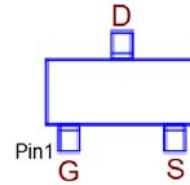
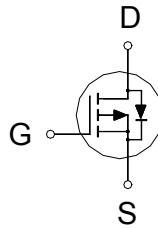




PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
-30V	120m Ω	-2A



G. GATE
D. DRAIN
S. 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}	-30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	$T_A = 25\text{ }^\circ\text{C}$	-2
		$T_A = 70\text{ }^\circ\text{C}$	-1.5
Pulsed Drain Current ¹	I_{DM}	-8	A
Power Dissipation	P_D	$T_A = 25\text{ }^\circ\text{C}$	0.7
		$T_A = 70\text{ }^\circ\text{C}$	0.4
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	$R_{\theta JA}$		177	$^\circ\text{C/W}$

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.

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

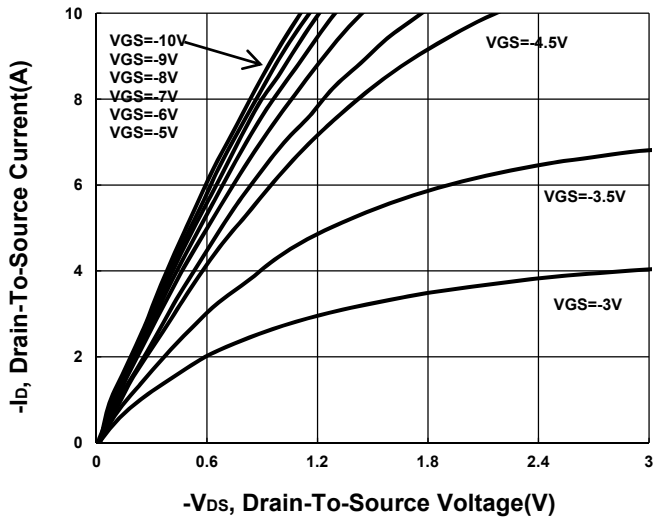
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1	-1.7	-3	V
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -24V, V_{GS} = 0V$			-1	μA
		$V_{DS} = -20V, V_{GS} = 0V, T_j = 55\text{ }^\circ\text{C}$			-10	μA
On-State Drain Current ¹	$I_{D(ON)}$	$V_{DS} = -10V, V_{GS} = -10V$	-8			A
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = -4.5V, I_D = -1.5A$		134	180	m Ω
		$V_{GS} = -10V, I_D = -2A$		98	120	

Forward Transconductance ¹	g_{fs}	$V_{DS} = -5V, I_D = -2A$		4.3		S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = -15V, f = 1MHz$		190		pF
Output Capacitance	C_{oss}			36		
Reverse Transfer Capacitance	C_{rss}			27		
Total Gate Charge ²	Q_g	$V_{DS} = -15V, V_{GS} = -10V, I_D = -2A$		4.8		nC
Gate-Source Charge ²	Q_{gs}			0.5		
Gate-Drain Charge ²	Q_{gd}			1.3		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DD} = -15V, V_{GS} = -10V, I_D \cong -2A, R_G = 6\Omega$		14		nS
Rise Time ²	t_r			36		
Turn-Off Delay Time ²	$t_{d(off)}$			42		
Fall Time ²	t_f			34		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T_J = 25 °C)						
Continuous Current	I_S				-2	A
Forward Voltage ¹	V_{SD}	$I_F = -2A, V_{GS} = 0V$			-1.1	V
Reverse Recovery Time	t_{rr}	$I_F = -2A, di_F/dt = 100A / \mu S$		15		nS
Reverse Recovery Charge	Q_{rr}			8		nC

