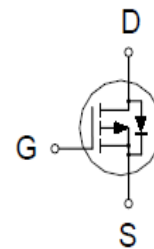
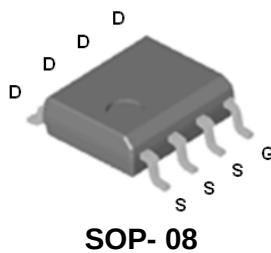


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PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
-30V	9m Ω @ $V_{GS} = -10V$	-11A



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	
Continuous Drain Current	$T_A = 25\text{ }^{\circ}\text{C}$	I_D	-11	A
	$T_A = 70\text{ }^{\circ}\text{C}$		-8.7	
Pulsed Drain Current ¹		I_{DM}	-50	
Avalanche Current		I_{AS}	-35	
Avalanche Energy	$L=0.1\text{mH}$	E_{AS}	61	mJ
Power Dissipation	$T_A = 25\text{ }^{\circ}\text{C}$	P_D	1.8	W
	$T_A = 70\text{ }^{\circ}\text{C}$		1.2	
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	$R_{\theta JA}$		68	$^{\circ}\text{C} / \text{W}$
Junction-to-Case	$R_{\theta JC}$		25	

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

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

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			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	-1.6	-3	
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
		$V_{DS} = -20V, V_{GS} = 0V, T_J = 55\text{ }^{\circ}C$			-10	
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = -4.5V, I_D = -11A$		10.4	14	m Ω
		$V_{GS} = -10V, I_D = -11A$		7.2	9	
Forward Transconductance ¹	g_{fs}	$V_{DS} = -10V, I_D = -11A$		40		S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = -15V, f = 1MHz$		2892		pF
Output Capacitance	C_{oss}			374		
Reverse Transfer Capacitance	C_{rss}			286		
Gate Resistance	R_g	$V_{GS} = 0V, V_{DS} = 0V, f = 1MHz$		3.7		Ω
Total Gate Charge ²	$Q_g(V_{GS} = -10V)$	$V_{DS} = -15V, I_D = -11A$		56		nC
	$Q_g(V_{GS} = -4.5V)$			28		
Gate-Source Charge ²	Q_{gs}			9		
Gate-Drain Charge ²	Q_{gd}			13		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DD} = -15V, I_D \cong -11A, V_{GS} = -10V, R_{GEN} = 6\Omega$		22		nS
Rise Time ²	t_r			26		
Turn-Off Delay Time ²	$t_{d(off)}$			102		
Fall Time ²	t_f			75		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_J = 25\text{ }^{\circ}C$)						
Continuous Current	I_S				-11	A
Forward Voltage ¹	V_{SD}	$I_F = -11A, V_{GS} = 0V$			-1.3	V
Reverse Recovery Time	t_{rr}	$I_F = -11A, dI/dt = 100A / \mu S$		26		nS
Reverse Recovery Charge	Q_{rr}			14		μC

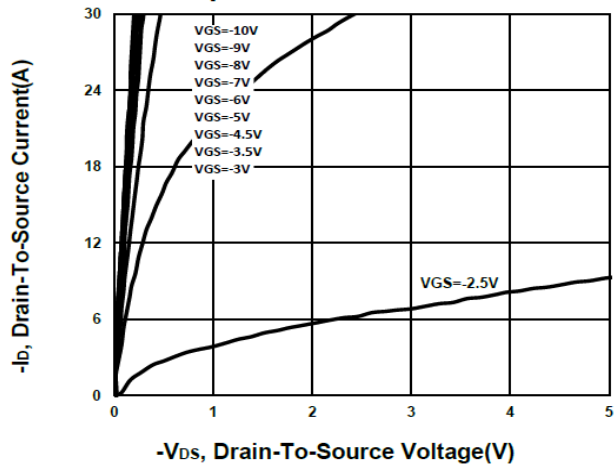
¹Pulse test : Pulse Width $\leq 300\text{ }\mu\text{sec}$, Duty Cycle $\leq 2\%$.

²Independent of operating temperature.

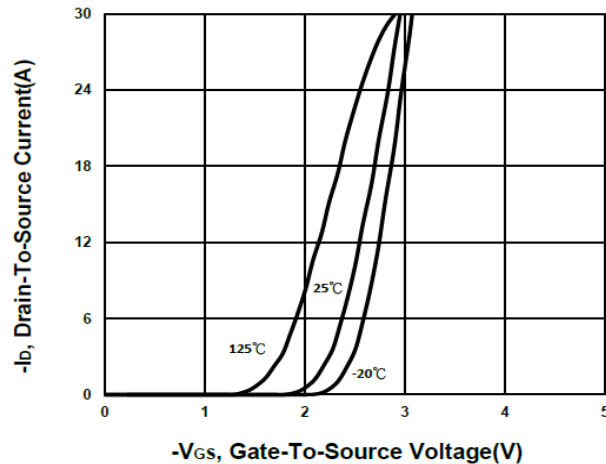
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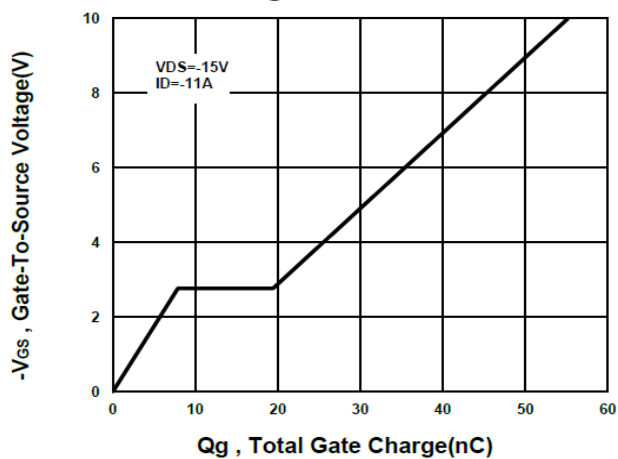
Output Characteristics



