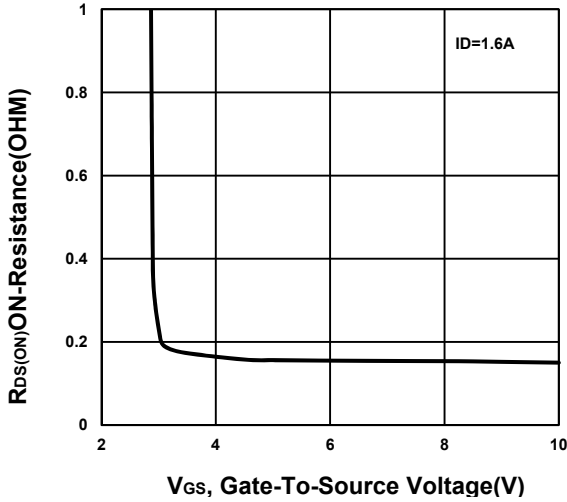
Output Characteristics



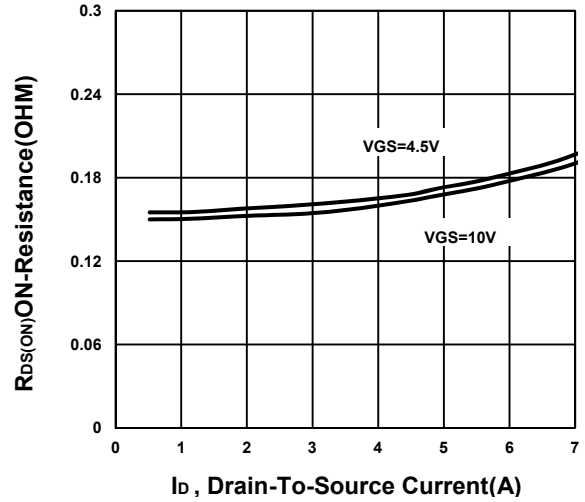
Transfer Characteristics



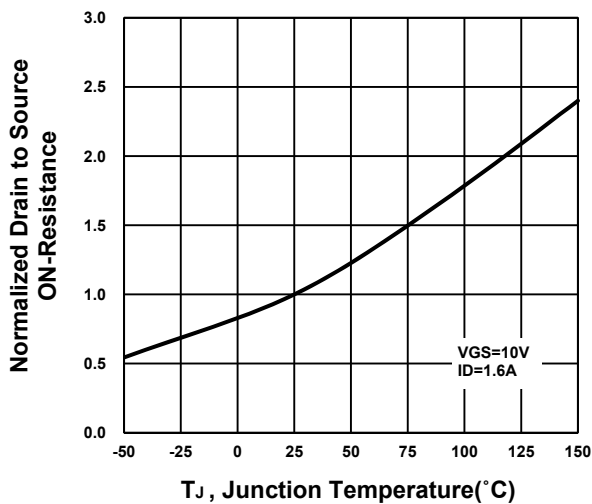
On-Resistance VS Gate-To-Source



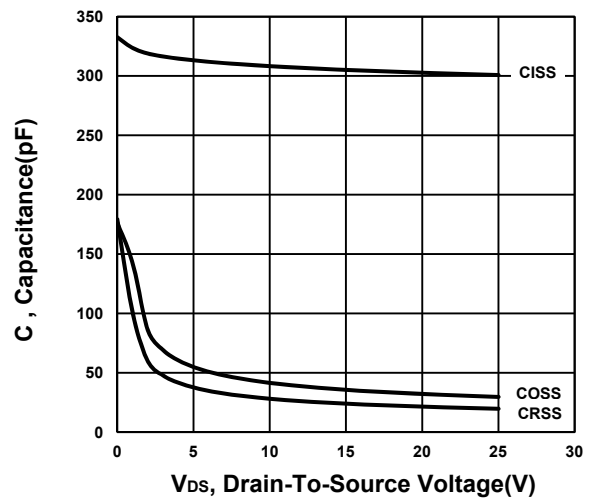
On-Resistance VS Drain Current



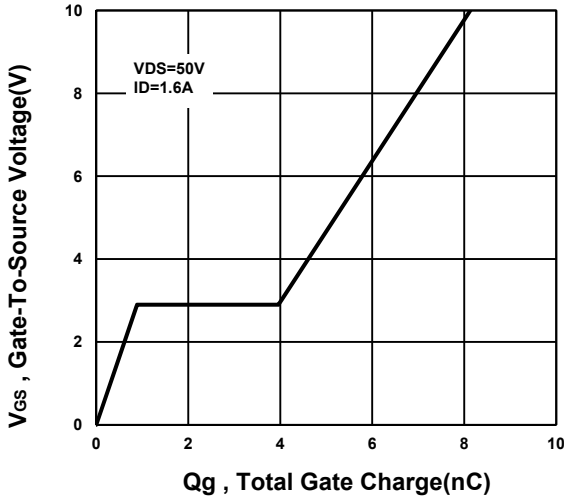