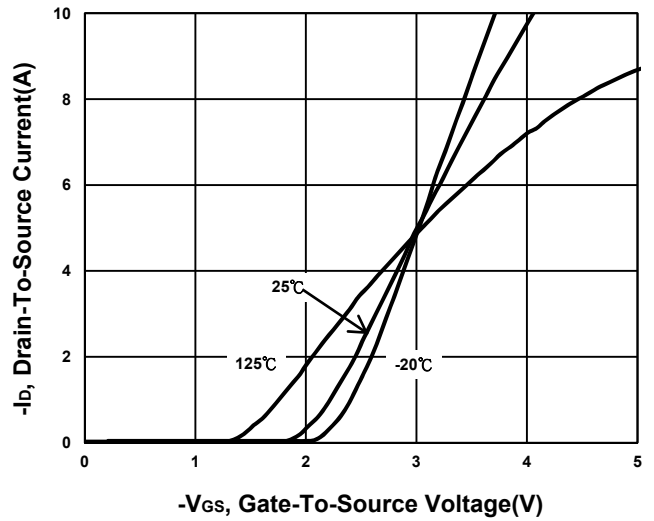
¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

²Independent of operating temperature.

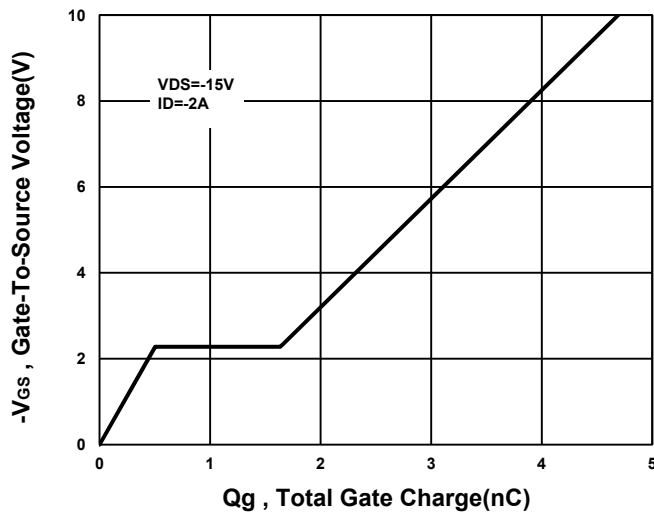
Output Characteristics



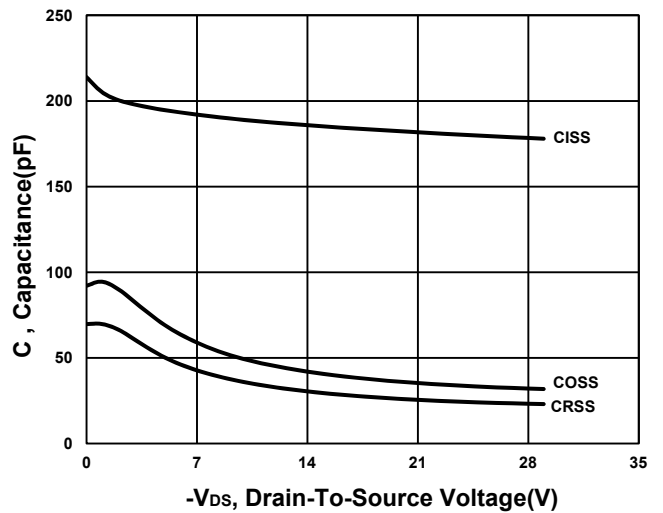
Transfer Characteristics



