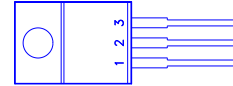
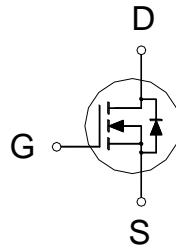




PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
150V	16.5m Ω	68A



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}	± 25	V
Continuous Drain Current	$T_C = 25\text{ }^\circ\text{C}$	I_D	68	A
	$T_C = 100\text{ }^\circ\text{C}$		43	
Pulsed Drain Current ¹		I_{DM}	270	
Avalanche Current		I_{AS}	30	
Avalanche Energy	$L = 1\text{mH}$	E_{AS}	435	mJ
Power Dissipation	$T_C = 25\text{ }^\circ\text{C}$	P_D	192	W
	$T_C = 100\text{ }^\circ\text{C}$		77	
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-Case	$R_{\theta JC}$		0.65	$^\circ\text{C} / \text{W}$
Junction-to-Ambient	$R_{\theta JA}$		62.5	

¹Pulse width limited by maximum junction temperature.

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

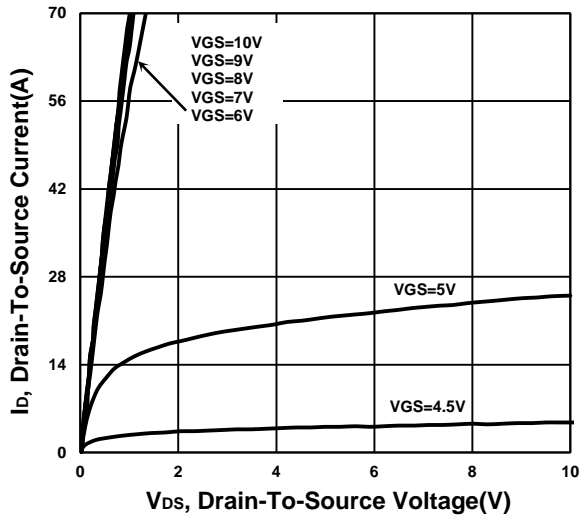
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{V}, I_D = 250\mu\text{A}$	150			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	2.5	3.5	4.5	V
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0\text{V}, V_{GS} = \pm 25\text{V}$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 120\text{V}, V_{GS} = 0\text{V}$			1	μA
		$V_{DS} = 100\text{V}, V_{GS} = 0\text{V}, T_J = 125\text{ }^\circ\text{C}$			10	

Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 7V, I_D = 20A$	14	18.5	mΩ
		$V_{GS} = 10V, I_D = 20A$	13	16.5	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 10V, I_D = 20A$	34		S
DYNAMIC					
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 25V, f = 1MHz$	3452		pF
Output Capacitance	C_{oss}		530		
Reverse Transfer Capacitance	C_{rss}		209		
Gate Resistance	R_g	$V_{GS} = 0V, V_{DS} = 0V, f = 1MHz$	1.4		Ω
Total Gate Charge ²	Q_g	$V_{GS} = 10V, V_{DS} = 75V, I_D = 20A$	80		nC
Gate-Source Charge ²	Q_{gs}		17		
Gate-Drain Charge ²	Q_{gd}		28		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DS} = 75V$ $I_D \cong 20A, V_{GS} = 10V, R_{GEN} = 6\Omega$	23		nS
Rise Time ²	t_r		56		
Turn-Off Delay Time ²	$t_{d(off)}$		55		
Fall Time ²	t_f		67		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T_J = 25 °C)					
Continuous Current	I_S			68	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}		225		nC

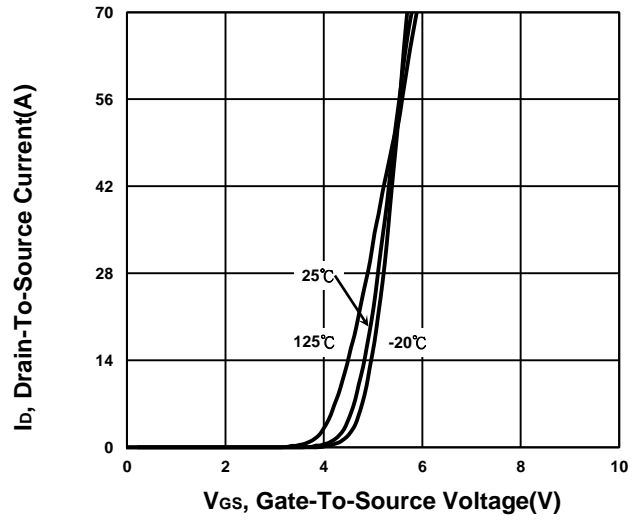
¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

²Independent of operating temperature.

