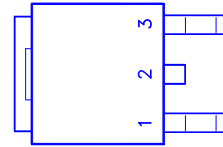
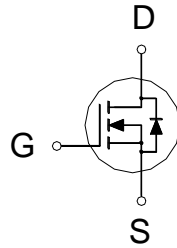


PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
250V	230m Ω	18A



1: GATE
2: DRAIN
3: SOURCE

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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	250	V
Gate-Source Voltage		V_{GS}	± 20	V
Continuous Drain Current	$T_C = 25^\circ\text{C}$	I_D	18	A
	$T_C = 100^\circ\text{C}$		11	
Pulsed Drain Current ¹		I_{DM}	51	
Avalanche Current		I_{AS}	9	
Avalanche Energy	$L = 1\text{mH}$	E_{AS}	40	mJ
Power Dissipation	$T_C = 25^\circ\text{C}$	P_D	74	W
	$T_C = 100^\circ\text{C}$		29	
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	$R_{\theta JA}$		62.5	$^\circ\text{C} / \text{W}$
Junction-to-Case	$R_{\theta JC}$		1.7	

¹Pulse width limited by maximum junction temperature.

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

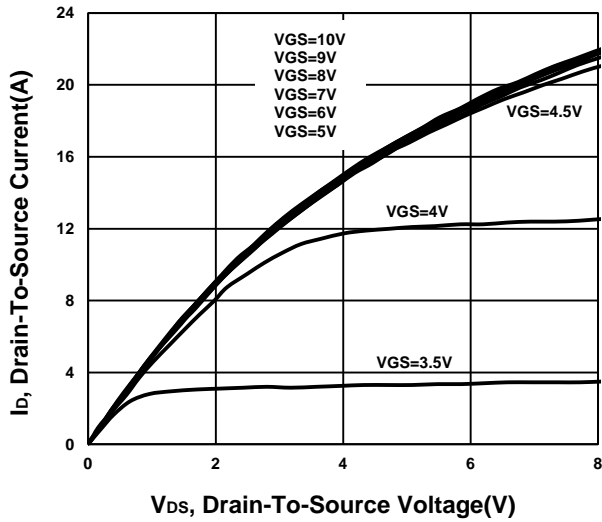
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{V}, I_D = 250\mu\text{A}$	250			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	1	2	3	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0\text{V}, V_{GS} = \pm 20\text{V}$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 250\text{V}, V_{GS} = 0\text{V}$			1	μA
		$V_{DS} = 200\text{V}, V_{GS} = 0\text{V}, T_J = 125^\circ\text{C}$			10	
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 4.5\text{V}, I_D = 9\text{A}$		210	286	m Ω
		$V_{GS} = 10\text{V}, I_D = 9\text{A}$		193	230	

Forward Transconductance ¹	g_{fs}	$V_{DS} = 10V, I_D = 9A$		21		S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 25V, f = 1MHz$		788		pF
Output Capacitance	C_{oss}			115		
Reverse Transfer Capacitance	C_{rss}			14		
Total Gate Charge ²	Q_g	$V_{GS} = 10V, V_{DS} = 200V$ $I_D = 18A$		24		nC
Gate-Source Charge ²	Q_{gs}			3.3		
Gate-Drain Charge ²	Q_{gd}			8.4		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DS} = 125V,$ $I_D \cong 18A, V_{GS} = 10V, R_{GEN} = 6\Omega$		14		nS
Rise Time ²	t_r			101		
Turn-Off Delay Time ²	$t_{d(off)}$			104		
Fall Time ²	t_f			79		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T_J = 25 ° C)						
Continuous Current	I_S				18	A
Forward Voltage ¹	V_{SD}	$I_F = 18A, V_{GS} = 0V$			1	V
Diode Reverse Recovery Time	t_{rr}	$I_F = 18A, di/dt = 100A/\mu s$		158		nS
Diode Reverse Recovery Charge	Q_{rr}			0.98		uC

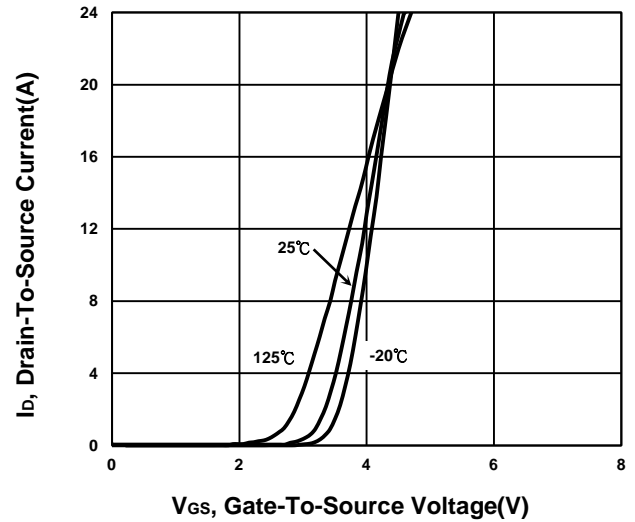
¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

²Independent of operating temperature.

