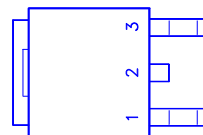
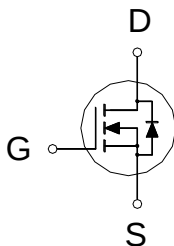




PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
150V	9.3m Ω	70A



1. GATE
2. DRAIN
3. 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}	150	V
Gate-Source Voltage		V_{GS}	± 20	V
Continuous Drain Current	$T_C = 25\text{ }^{\circ}\text{C}$	I_D	70	A
	$T_C = 100\text{ }^{\circ}\text{C}$		50	
Pulsed Drain Current ¹		I_{DM}	324	
Avalanche Current		I_{AS}	19	
Avalanche Energy	$L = 1\text{mH}$	E_{AS}	181	mJ
Power Dissipation	$T_C = 25\text{ }^{\circ}\text{C}$	P_D	115	W
	$T_C = 100\text{ }^{\circ}\text{C}$		58	
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-Ambient ²	Steady-State	$R_{\theta JA}$		62.5	
Junction-to-Case	Steady-State	$R_{\theta JC}$		1.3	

¹Pulse width limited by maximum junction temperature.

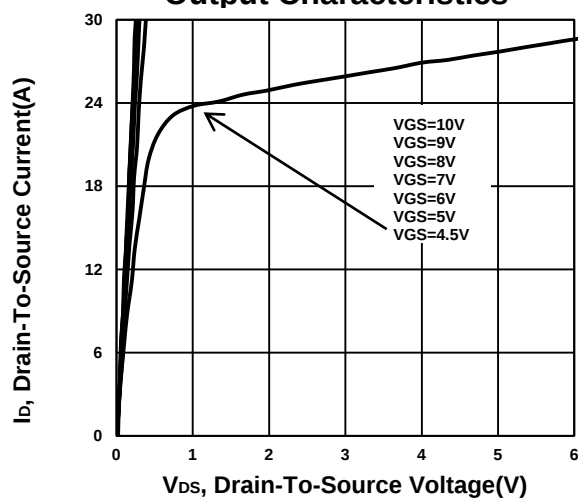
ELECTRICAL CHARACTERISTICS ($T_J = 25\text{ }^{\circ}\text{C}$, Unless Otherwise Noted)

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	150			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	2	2.9	4	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±100	nA

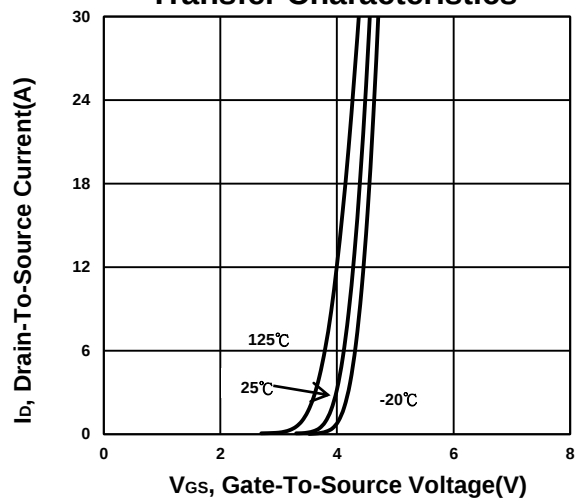
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 150V, V_{GS} = 0V$			1	μA
		$V_{DS} = 150V, V_{GS} = 0V, T_J = 125\text{ }^{\circ}C$			100	
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 10V, I_D = 20A$		8	9.3	$m\Omega$
Forward Transconductance ¹	g_{fs}	$V_{DS} = 5V, I_D = 20A$		58		S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 75V, f = 1MHz$		3618		pF
Output Capacitance	C_{oss}			308		
Reverse Transfer Capacitance	C_{rss}			7		
Gate Resistance	R_g	$V_{GS} = 0V, V_{DS} = 0V, f = 1MHz$		1.2		Ω
Total Gate Charge ²	Q_g	$V_{GS} = 10V, V_{DS} = 75V, I_D = 20A$		54		nC
Gate-Source Charge ²	Q_{gs}			17		
Gate-Drain Charge ²	Q_{gd}			13		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DD} = 75V,$ $I_D \cong 20A, V_{GS} = 10V, R_{GEN} = 6\Omega$		21		nS
Rise Time ²	t_r			53		
Turn-Off Delay Time ²	$t_{d(off)}$			48		
Fall Time ²	t_f			62		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_J = 25\text{ }^{\circ}C$)						
Continuous Current	I_S				70	A
Forward Voltage ¹	V_{SD}	$I_F = 20A, V_{GS} = 0V$			1.2	V
Reverse Recovery Time	t_{rr}	$I_F = 20A, dI_F/dt = 100A/\mu s$		80		nS
Reverse Recovery Charge	Q_{rr}			187		nC

