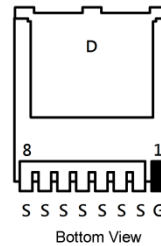
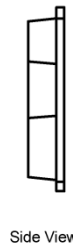
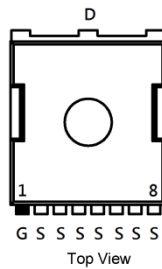
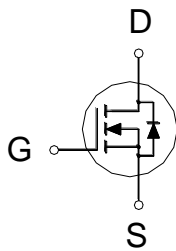


PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
100V	1.98mΩ	274A



G(Pin1): GATE
D: DRAIN
S(Pin2-Pin8): SOURCE

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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	100	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	$T_C = 25^\circ\text{C}$	I_D	274	A
	$T_C = 100^\circ\text{C}$		173	
Pulsed Drain Current ¹		I_{DM}	1040	
Avalanche Current		I_{AS}	31	
Avalanche Energy	L = 1mH	E_{AS}	480	mJ
Power Dissipation	$T_C = 25^\circ\text{C}$	P_D	312	W
	$T_C = 100^\circ\text{C}$		125	
Operating Junction & Storage Temperature Range		T_j, T_{stg}	-55 to 150	°C

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Case	$R_{\theta JC}$		0.4	°C / W
Junction-to-Ambient	$R_{\theta JA}$		50	

¹Pulse width limited by maximum junction temperature.

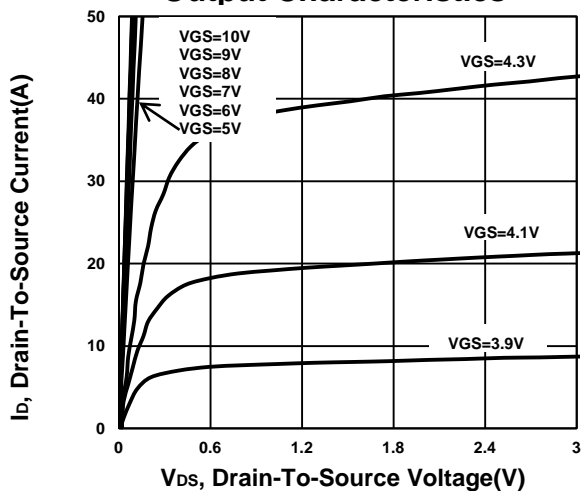
ELECTRICAL CHARACTERISTICS (T_J = 25 ° C, Unless Otherwise Noted)

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	100			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	2	2.6	4	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 100V, V _{GS} = 0V			1	μA
		V _{DS} = 100V, V _{GS} = 0V, T _J = 55 ° C			100	
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = 10V, I _D = 14A		1.64	1.98	mΩ
Forward Transconductance ¹	g _{fs}	V _{DS} = 5V, I _D = 14A		71		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 50V, f = 1MHz		11204		pF
Output Capacitance	C _{oss}			1017		
Reverse Transfer Capacitance	C _{rss}			62		
Gate Resistance	R _g	V _{GS} = 0V, V _{DS} = 0V, f = 1MHz		0.8		Ω
Total Gate Charge ²	Q _g	V _{GS} = 10V, V _{DS} = 50V, I _D = 14A		195		nC
Gate-Source Charge ²	Q _{gs}			50		
Gate-Drain Charge ²	Q _{gd}			44		
Turn-On Delay Time ²	t _{d(on)}	V _{DD} = 50V, I _D ≅ 14A, V _{GS} = 10V, R _{GEN} = 6Ω		52		nS
Rise Time ²	t _r			58		
Turn-Off Delay Time ²	t _{d(off)}			163		
Fall Time ²	t _f			71		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T_J = 25 ° C)						
Continuous Current	I _S				260	A
Forward Voltage ¹	V _{SD}	I _F = 14A, V _{GS} = 0V			1.2	V
Reverse Recovery Time	t _{rr}	I _F = 14A, di _F /dt = 100A/μs		74		nS
Reverse Recovery Charge	Q _{rr}				186	

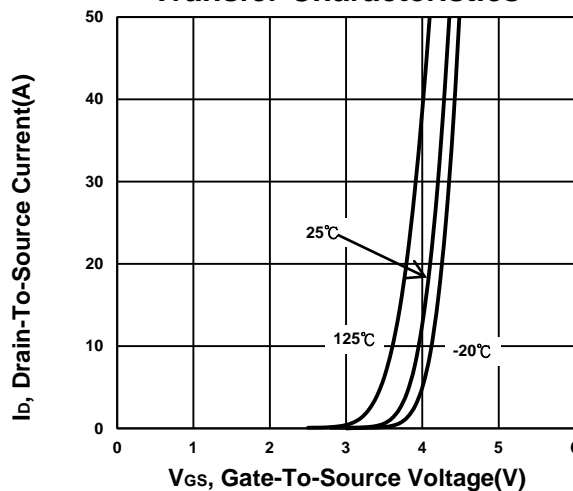
¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

²Independent of operating temperature.

