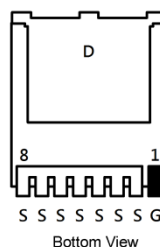
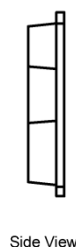
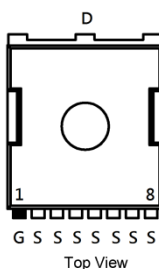
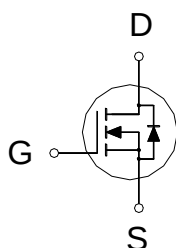


PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
100V	1.98m Ω	300A



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	300	A
	$T_C = 100^\circ\text{C}$		212	
Pulsed Drain Current ¹		I_{DM}	1136	
Avalanche Current		I_{AS}	31	
Avalanche Energy	L = 1mH	E_{AS}	480	mJ
Power Dissipation	$T_C = 25^\circ\text{C}$	P_D	375	W
	$T_C = 100^\circ\text{C}$		187	
Operating Junction & Storage Temperature Range		T_j, T_{stg}	-55 to 175	$^\circ\text{C}$

THERMAL RESISTANCE RATINGS

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

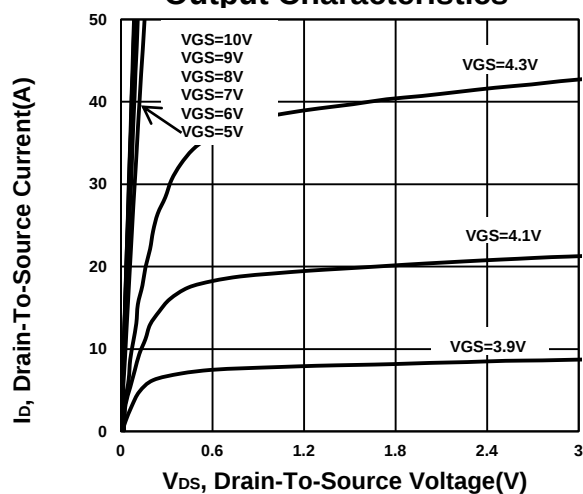
¹Pulse width limited by maximum junction temperature.

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

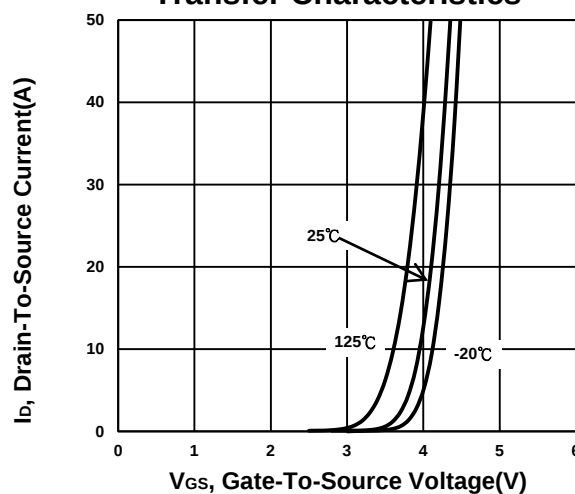
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	100			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	2	2.6	4	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 100V, V_{GS} = 0V$			1	μA
		$V_{DS} = 100V, V_{GS} = 0V, T_J = 55^\circ C$			100	
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 10V, I_D = 14A$		1.64	1.98	m Ω
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	$t_{d(on)}$	$V_{DD} = 50V,$ $I_D \cong 14A, V_{GS} = 10V, R_{GEN} = 6\Omega$		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 ($T_J = 25^\circ C$)						
Continuous Current	I_S				300	A
Forward Voltage ¹	V_{SD}	$I_F = 14A, V_{GS} = 0V$			1.2	V
Reverse Recovery Time	t_{rr}	$I_F = 14A, dI_F/dt = 100A/\mu s$		74		nS
Reverse Recovery Charge	Q_{rr}			186		nC