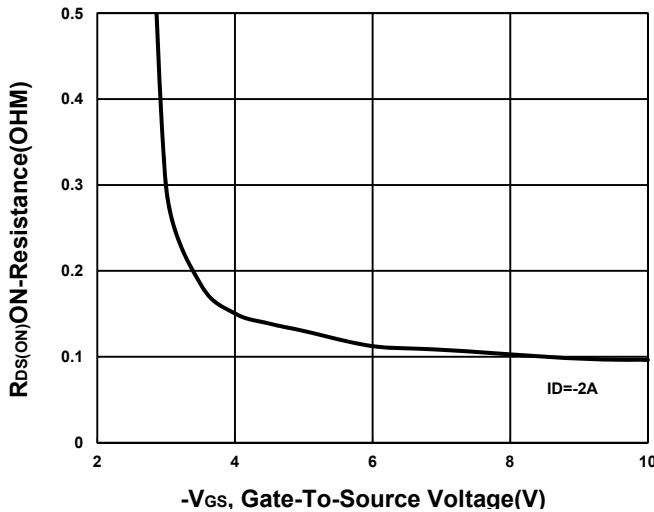
Gate charge Characteristics



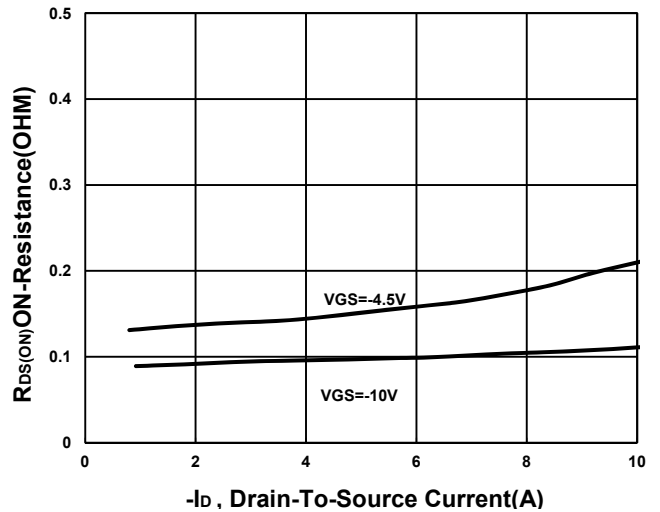
Capacitance Characteristic



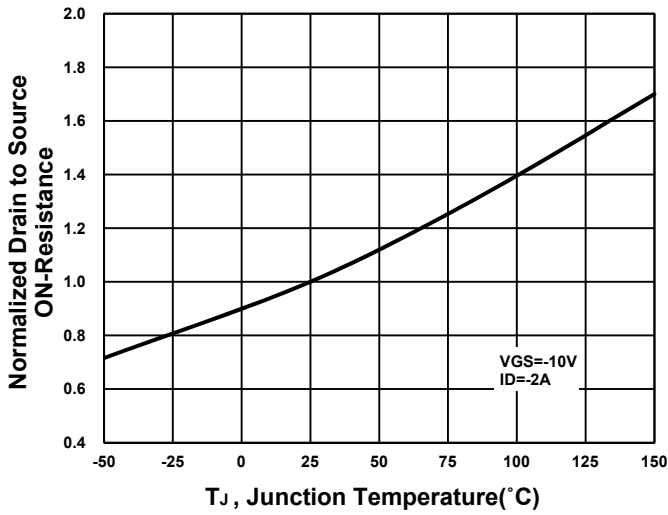
On-Resistance VS Gate-To-Source



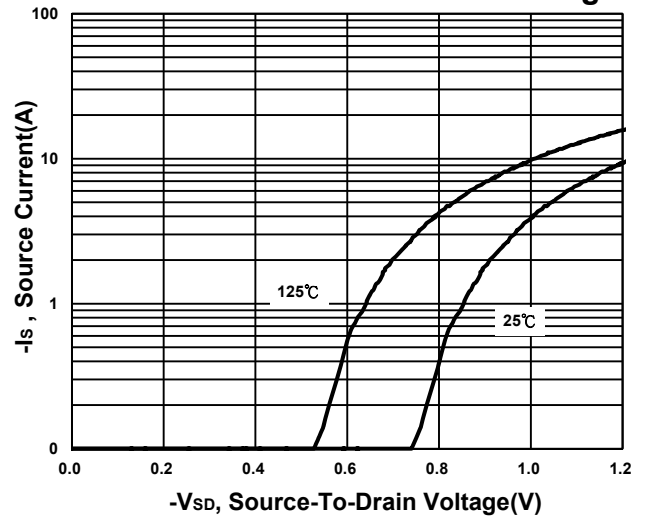
On-Resistance VS Drain Current