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

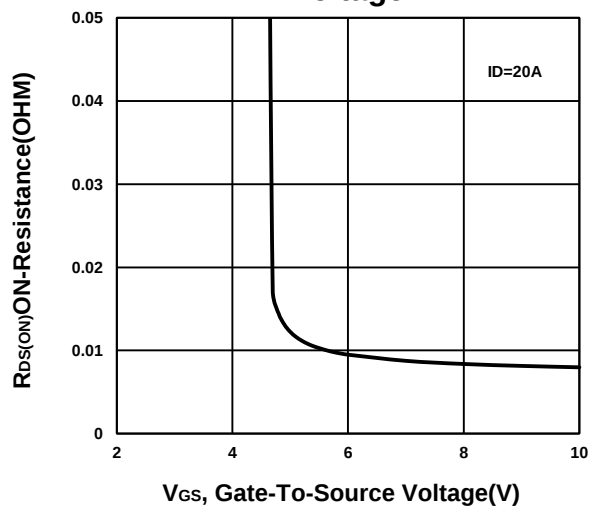
Output Characteristics



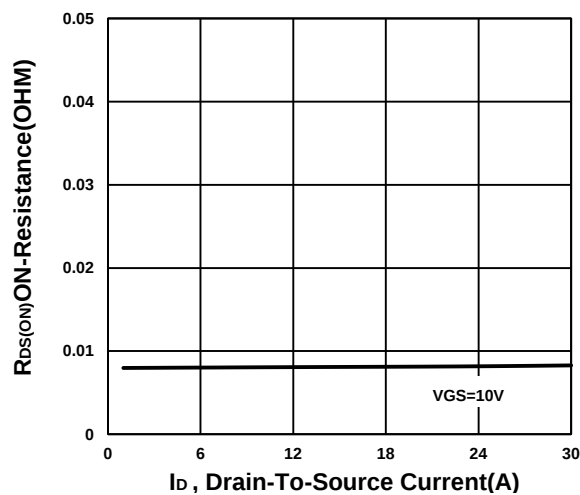
Transfer Characteristics



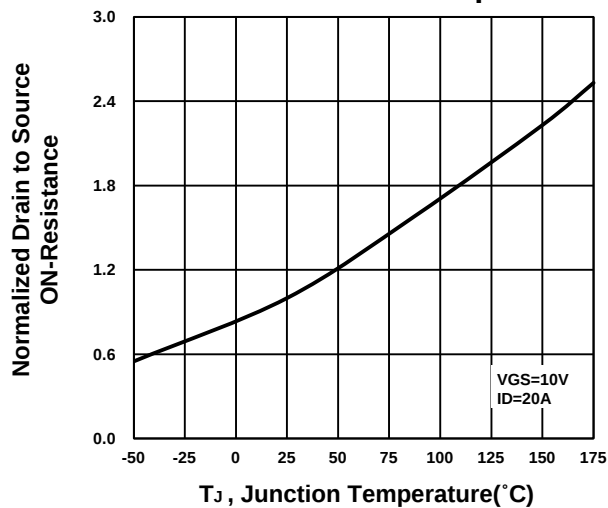
On-Resistance VS Gate-To-Source Voltage



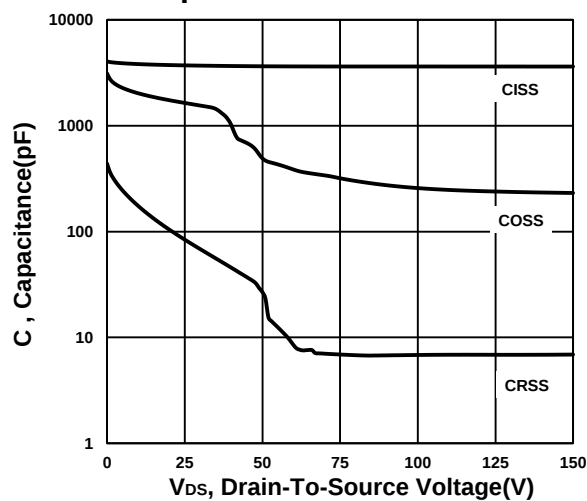
On-Resistance VS Drain Current



