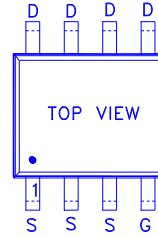
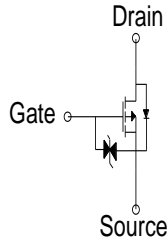




PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
-30V	7mΩ	-15A



4 :GATE
5,6,7,8 :DRAIN
1,2,3 :SOURCE

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

PARAMETERS/TEST CONDITIONS	SYMBOL	LIMITS	UNITS
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	$T_A = 25\text{ °C}$	-15
		$T_A = 70\text{ °C}$	-11
Pulsed Drain Current ¹	I_{DM}	-69	A
Avalanche Current	I_{AS}	-69	
Avalanche Energy	L = 0.1mH	E_{AS}	238 mJ
Power Dissipation	P_D	$T_A = 25\text{ °C}$	2.5
		$T_A = 70\text{ °C}$	1.6
Operating Junction & Storage Temperature Range	T_j, T_{stg}	-55 to 150	°C

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient	$R_{\theta JA}$		50	°C / W

¹Pulse width limited by maximum junction temperature.

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

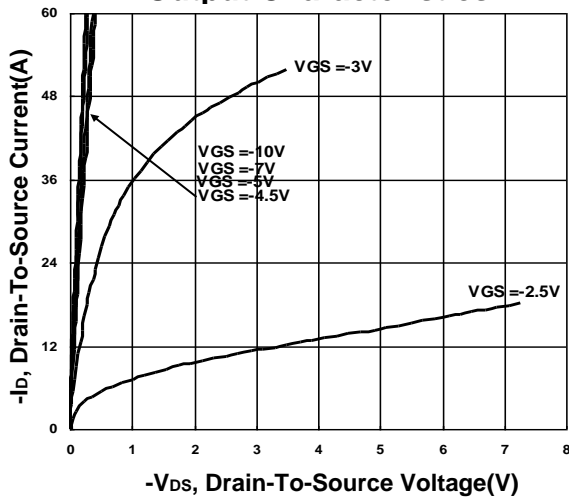
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1	-1.7	-3	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 16V$			±30	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -24V, V_{GS} = 0V$			-1	μA
		$V_{DS} = -20V, V_{GS} = 0V, T_J = 125\text{ °C}$			-10	
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = -4.5V, I_D = -10A$		6.8	12	mΩ
		$V_{GS} = -10V, I_D = -15A$		4.8	7	
Forward Transconductance ¹	g_{fs}	$V_{DS} = -5V, I_D = -15A$		25		S

DYNAMIC						
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = -15V, f = 1MHz$		5200		pF
Output Capacitance	C_{oss}			885		
Reverse Transfer Capacitance	C_{rss}			789		
Total Gate Charge ²	Q_g	$V_{DS} = 0.5V_{(BR)DSS}, V_{GS} = -10V, I_D = -15A$		119		nC
Gate-Source Charge ²	Q_{gs}			14		
Gate-Drain Charge ²	Q_{gd}			31		
Turn-On Delay Time ²	$t_{d(on)}$	$V_{DS} = -15V, I_D \cong -15A, V_{GS} = -10V, R_{GS} = 6\Omega$		26		nS
Rise Time ²	t_r			29		
Turn-Off Delay Time ²	$t_{d(off)}$			225		
Fall Time ²	t_f			124		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS ($T_J = 25\text{ }^\circ\text{C}$)						
Continuous Current	I_S				-15	A
Forward Voltage ¹	V_{SD}	$I_S = -15A, V_{GS} = 0V$			-1.2	V
Reverse Recovery Time	t_{rr}	$I_F = -15A, di/dt = 100A/\mu s$		35		nS
Reverse Recovery Charge	Q_{rr}			20		nC

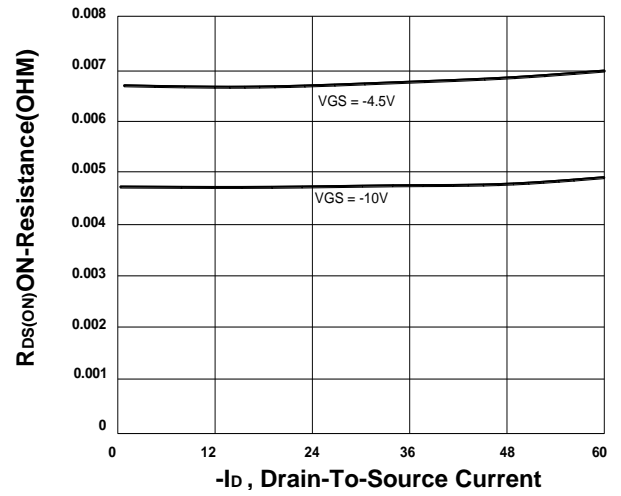
¹Pulse test : Pulse Width $\leq 300\ \mu\text{sec}$, Duty Cycle $\leq 2\%$.