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

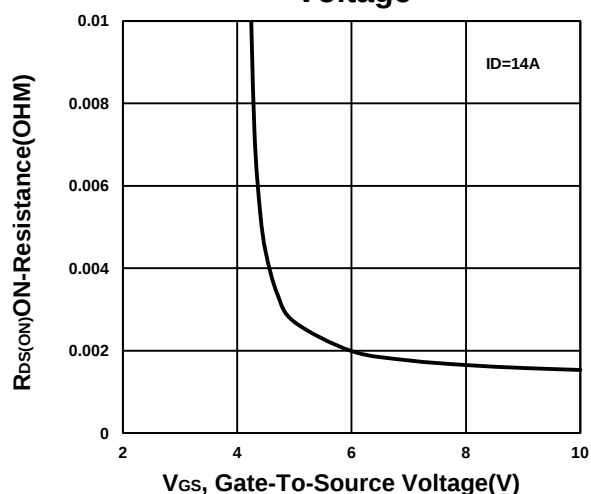
Output Characteristics



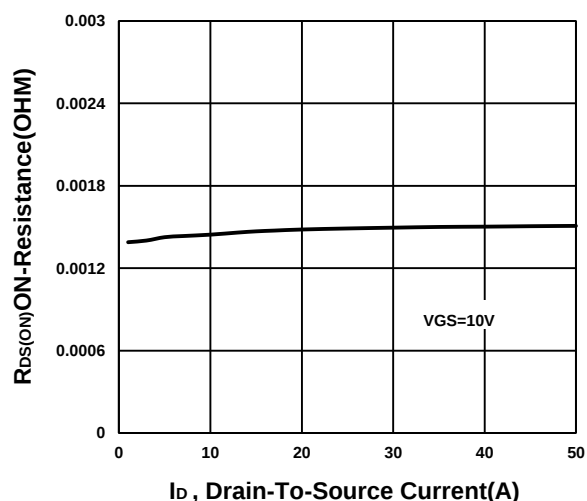
Transfer Characteristics



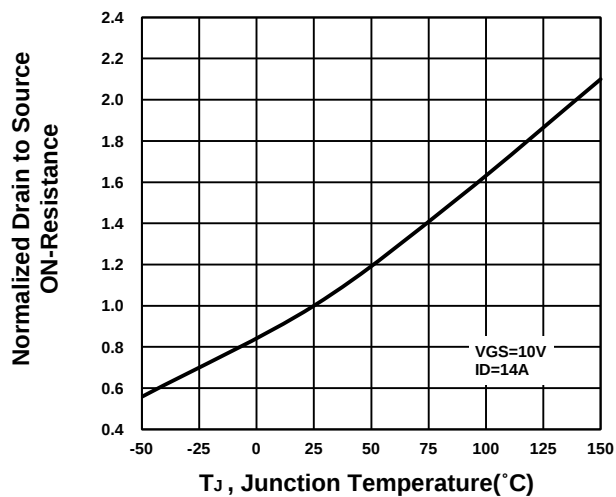
On-Resistance VS Gate-To-Source Voltage



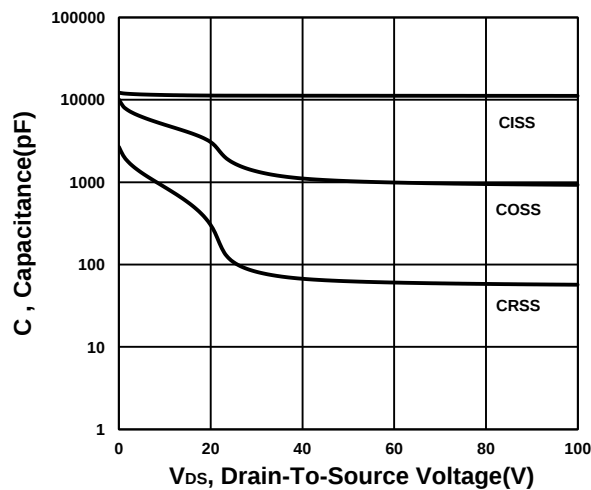
On-Resistance VS Drain Current