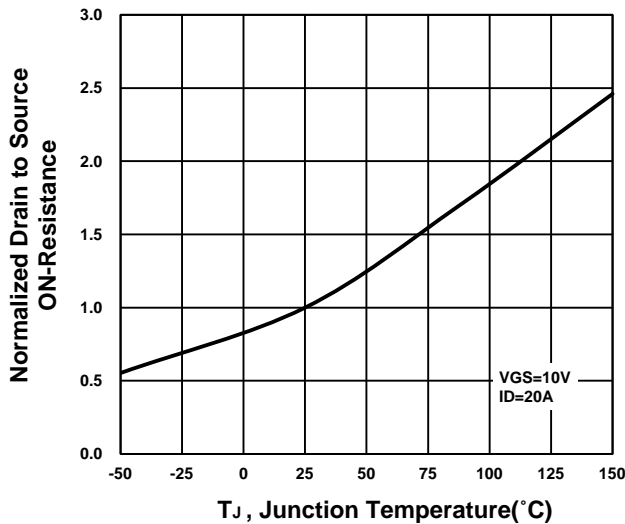
Output Characteristics



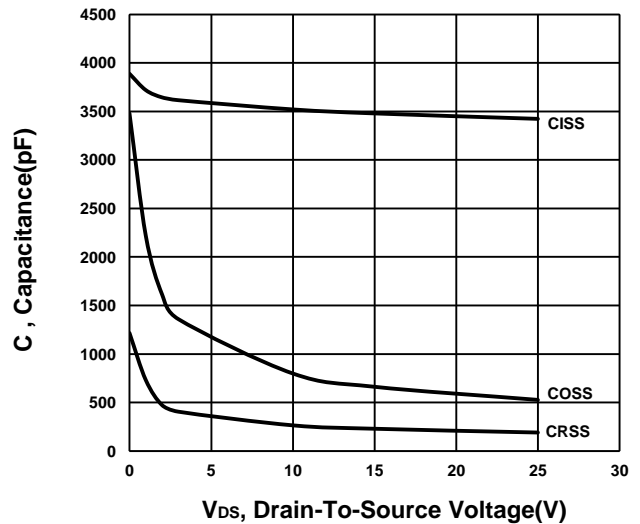
Transfer Characteristics



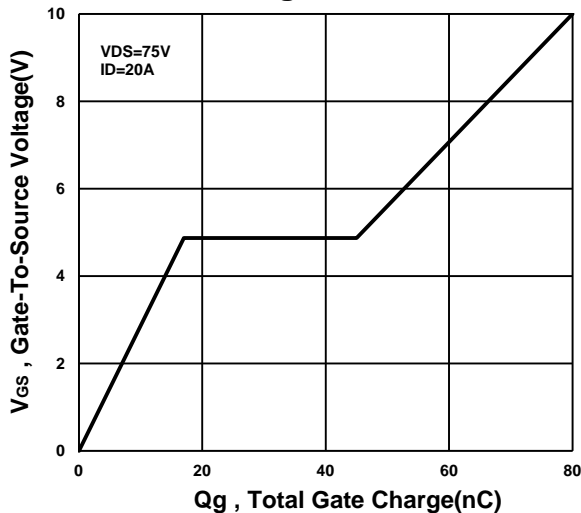
On-Resistance VS Temperature



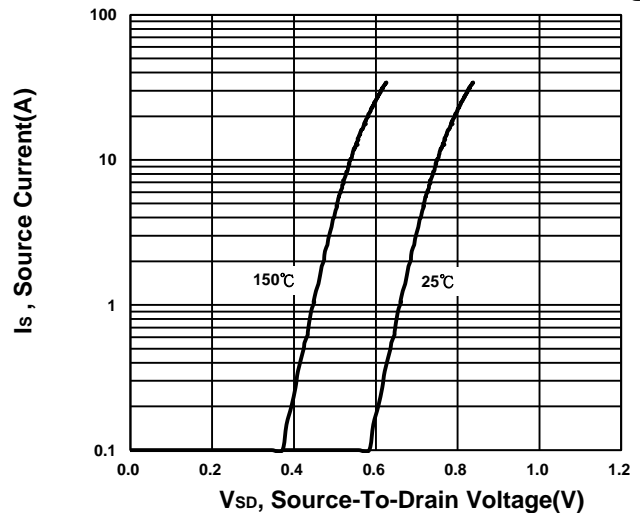
Capacitance Characteristic



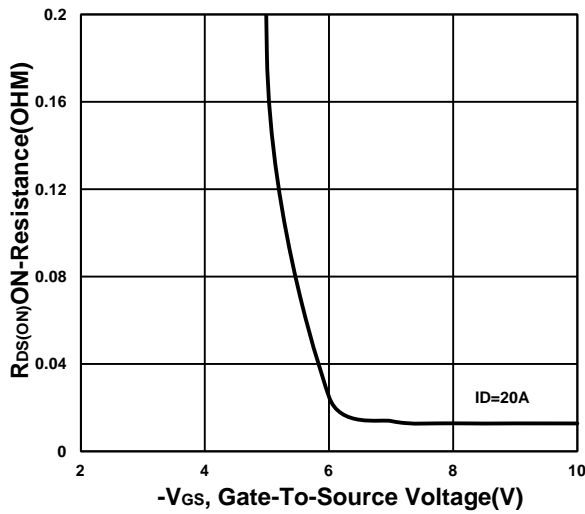