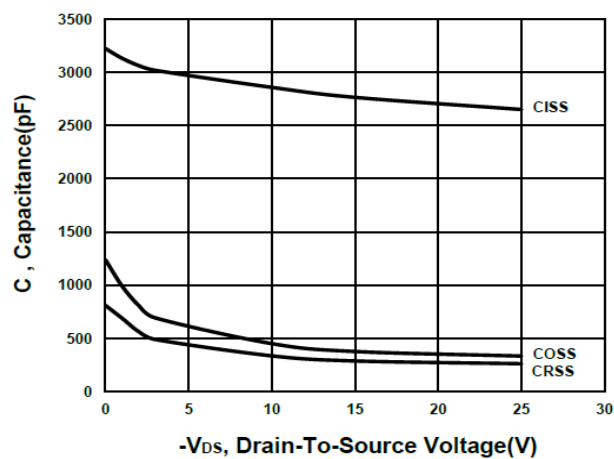
Transfer Characteristics



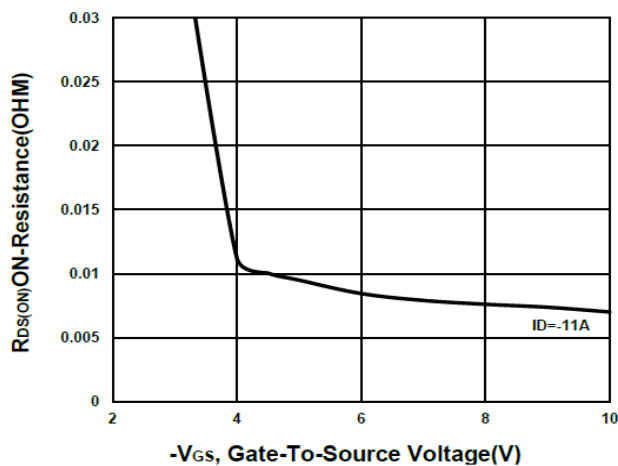
Gate charge Characteristics



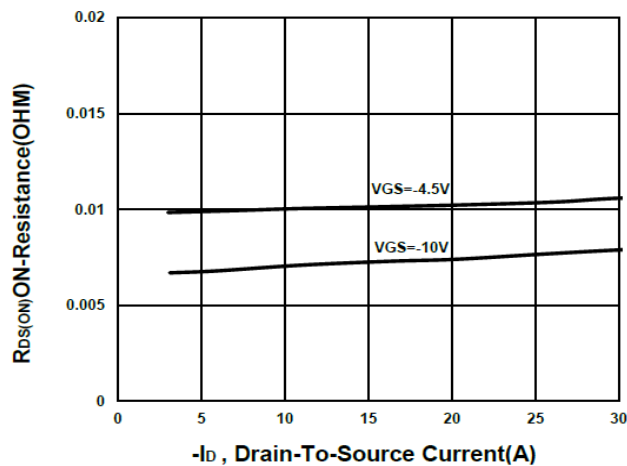
Capacitance Characteristic



On-Resistance VS Gate-To-Source



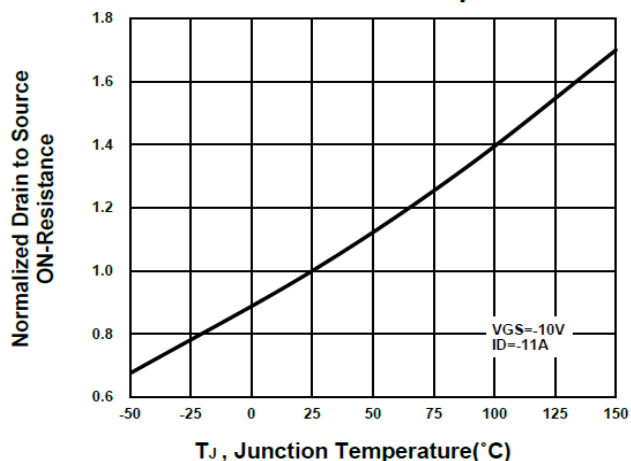
On-Resistance VS Drain Current



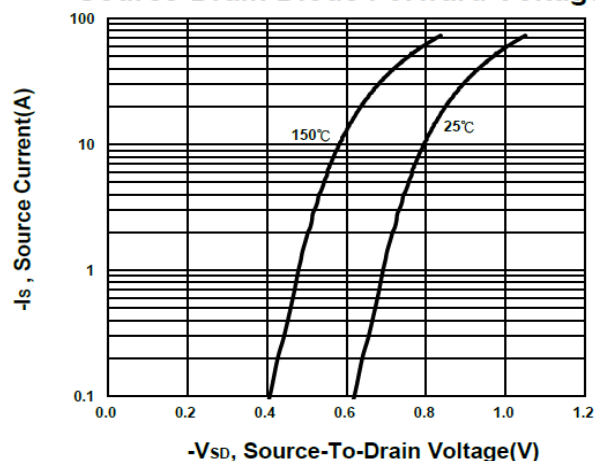
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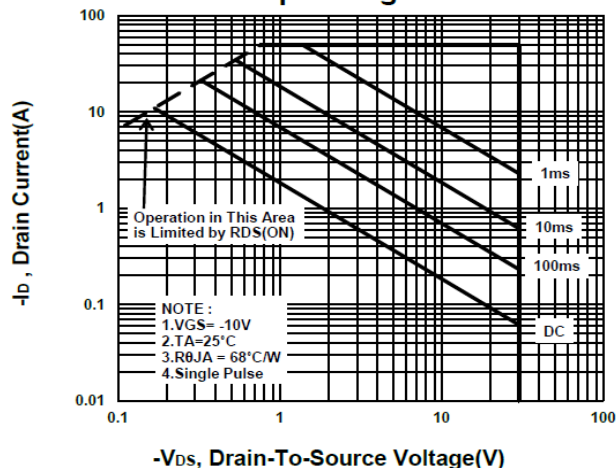
On-Resistance VS Temperature



