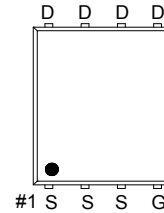
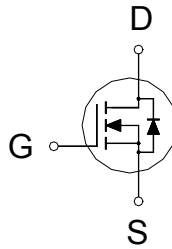




PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
150V	55mΩ	13.4A



G. GATE
D. DRAIN
S. SOURCE

ABSOLUTE MAXIMUM RATINGS ($T_A = 25\text{ °C}$ 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	$T_C = 25\text{ °C}$	I_D	13.4	A
	$T_C = 100\text{ °C}$		8.5	
Pulsed Drain Current ¹		I_{DM}	31	
Continuous Drain Current	$T_A = 25\text{ °C}$	I_D	4.1	
	$T_A = 70\text{ °C}$		3.3	
Avalanche Current		I_{AS}	15.8	
Avalanche Energy	$L = 1\text{mH}$	E_{AS}	125	mJ
Power Dissipation	$T_C = 25\text{ °C}$	P_D	24	W
	$T_C = 100\text{ °C}$		9.6	
Power Dissipation	$T_A = 25\text{ °C}$	P_D	2.2	W
	$T_A = 70\text{ °C}$		1.4	
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 ²	$R_{\theta JA}$		54	°C / W
Junction-to-Case	$R_{\theta JC}$		5.2	

¹Pulse width limited by maximum junction temperature.

²The value of $R_{\theta JA}$ is measured with the device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with $T_A = 25\text{ °C}$.

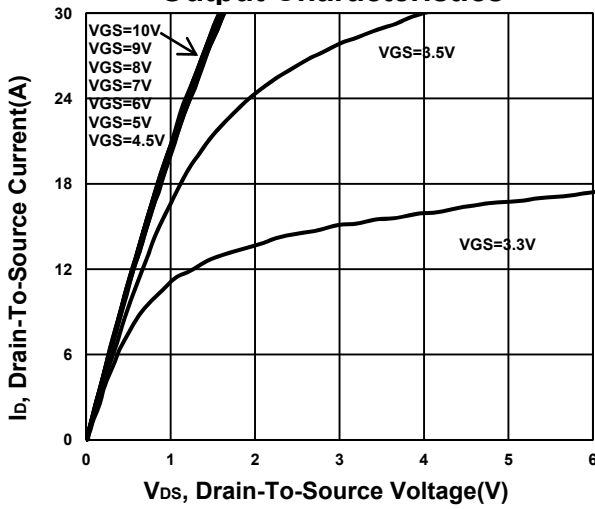
ELECTRICAL CHARACTERISTICS (T_J = 25 °C, Unless Otherwise Noted)

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	150			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1.3	1.75	2.3	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 120V, V _{GS} = 0V			1	μA
		V _{DS} = 100V, V _{GS} = 0V, T _J = 55 °C			10	
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = 4.5V, I _D = 10A		47	65	mΩ
		V _{GS} = 10V, I _D = 13A		46	55	
Forward Transconductance ¹	g _{fs}	V _{DS} = 5V, I _D = 13A		76		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 25V, f = 1MHz		2103		pF
Output Capacitance	C _{oss}			180		
Reverse Transfer Capacitance	C _{rss}			77		
Gate Resistance	R _g	V _{GS} = 0V, V _{DS} = 0V, f = 1MHz		1.3		Ω
Total Gate Charge ²	Q _g	V _{GS} = 10V	V _{DS} = 75V, V _{GS} = 10V, I _D = 13A		41	nC
		V _{GS} = 4.5V			21	
Gate-Source Charge ²	Q _{gs}			5.9		
Gate-Drain Charge ²	Q _{gd}			10.6		
Turn-On Delay Time ²	t _{d(on)}	V _{DS} = 75V, I _D ≅ 13A, V _{GS} = 10V, R _{GEN} = 6Ω			18	
Rise Time ²	t _r			18		
Turn-Off Delay Time ²	t _{d(off)}			68		
Fall Time ²	t _f			45		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T_J = 25 °C)						
Continuous Current	I _S				13.4	A
Forward Voltage ¹	V _{SD}	I _F = 13A, V _{GS} = 0V			1	V
Reverse Recovery Time	t _{rr}	I _F = 13A, dI _F /dt = 100A / μS		55		nS
Reverse Recovery Charge	Q _{rr}			93		nC

