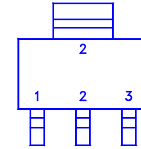
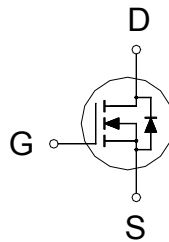




PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
150V	650m Ω	1A



- 1. GATE
- 2. DRAIN
- 3. SOURCE

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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Gate-Source Voltage		V_{GS}	± 20	V
Continuous Drain Current	$T_A = 25^\circ\text{C}$	I_D	1	A
	$T_A = 100^\circ\text{C}$		0.8	
Pulsed Drain Current ¹		I_{DM}	4	
Avalanche Current		I_{AS}	1.1	
Avalanche Energy	L = 1mH	E_{AS}	0.6	mJ
Power Dissipation ³	$T_A = 25^\circ\text{C}$	P_D	1.9	W
	$T_A = 100^\circ\text{C}$		1.2	
Operating Junction & Storage Temperature Range		T_j, T_{stg}	-55 to 150	$^\circ\text{C}$

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE		SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient ²	$t \leq 10\text{s}$	$R_{\theta JA}$		40	$^\circ\text{C} / \text{W}$
Junction-to-Ambient ²	Steady-State	$R_{\theta JA}$		65	

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

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

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

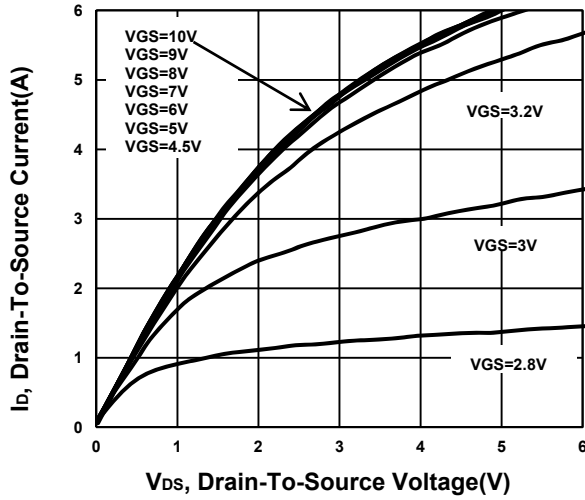
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{V}, I_D = 250\mu\text{A}$	150			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	1.3	1.87	2.3	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0\text{V}, V_{GS} = \pm 20\text{V}$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 120\text{V}, V_{GS} = 0\text{V}$			1	μA
		$V_{DS} = 100\text{V}, V_{GS} = 0\text{V}, T_J = 125^\circ\text{C}$			10	

Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 4.5V, I_D = 1A$	494	800	mΩ
		$V_{GS} = 10V, I_D = 1A$	484	650	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 5V, I_D = 1A$	8.6		S
DYNAMIC					
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 25V, f = 1MHz$	309		pF
Output Capacitance	C_{oss}		31		
Reverse Transfer Capacitance	C_{rss}		17		
Gate Resistance	R_g	$V_{GS} = 0V, V_{DS} = 0V, f = 1MHz$	2.5		Ω
Total Gate Charge ²	$Q_{g(VGS=10V)}$	$V_{DS} = 75V, I_D = 1A$	8		nC
	$Q_{g(VGS=4.5V)}$		4.8		
Gate-Source Charge ²	Q_{gs}		0.8		
Gate-Drain Charge ²	Q_{gd}		2.7		
Turn-On Delay Time ²	$t_{d(on)}$		$V_{DS} = 75V$ $I_D \cong 1A, V_{GS} = 10V, R_{GS} = 25\Omega$	8	
Rise Time ²	t_r	3			
Turn-Off Delay Time ²	$t_{d(off)}$	17			
Fall Time ²	t_f	5			
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_J = 25^\circ C$)					
Continuous Current	I_S			1	A
Forward Voltage ¹	V_{SD}	$I_F = 1A, V_{GS} = 0V$		1	V
Reverse Recovery Time	t_{rr}	$I_F = 1A, di/dt = 100 A/\mu s$	41		nS
Reverse Recovery Charge	Q_{rr}		21		nC

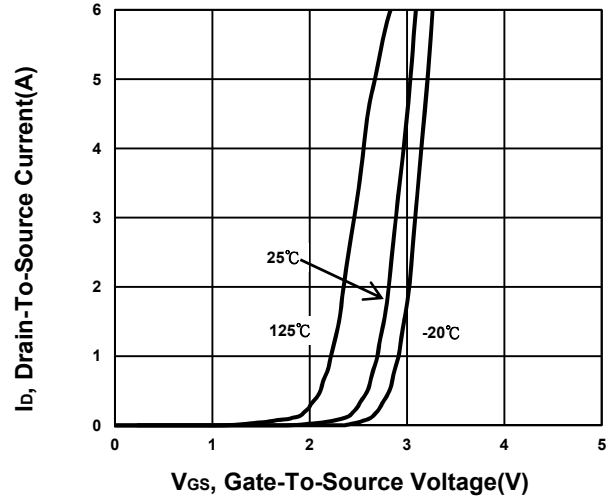
¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

²Independent of operating temperature.