On-Resistance VS Temperature



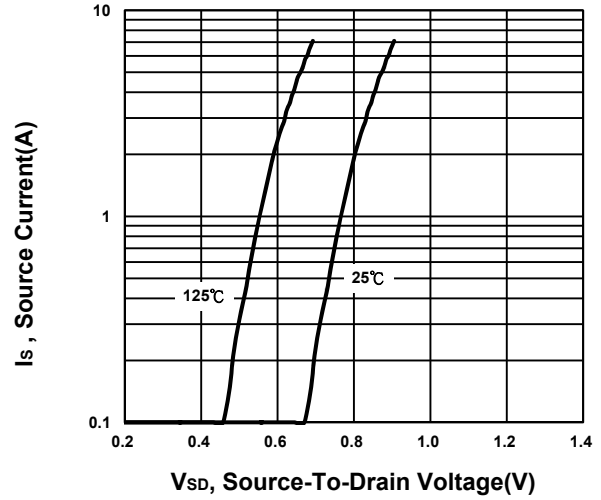
Capacitance Characteristic



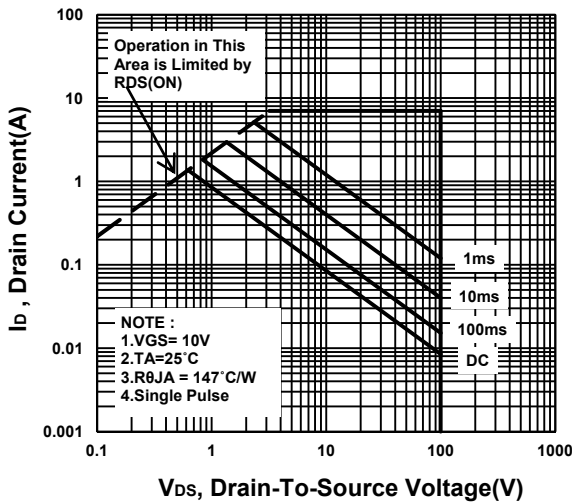
Gate charge Characteristics



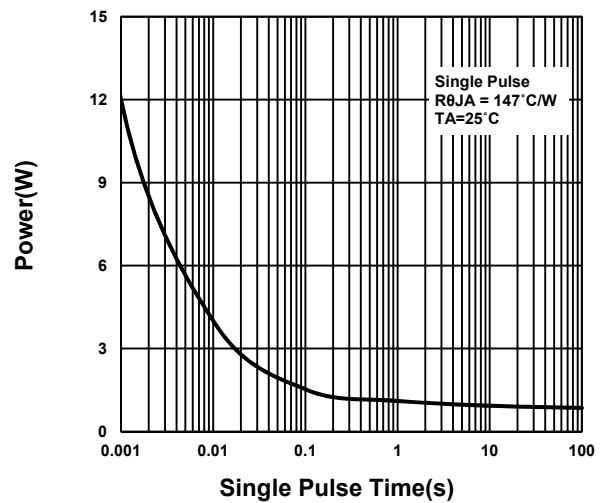
Source-Drain Diode Forward Voltage



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

