MOSFET Datasheet

SPECIFICATIONS T_J = 25 ° C, unless otherwise noted							
PARAMETER	SYMBOL	TEST CONDITIONS		MIN	TYP	MAX	UNIT
Static							
Drain-source breakdown voltage	V_{DS}	V_{GS} = 0 V, I_D = 250 μA		500	-	-	V
VDS temperature coefficient	$\Delta V_{DS}/T_J$	Reference to 25 ° C, I_D = 1 mA		-	0.63	-	V/°C
Gate-source threshold voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250 μA		2	-	4.0	V
Gate-source leakage	I_{GSS}	V_{GS} = ± 20 V		-	-	±100	nA
Zero gate voltage drain current	I_{DSS}	V_{DS} = 500 V, V_{GS} = 0 V		-	-	25	μA
		V_{DS} = 400 V, V_{GS} = 0 V, T_J = 125 ° C		-	-	250	
Drain-source on-state resistance	$R_{DS(on)}$	V_{GS} = 10 V	I_D = 12 A	-	-	0.27	Ω
Forward transconductance	g_{fs}	V_{DS} = 50 V, I_D = 12 A		13	-	-	S
Dynamic							
Input capacitance	C_{iss}	V_{GS} = 0 V, V_{DS} = 25 V, f = 1.0 MHz,		-	4200	-	pF
Output capacitance	C_{oss}			-	870	-	pF
Reverse transfer capacitance	C_{rss}			-	350	-	pF
Total gate charge	Q_g	V_{GS} = 10 V	I_D = 20 A V_{DS} = 400 V	-	-	210	nC
Gate-source charge	Q_{gs}			-	-	29	nC
Gate-drain charge	Q_{gd}			-	-	110	nC
Turn-on delay time	$t_{d(on)}$	V_{DD} = 250 V		-	18	-	ns
Rise time	t_r	I_D = 20 A		-	59	-	ns
Turn-off delay time	$t_{d(off)}$	R_G = 4.3 Ω		-	110	-	ns
Fall time	t_r	R_D = 13 Ω		-	58	-	ns
Drain-Source Body Diode Characteristics							
Body diode voltage	V_{SD}	T_J = 25 ° C, I_S = 20 A, V_{GS} = 0 V		-	-	1.8	V
Body diode reverse recovery time	t_{rr}	T_J = 25 ° C, I_F = 20 A, di/dt = 100 A/μs		-	570	860	ns
Body diode reverse recovery charge	Q_{rr}			-	5.7	8.6	μC

Typical Source-Drain Diode Forward Voltage

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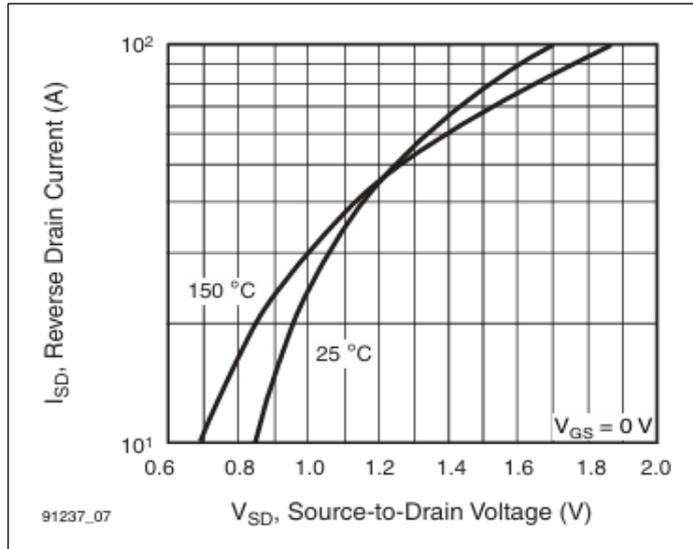
Typical Capacitance vs. Drain-to-Source Voltage

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