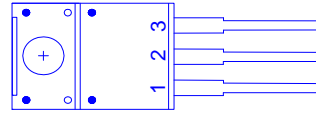
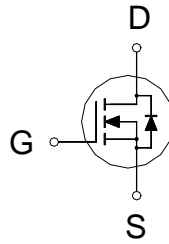




PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
110V	16mΩ	34A



1.GATE
2.DRAIN
3.SOURCE

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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current ²	$T_C = 25\text{ °C}$	I_D	34	A
	$T_C = 100\text{ °C}$		21	
Pulsed Drain Current ^{1,2}		I_{DM}	120	
Avalanche Current		I_{AS}	12	
Avalanche Energy	$L = 1\text{mH}$	E_{AS}	72	mJ
Power Dissipation	$T_C = 25\text{ °C}$	P_D	48	W
	$T_C = 100\text{ °C}$		19	
Mounting Torque ³	Machine Screw		5	Kgf.cm
			0.49	N.m
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	$R_{\theta JC}$		2.6	°C / W
Junction-to-Ambient	$R_{\theta JA}$		62.5	°C / W

¹Pulse width limited by maximum junction temperature.

²Limited only by maximum temperature allowed.

³Not suggest using Self-Tapping screw.

ELECTRICAL CHARACTERISTICS ($T_j = 25\text{ °C}$, Unless Otherwise Noted)

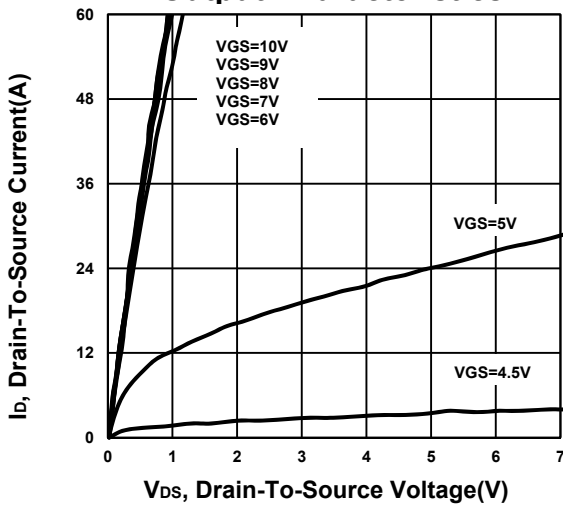
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	110			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	2	3.2	4	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			±100	

Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 88V, V_{GS} = 0V$			1	μA
		$V_{DS} = 80V, V_{GS} = 0V, T_J = 125\text{ }^\circ C$			10	
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 7V, I_D = 15A$		13.5	21	$m\Omega$
		$V_{GS} = 10V, I_D = 20A$		12.5	16	
Forward Transconductance ¹	g_{fs}	$V_{DS} = 10V, I_D = 20A$		80		S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 25V, f = 1MHz$		3009		pF
Output Capacitance	C_{oss}			258		
Reverse Transfer Capacitance	C_{rss}			152		
Gate Resistance	R_g	$V_{GS} = 0V, V_{DS} = 0V, f = 1MHz$		0.81		Ω
Total Gate Charge ²	Q_g	$V_{DS} = 55V, V_{GS} = 10V, I_D = 20A$		57		nC
Gate-Source Charge ²	Q_{gs}			15.8		
Gate-Drain Charge ²	Q_{gd}			20		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DD} = 55V, I_D \cong 20A, V_{GS} = 10V, R_{GEN} = 6\Omega$		47		nS
Rise Time ²	t_r			88		
Turn-Off Delay Time ²	$t_{d(off)}$			86		
Fall Time ²	t_f			83		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_J = 25\text{ }^\circ C$)						
Continuous Current	I_S				36	A
Forward Voltage ¹	V_{SD}	$I_F = 20A, V_{GS} = 0V$			1.2	V
Reverse Recovery Time	t_{rr}	$I_F = 20A, di_F/dt = 100A / \mu S$		37		nS
Reverse Recovery Charge	Q_{rr}			50		nC