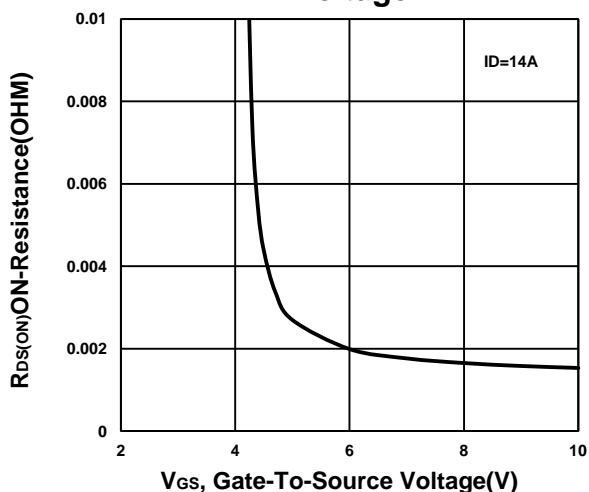
Output Characteristics



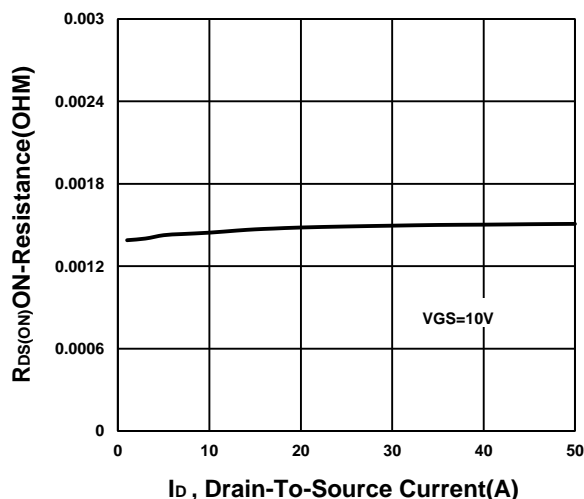
Transfer Characteristics



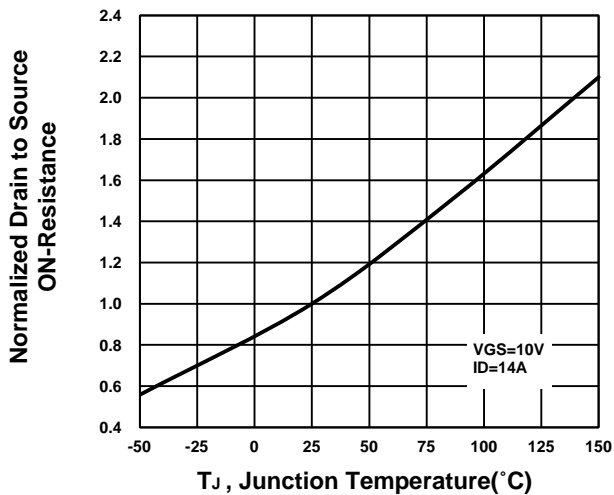
On-Resistance VS Gate-To-Source Voltage



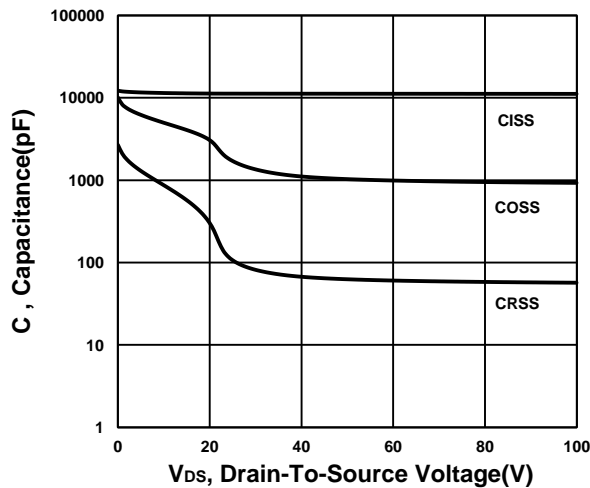
On-Resistance VS Drain Current



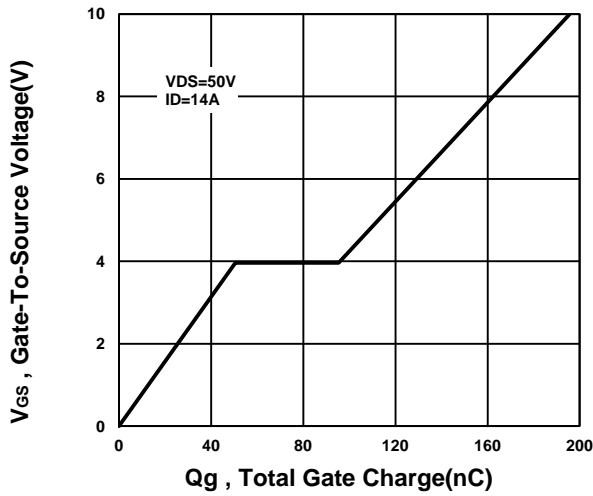