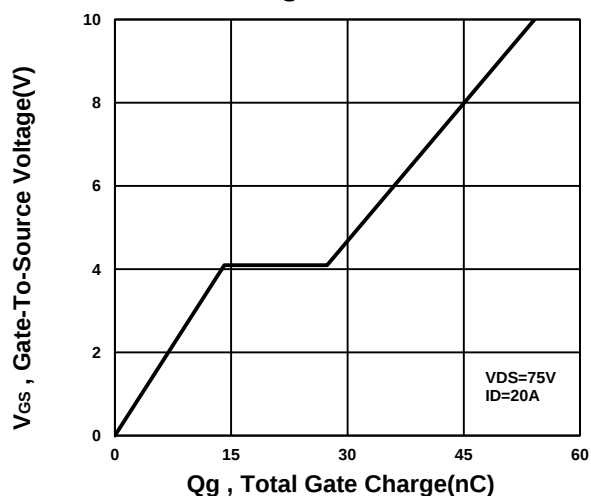
On-Resistance VS Temperature



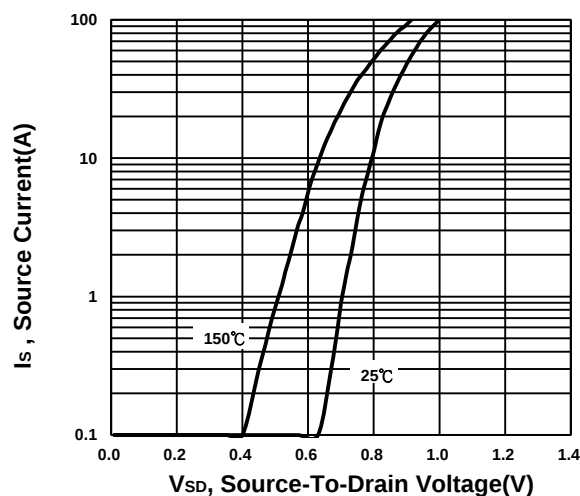
Capacitance Characteristic



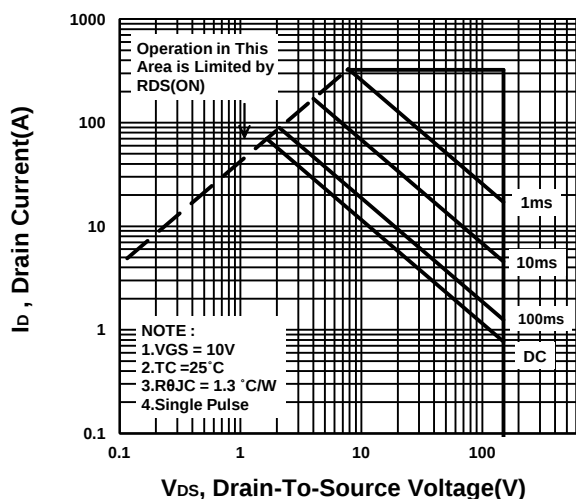
Gate charge Characteristics



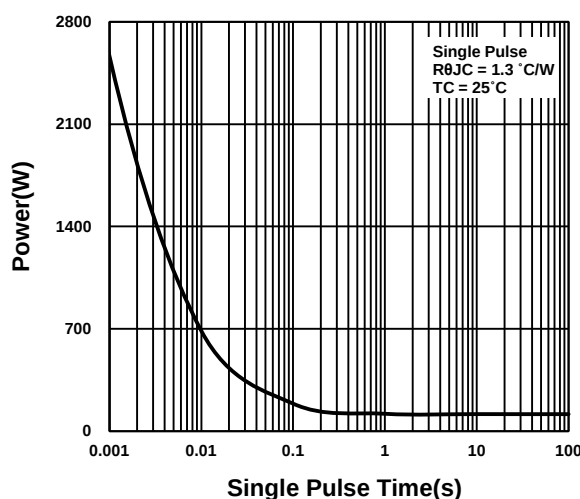
Source-Drain Diode Forward Voltage



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

