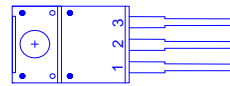
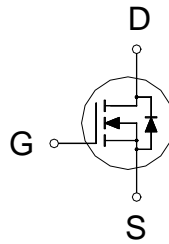




PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
800V	1.94Ω	7A



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}	800	V
Gate-Source Voltage	V_{GS}	±30	V
Continuous Drain Current ²	I_D	$T_C = 25^\circ\text{C}$	7
		$T_C = 100^\circ\text{C}$	4
Pulsed Drain Current ¹	I_{DM}	21	A
Avalanche Energy ³	EAS	61	mJ
Power Dissipation	P_D	$T_C = 25^\circ\text{C}$	57
		$T_C = 100^\circ\text{C}$	23
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	$R_{\theta JC}$		2.2	°C / W
Junction-to-Ambient	$R_{\theta JA}$		62.5	°C / W

¹Pulse width limited by maximum junction temperature.

²Ensure that the channel temperature does not exceed 150°C.

³ $V_{DD} = 50\text{V}$, $L = 10\text{mH}$, starting $T_j = 25^\circ\text{C}$.

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	$V_{(BR)DSS}$	$V_{GS} = 0\text{V}, I_D = 250\mu\text{A}$	800			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu\text{A}$	2.5	3.5	4.5	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0\text{V}, V_{GS} = \pm 30\text{V}$			±100	nA
Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 800\text{V}, V_{GS} = 0\text{V}, T_C = 25^\circ\text{C}$			1	μA
		$V_{DS} = 640\text{V}, V_{GS} = 0\text{V}, T_C = 100^\circ\text{C}$			100	

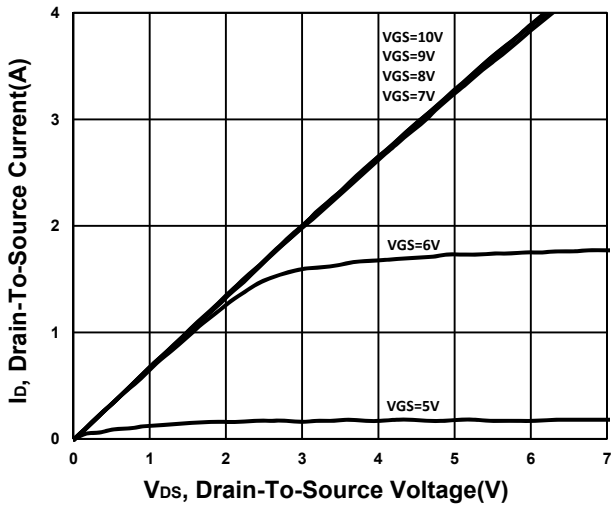
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 10V, I_D = 3.5A$		1.46	1.94	Ω
Forward Transconductance ¹	g_{fs}	$V_{DS} = 10V, I_D = 3.5A$		5		S
DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 25V, f = 1MHz$		1620		pF
Output Capacitance	C_{oss}			95		
Reverse Transfer Capacitance	C_{rss}			10		
Total Gate Charge ²	Q_g	$V_{DD} = 640V, I_D = 7A, V_{GS} = 10V$		33		nC
Gate-Source Charge ²	Q_{gs}			9.7		
Gate-Drain Charge ²	Q_{gd}			8.7		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DD} = 400V, I_D = 7A, R_G = 6\Omega$		80		nS
Rise Time ²	t_r			210		
Turn-Off Delay Time ²	$t_{d(off)}$			110		
Fall Time ²	t_f			130		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_J = 25^\circ C$)						
Continuous Current ³	I_S				7	A
Forward Voltage ¹	V_{SD}	$I_F = 7A, V_{GS} = 0V$			1.4	V
Reverse Recovery Time	t_{rr}	$I_F = 7A, di_F/dt = 100A / \mu S$		775		nS
Reverse Recovery Charge	Q_{rr}			5.5		uC

¹Pulse test : Pulse Width $\leq 380 \mu sec$, Duty Cycle $\leq 2\%$.