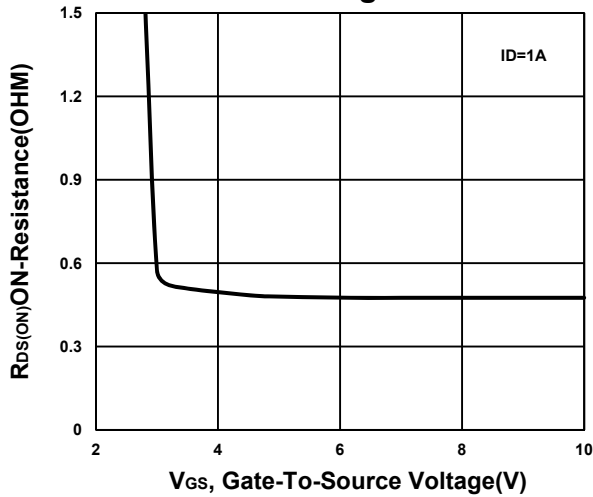
Output Characteristics



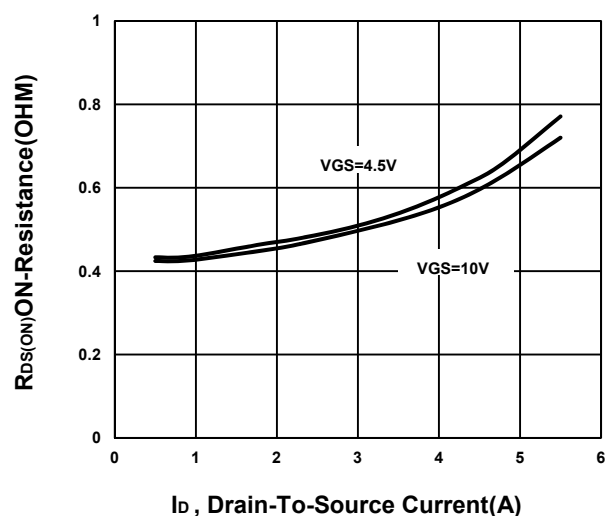
Transfer Characteristics



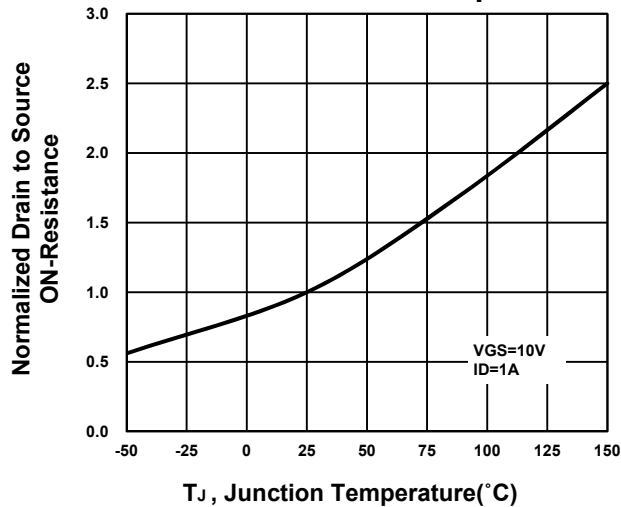
On-Resistance VS Gate-To-Source Voltage



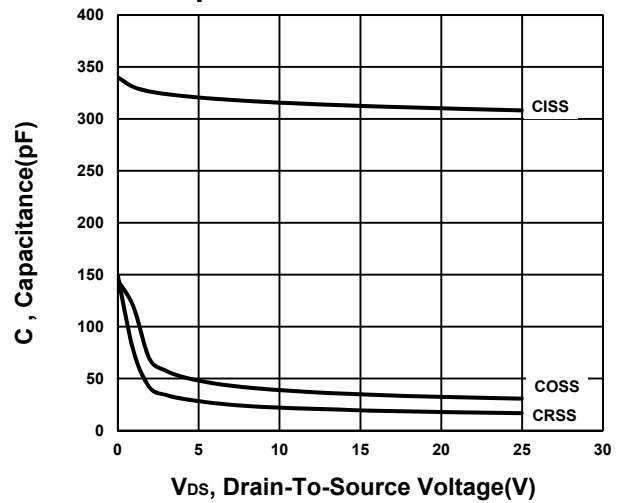
On-Resistance VS Drain Current



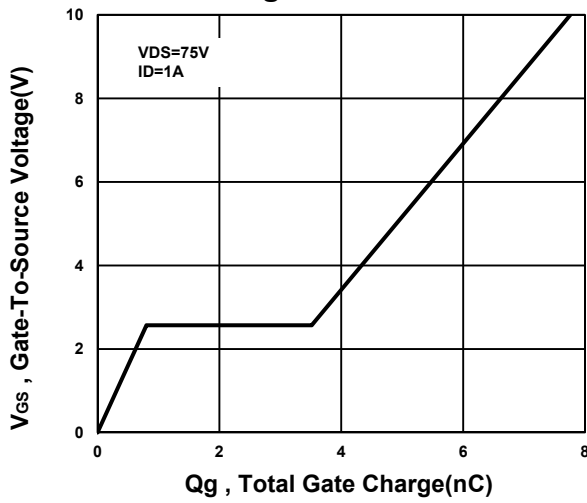