²Independent of operating temperature.

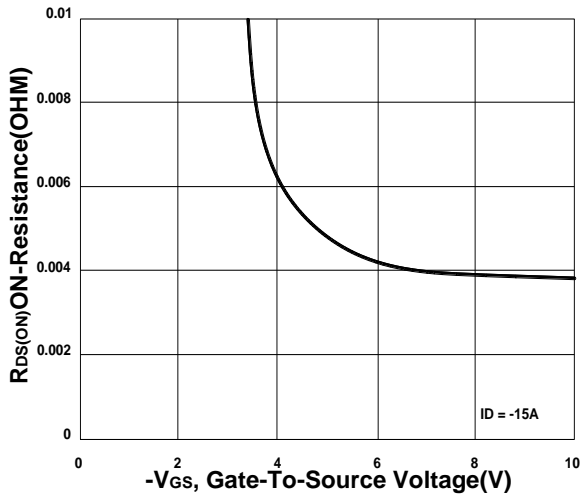
Output Characteristics



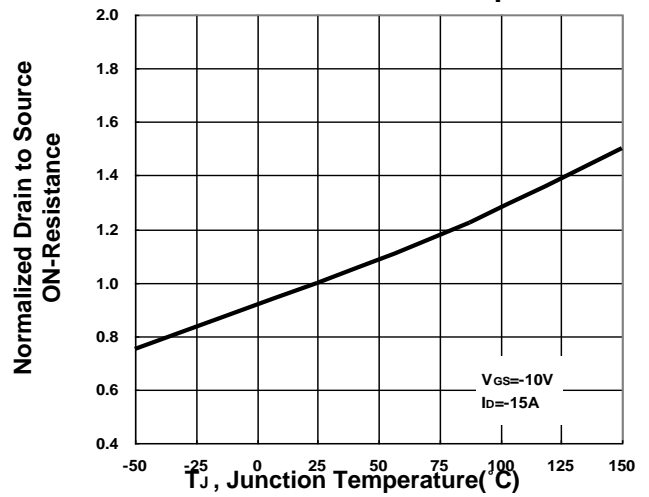
On-Resistance VS Drain Current



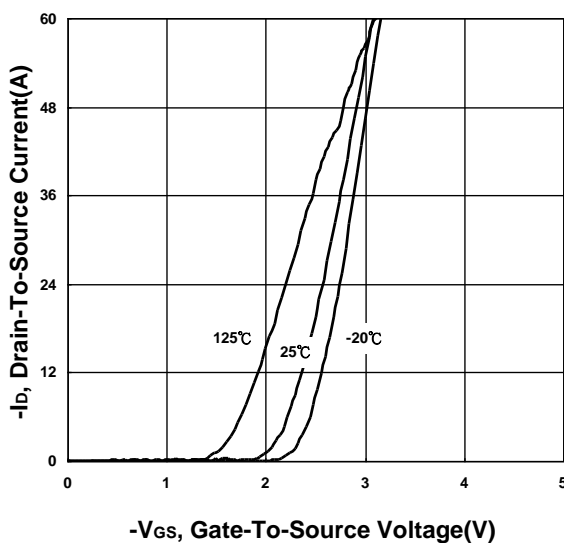
On-Resistance VS Gate-To-Source



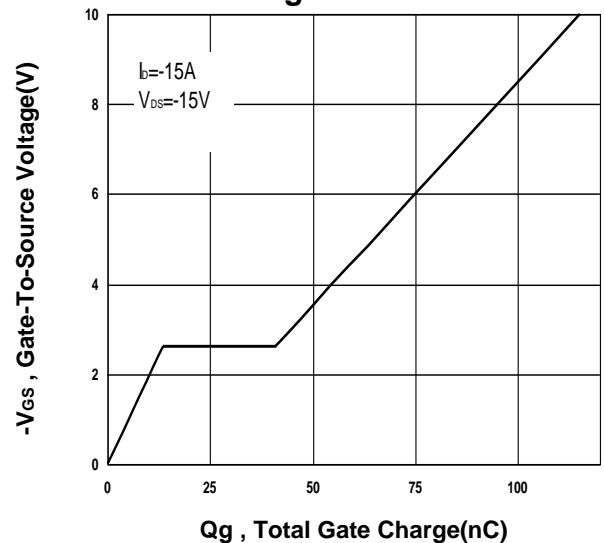
On-Resistance VS Temperature