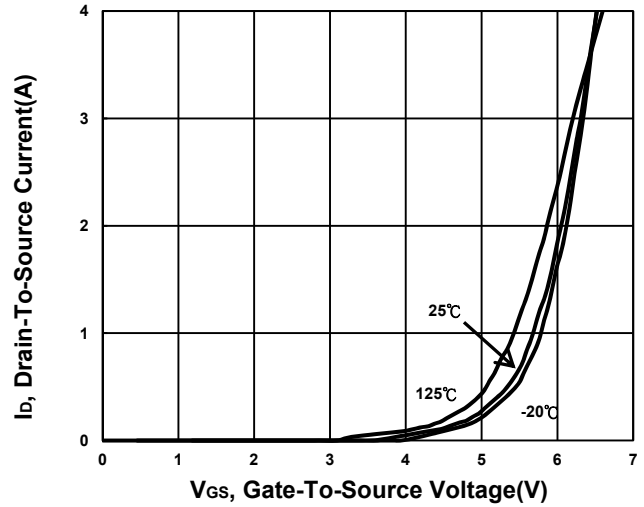
²Independent of operating temperature.

³Pulse width limited by maximum junction temperature.

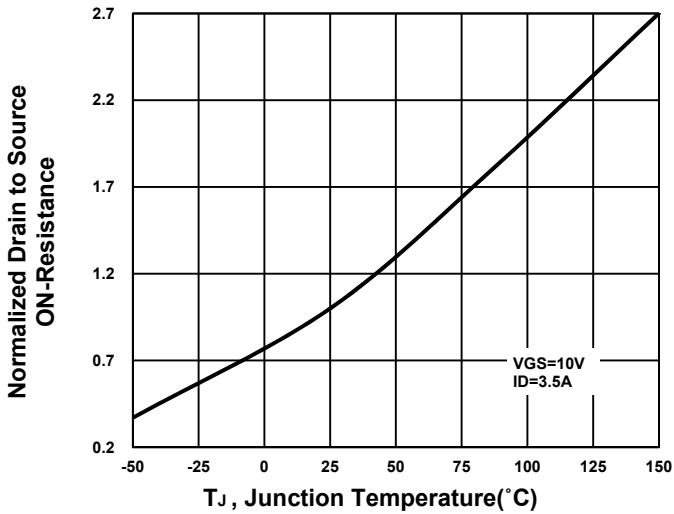
Output Characteristics



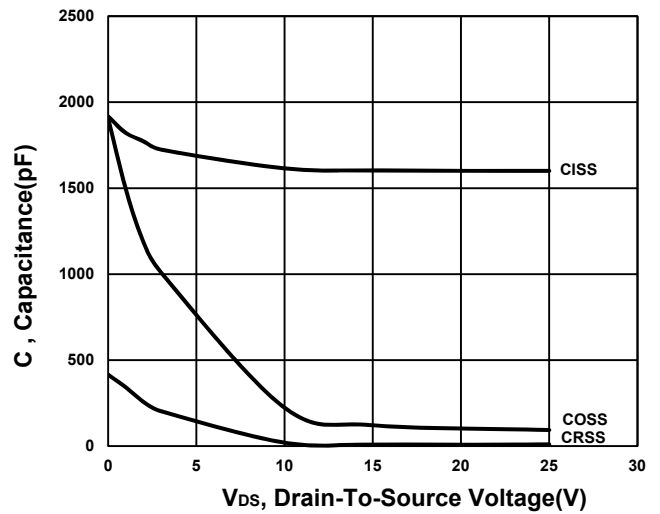
Transfer Characteristics



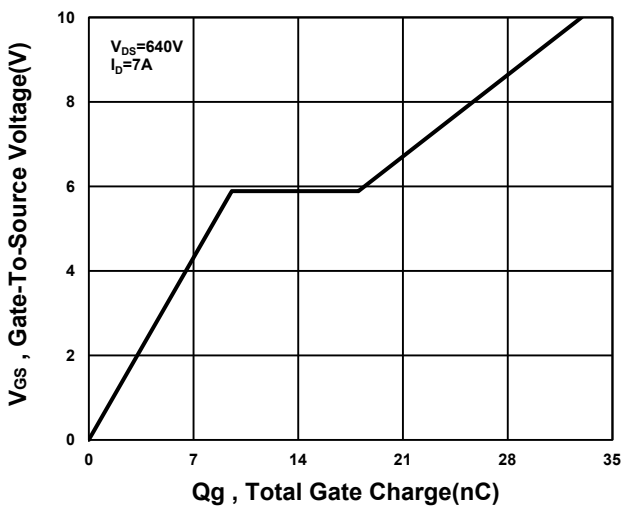