On-Resistance VS Temperature



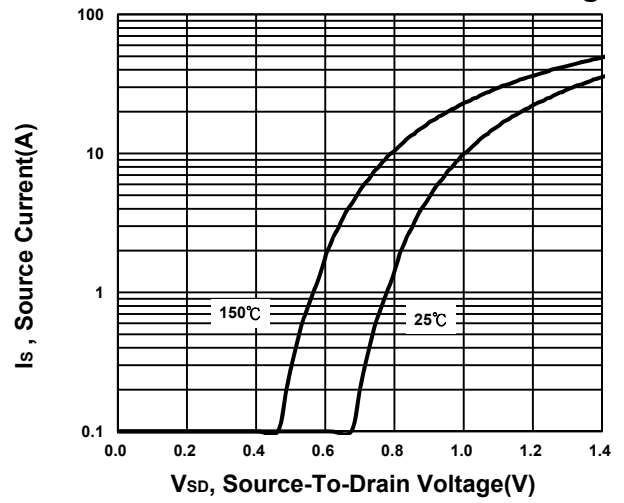
Capacitance Characteristic



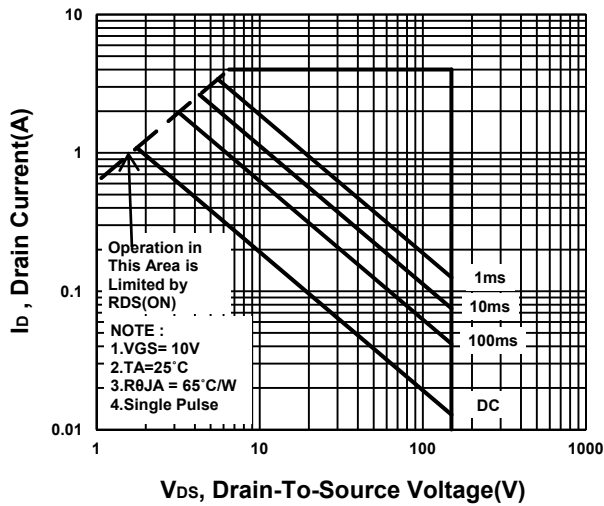
Gate charge Characteristics



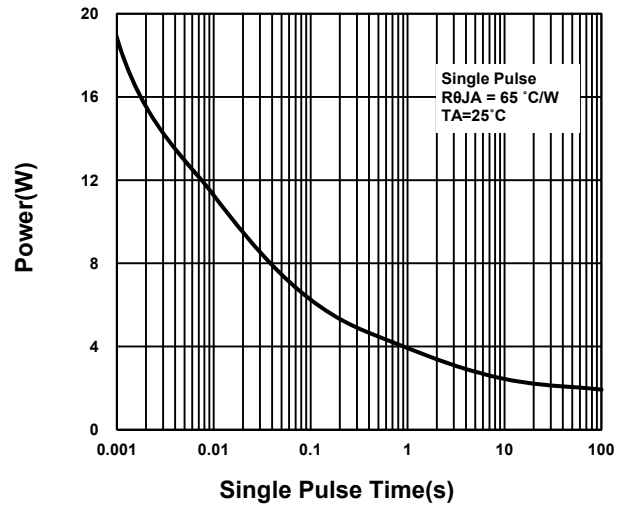
Source-Drain Diode Forward Voltage



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