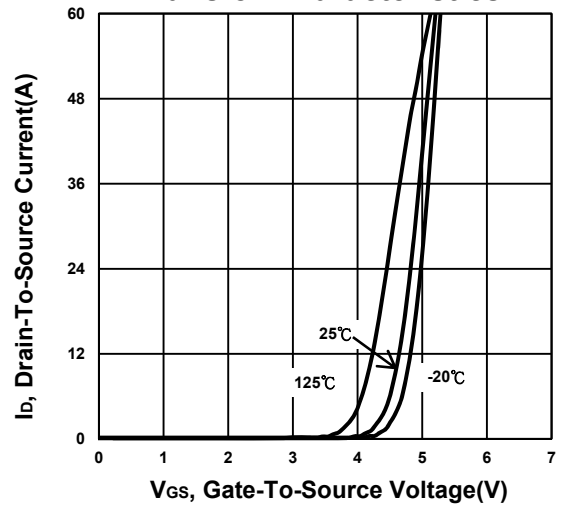
¹Pulse test : Pulse Width $\leq 300\ \mu sec$, Duty Cycle $\leq 2\%$.

²Independent of operating temperature.

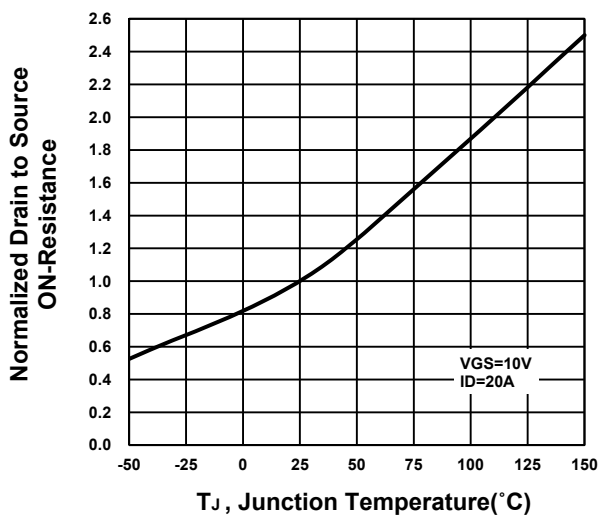
Output Characteristics



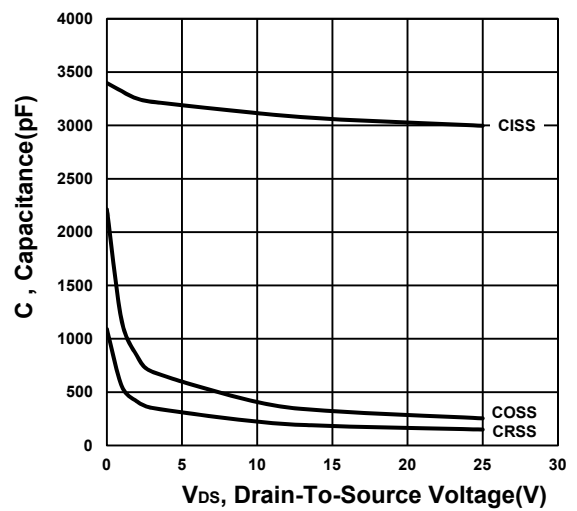
Transfer Characteristics



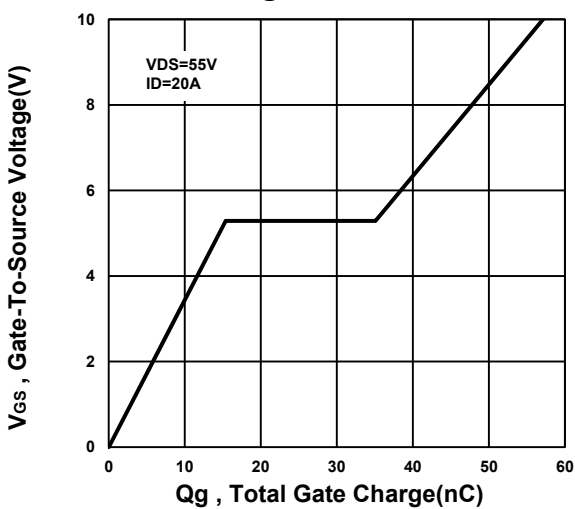