On-Resistance VS Temperature



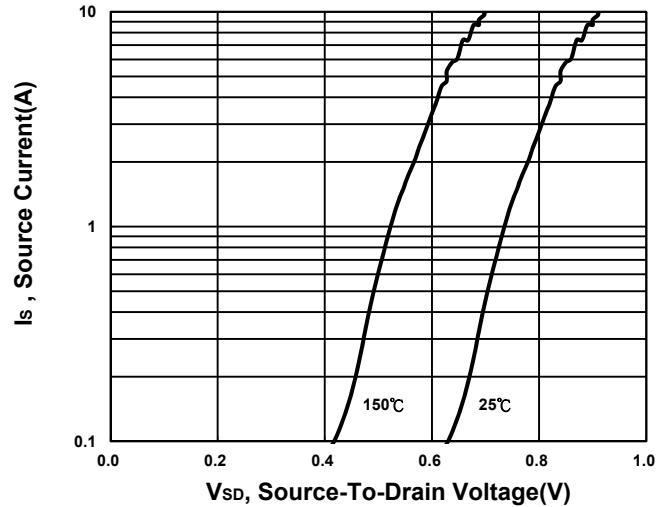
Capacitance Characteristic



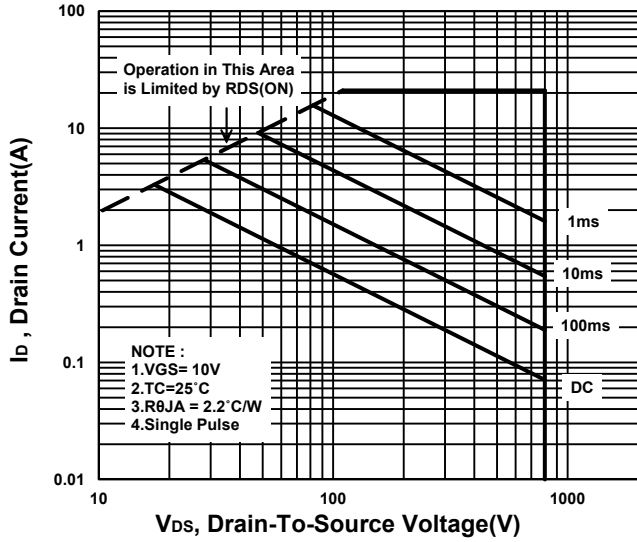
Gate charge Characteristics



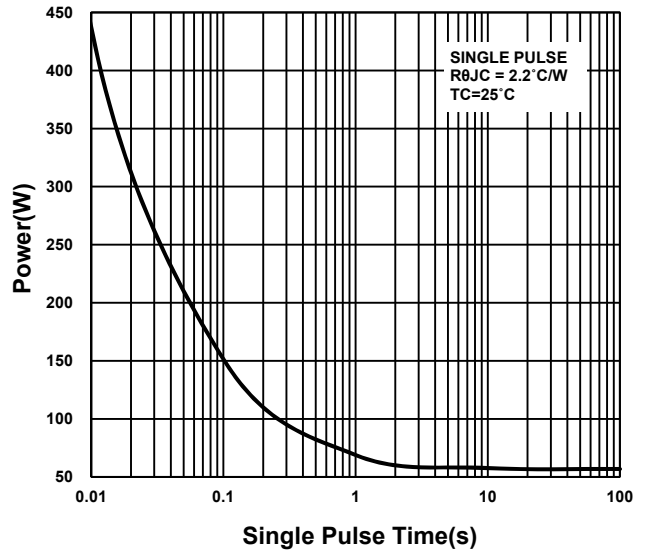
Source-Drain Diode Forward Voltage



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

