

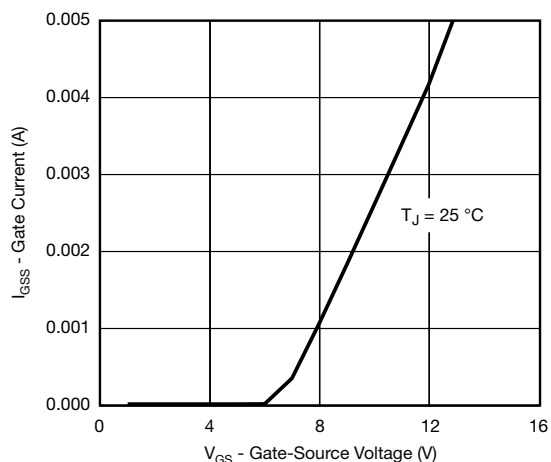


SPECIFICATIONS (T _C = 25 °C, unless otherwise noted)							
PARAMETER	SYMBOL	TEST CONDITIONS		MIN.	TYP.	MAX.	UNIT
Static							
Drain-Source Breakdown Voltage	V _{DS}	V _{GS} = 0, I _D = 250 μA		20	-	-	V
Gate-Source Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250 μA		0.45	0.6	1.5	
Gate-Source Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ± 4.5 V		-	-	± 1	μA
		V _{DS} = 0 V, V _{GS} = ± 12 V		-	-	± 10	mA
Zero Gate Voltage Drain Current	I _{DSS}	V _{GS} = 0 V	V _{DS} = 20 V	-	-	1	μA
		V _{GS} = 0 V	V _{DS} = 20 V, T _J = 125 °C	-	-	50	
		V _{GS} = 0 V	V _{DS} = 20 V, T _J = 175 °C	-	-	150	
On-State Drain Current ^a	I _{D(on)}	V _{GS} = 4.5 V	V _{DS} ≥ 5 V	1.5	-	-	A
Drain-Source On-State Resistance ^a	R _{DS(on)}	V _{GS} = 4.5 V	I _D = 1.2 A	-	0.200	0.280	Ω
		V _{GS} = 4.5 V	I _D = 1.2 A, T _J = 125 °C	-	-	0.423	
		V _{GS} = 4.5 V	I _D = 1.2 A, T _J = 175°C	-	-	0.510	
		V _{GS} = 2.5 V	I _D = 1 A	-	0.261	0.360	
		V _{GS} = 1.8 V	I _D = 0.2 A	-	0.320	0.45	
Forward Transconductance ^b	g _{fs}	V _{DS} = 10 V, I _D = 1.2 A		-	2.6	-	S
Dynamic ^b							
Input Capacitance	C _{iss}	V _{GS} = 0 V	V _{DS} = 10 V, f = 1 MHz	-	68	85	pF
Output Capacitance	C _{oss}			-	23	29	
Reverse Transfer Capacitance	C _{rss}			-	9	12	
Total Gate Charge ^c	Q _g	V _{GS} = 4.5 V	V _{DS} = 10 V, I _D = 1.2 A	-	1.5	2.3	nC
Gate-Source Charge ^c	Q _{gs}			-	0.2	-	
Gate-Drain Charge ^c	Q _{gd}			-	0.3	-	
Gate Resistance	R _g	f = 1 MHz		0.6	1.1	1.6	Ω
Turn-On Delay Time ^c	t _{d(on)}	V _{DD} = 10 V, R _L = 20 Ω I _D ≅ 0.5 A, V _{GEN} = 4.5 V, R _g = 1 Ω		-	34	50	ns
Rise Time ^c	t _r			-	51	75	
Turn-Off Delay Time ^c	t _{d(off)}			-	431	650	
Fall Time ^c	t _f			-	142	215	
Source-Drain Diode Ratings and Characteristics ^b							
Pulsed Current ^a	I _{SM}			-	-	3	A
Forward Voltage	V _{SD}	I _F = 0.5 A, V _{GS} = 0		-	0.8	1.2	V

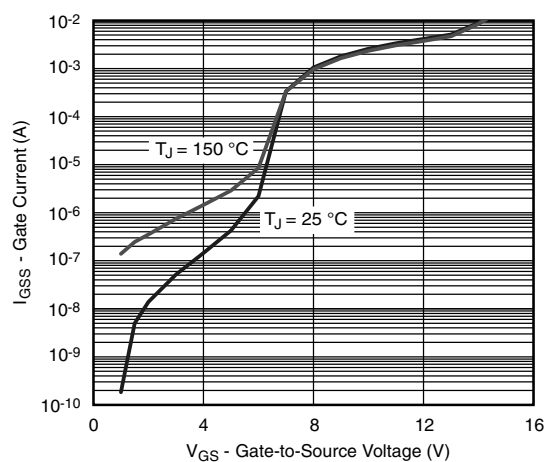
Notes

- a. Pulse test; pulse width $\leq 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$.
b. Guaranteed by design, not subject to production testing.
c. Independent of operating temperature.