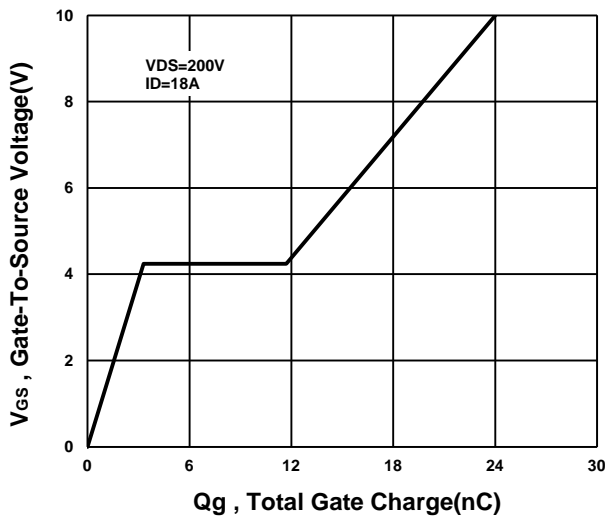
Output Characteristics



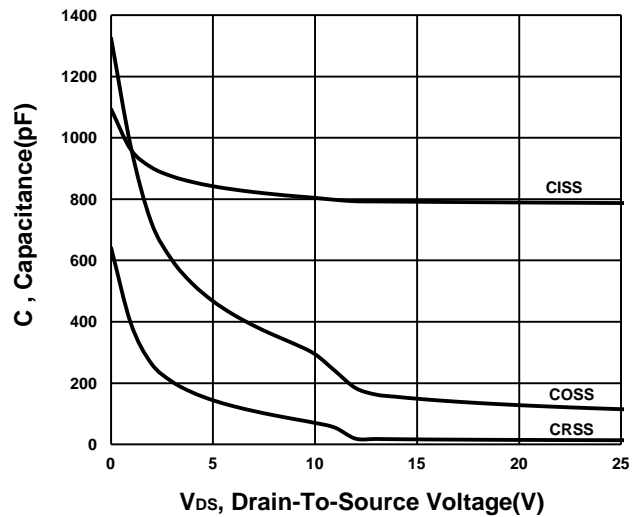
Transfer Characteristics



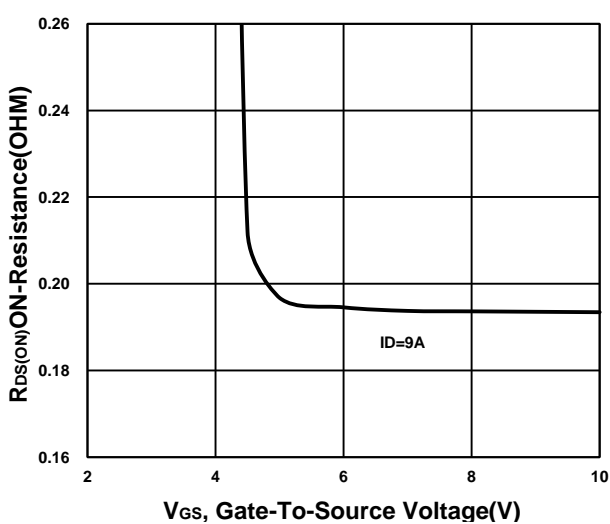
Gate charge Characteristics



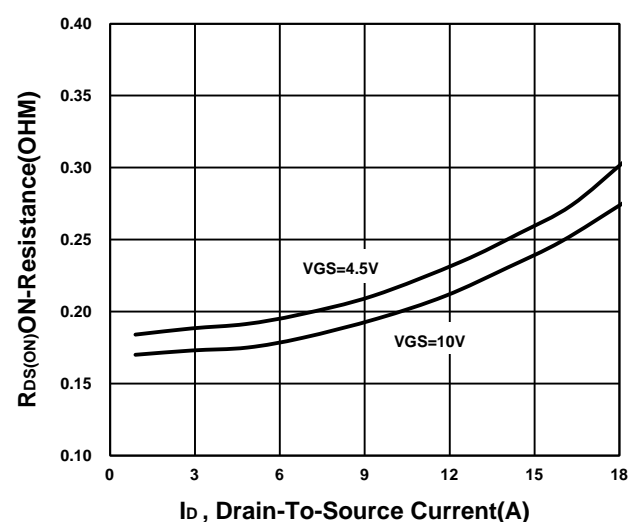
Capacitance Characteristic



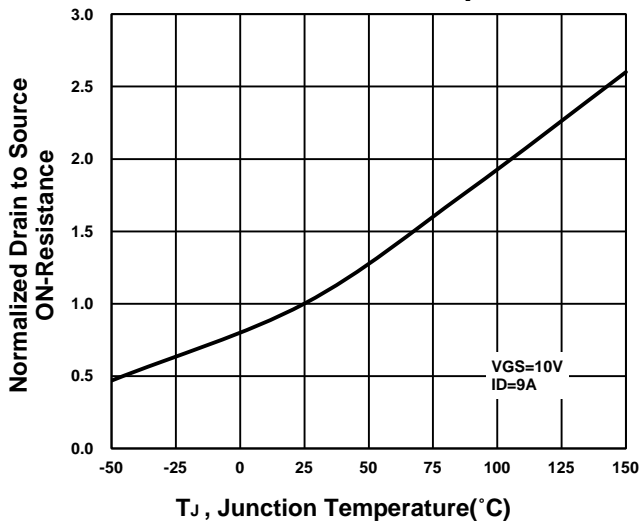