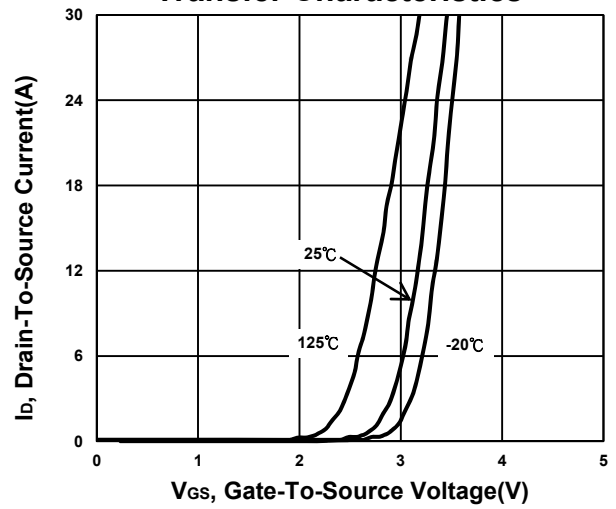
¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

²Independent of operating temperature.

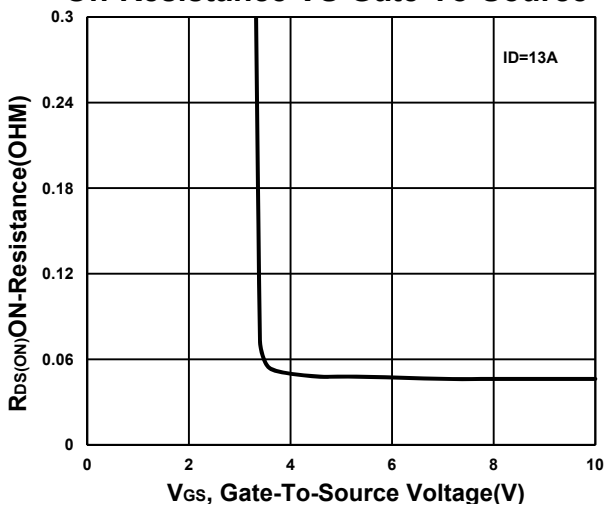
Output Characteristics



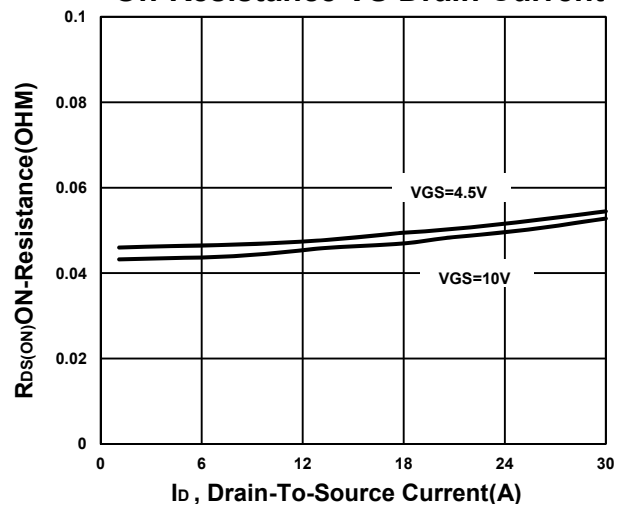
Transfer Characteristics



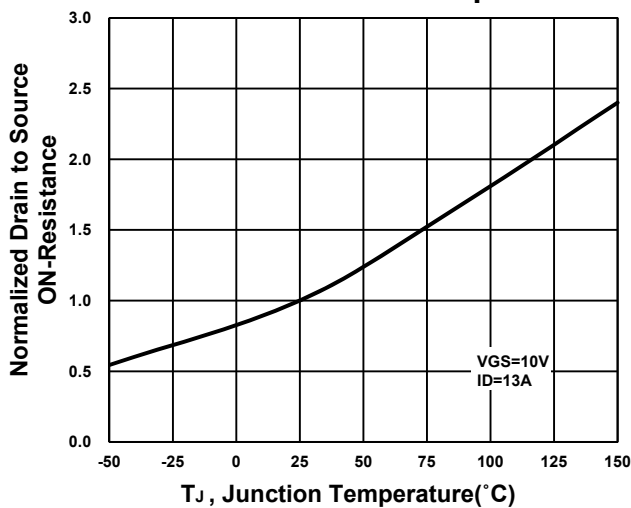
On-Resistance VS Gate-To-Source



On-Resistance VS Drain Current



On-Resistance VS Temperature



Capacitance Characteristic