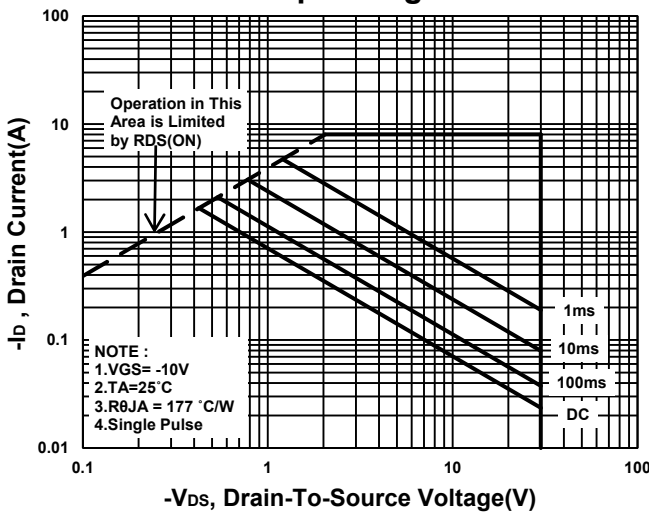
On-Resistance VS Temperature



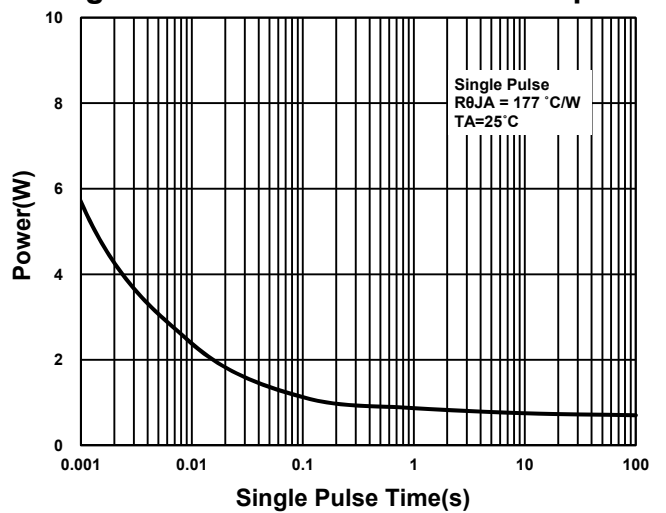
Source-Drain Diode Forward Voltage



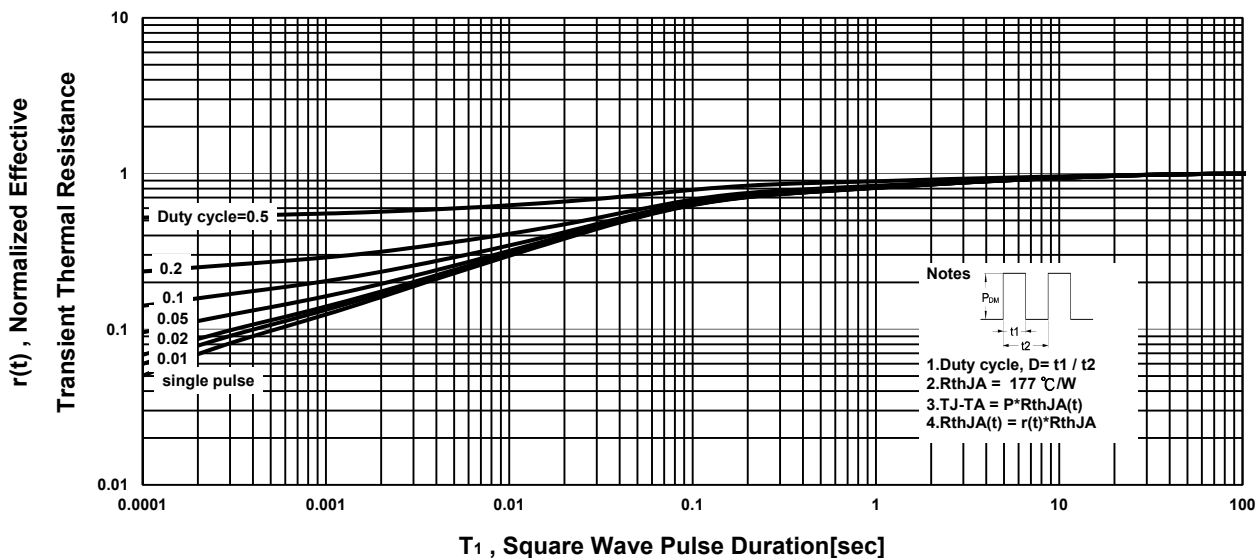
Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve



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