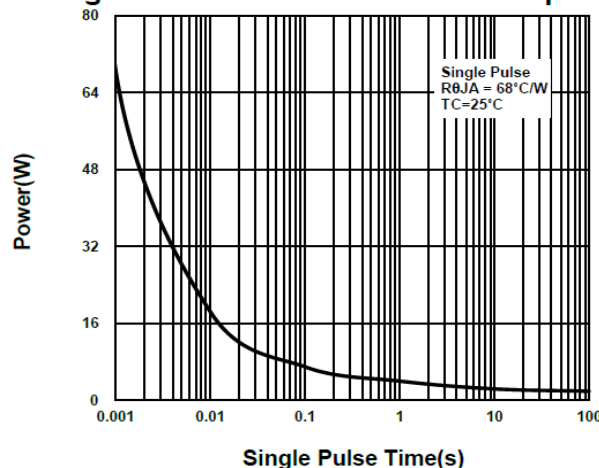
Source-Drain Diode Forward Voltage



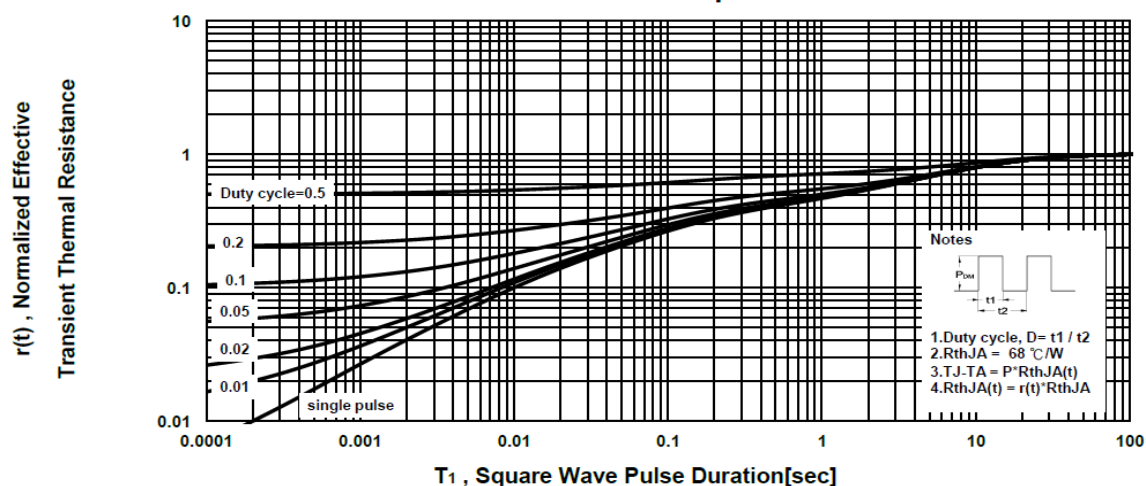
Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve



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Package Dimension

SOP-8 MECHANICAL DATA

Dimension	mm			Dimension	mm		
	Min.	Typ.	Max.		Min.	Typ.	Max.
A	4.8	4.9	5.0	H	0.4	0.6	0.93
B	3.8	3.9	4.0	I	0.19	0.21	0.25
C	5.79	6.0	6.2	J	0.25	0.375	0.5
D	0.33	0.4	0.51	K	0°	3°	18°
E	1.25	1.27	1.29				
F	1.1	1.3	1.65				
G	0.05	0.15	0.25				