Gate charge Characteristics



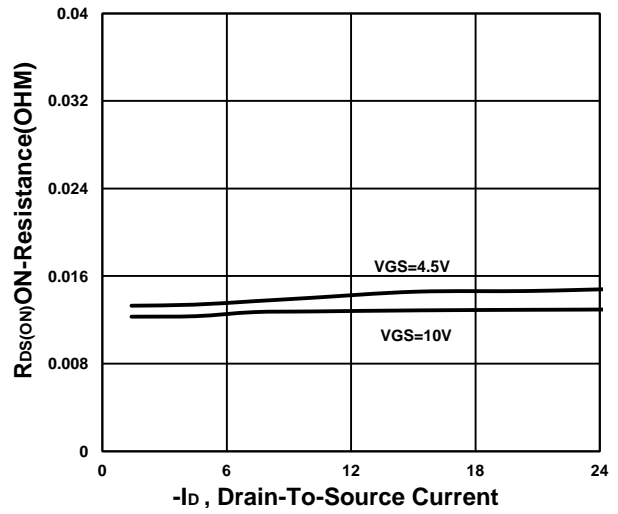
Source-Drain Diode Forward Voltage



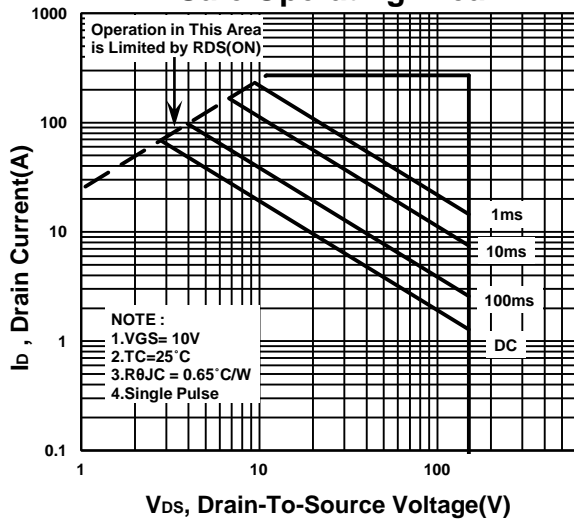
On-Resistance VS Gate-To-Source



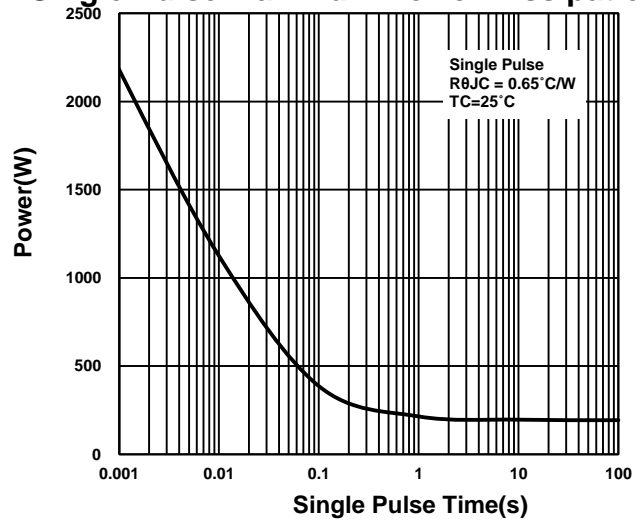
On-Resistance VS Drain Current



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