On-Resistance VS Temperature



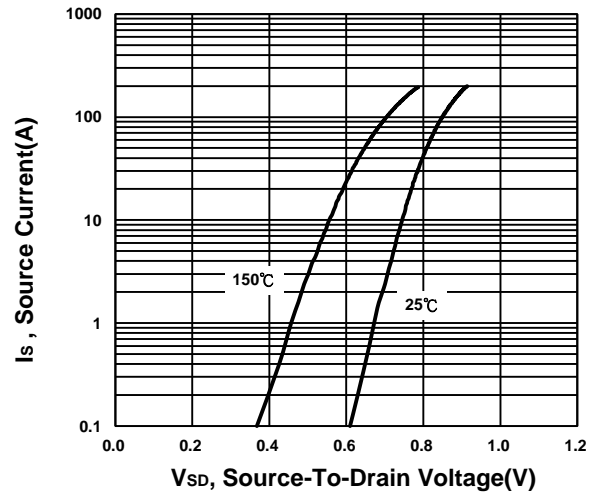
Capacitance Characteristic



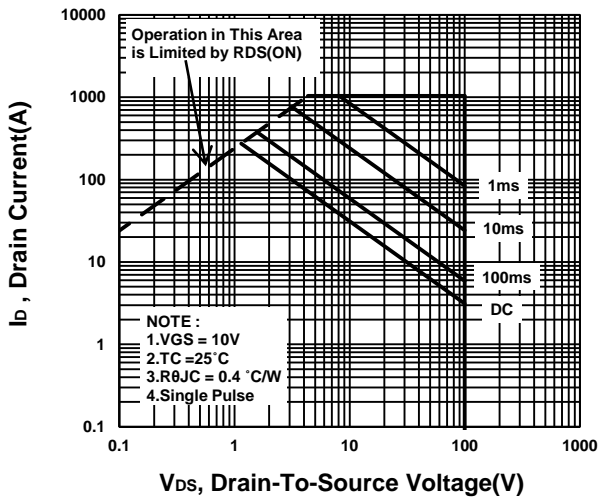
Gate charge Characteristics



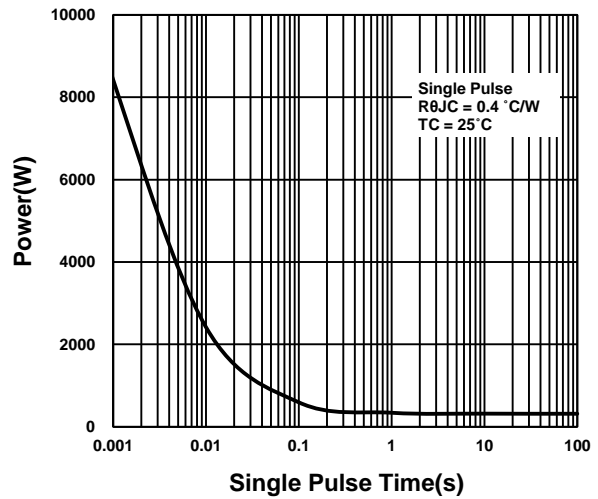
Source-Drain Diode Forward Voltage



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