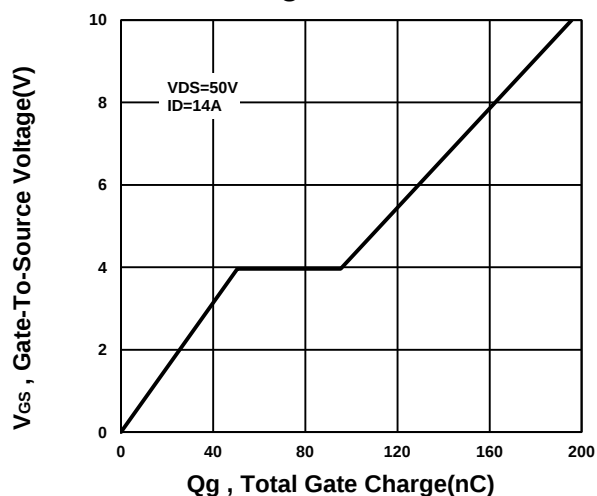
On-Resistance VS Temperature



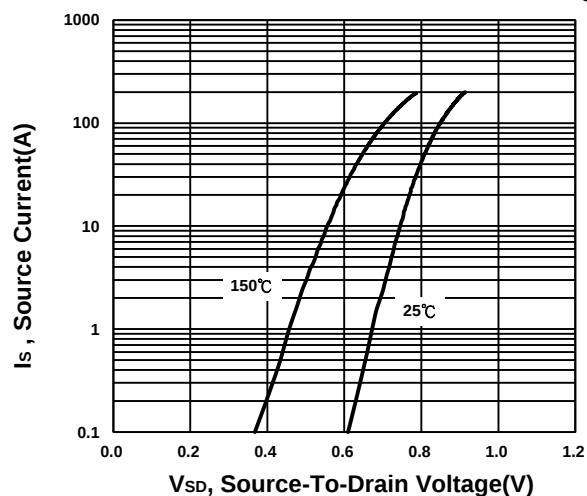
Capacitance Characteristic



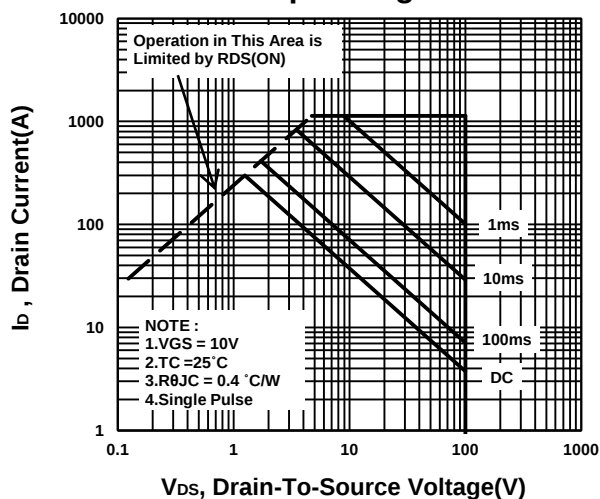
Gate charge Characteristics



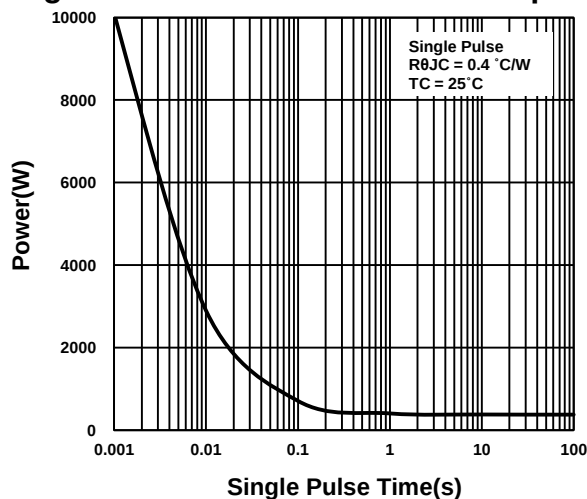
Source-Drain Diode Forward Voltage



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