On-Resistance VS Gate-To-Source



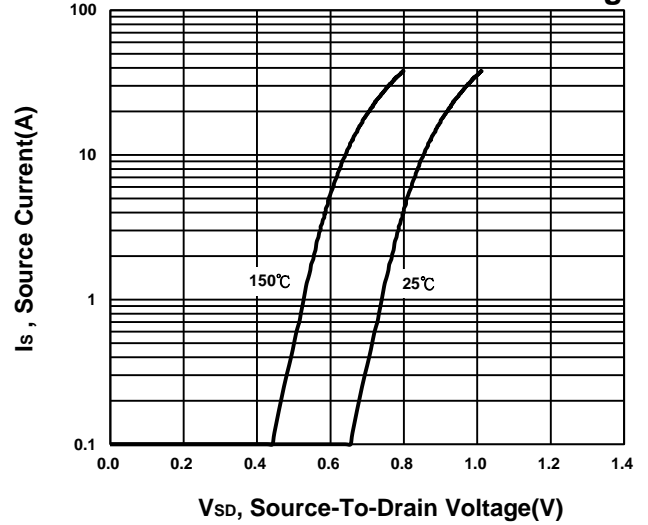
On-Resistance VS Drain Current



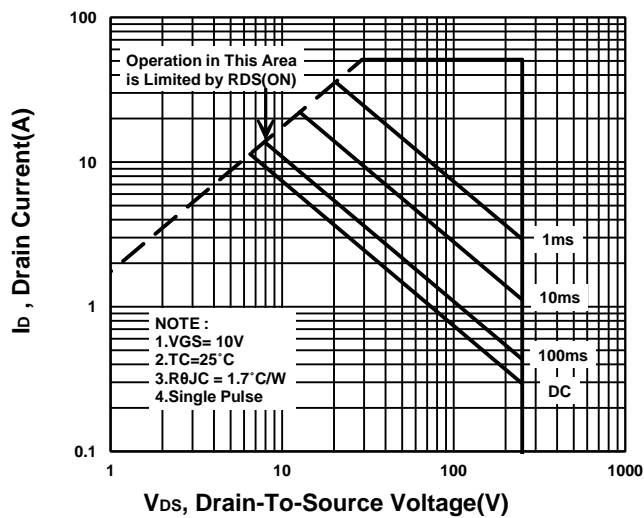
On-Resistance VS Temperature



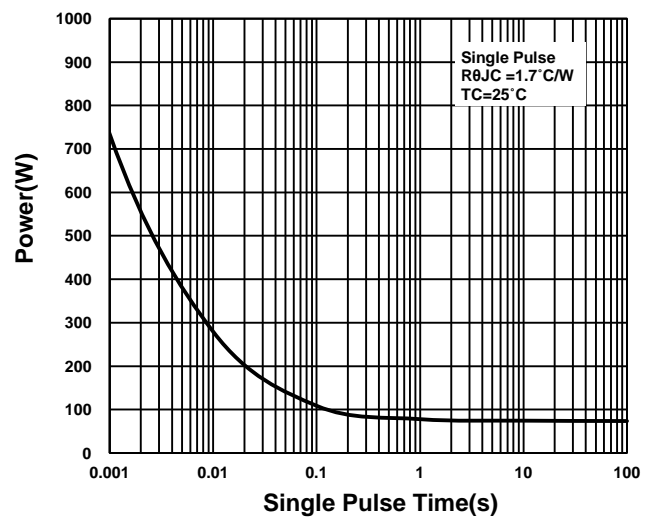
Source-Drain Diode Forward Voltage



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