On-Resistance VS Temperature



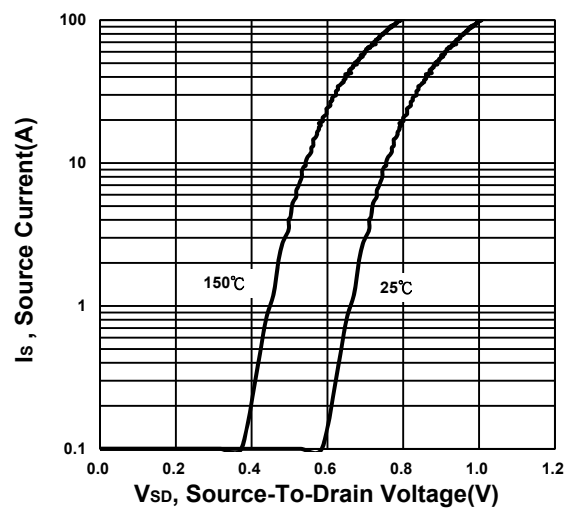
Capacitance Characteristic



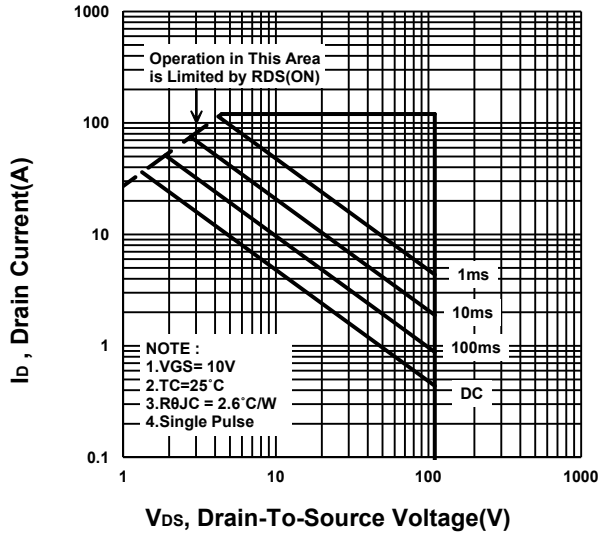
Gate charge Characteristics



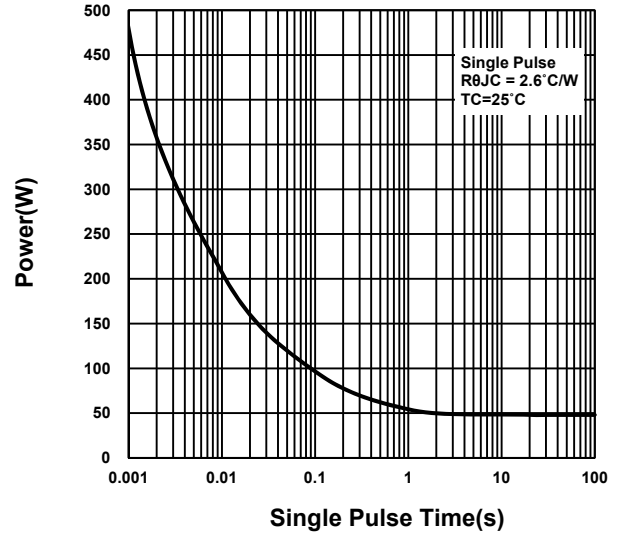
Source-Drain Diode Forward Voltage



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