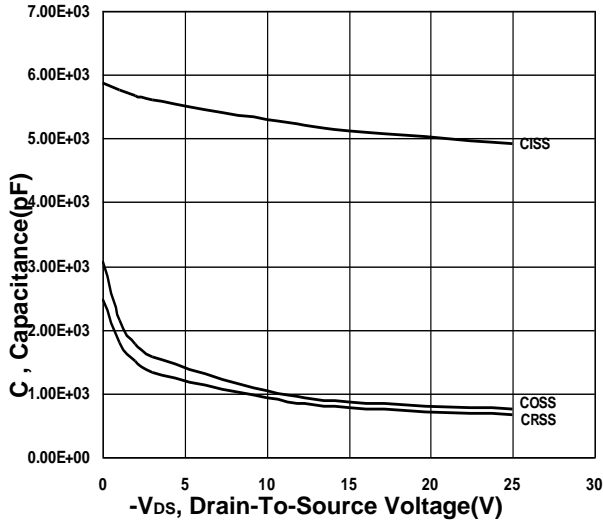
Transfer Characteristics



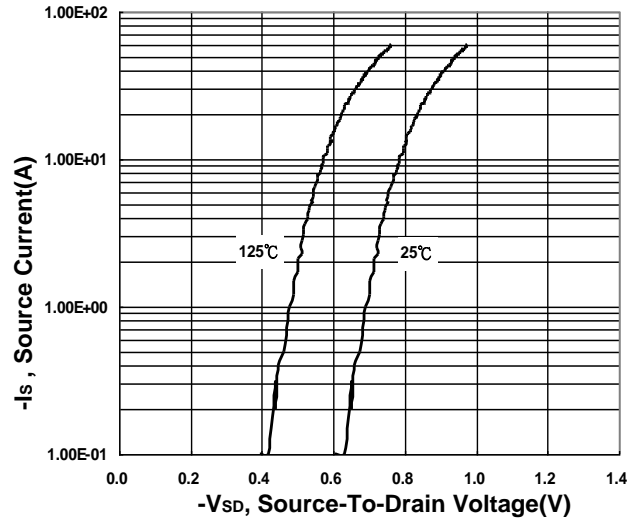
Gate charge Characteristics



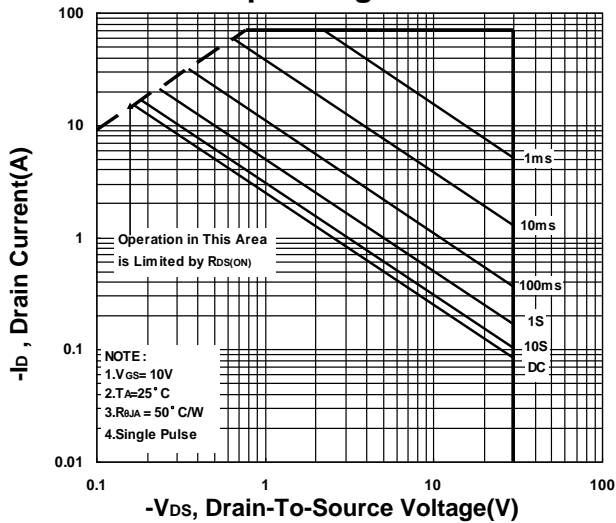
Capacitance Characteristic



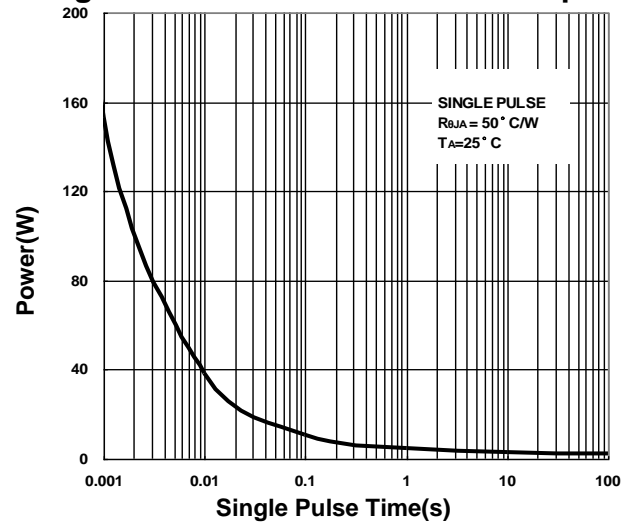
Body Diode Forward Voltage VS Source current



Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve