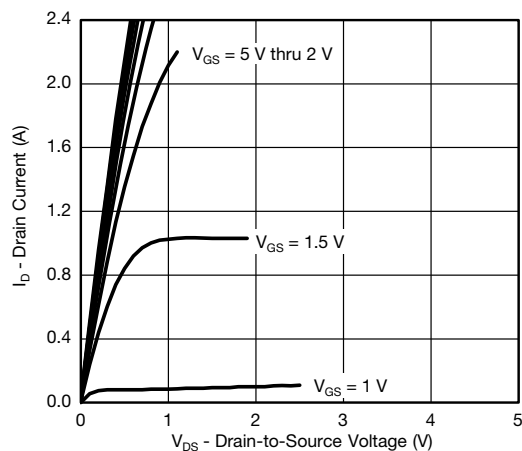
Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

TYPICAL CHARACTERISTICS (25 °C, unless otherwise noted)


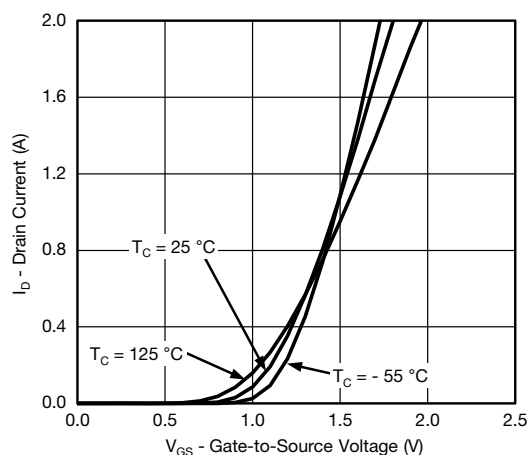
Gate Current vs. Gate-Source Voltage



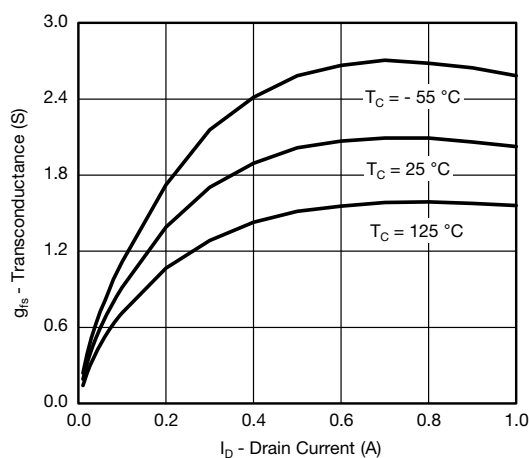
Gate Current vs. Gate-Source Voltage



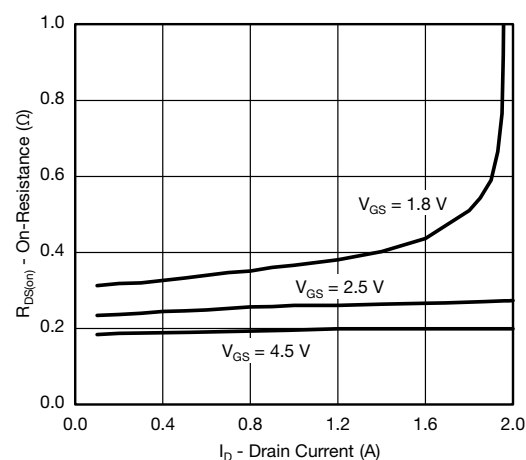
Output Characteristics



Transfer Characteristics



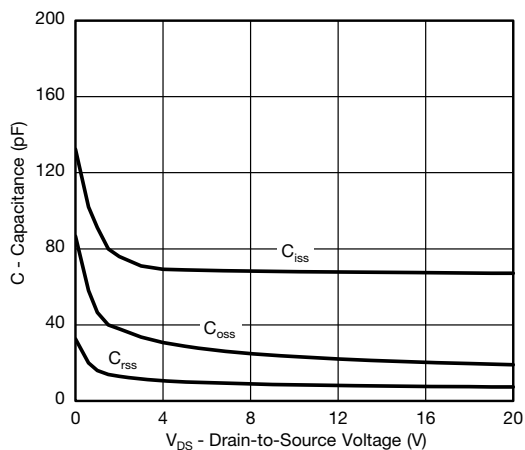
Transconductance



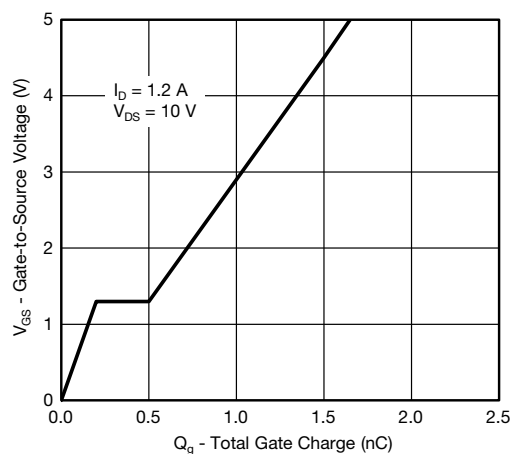
On-Resistance vs. Drain Current



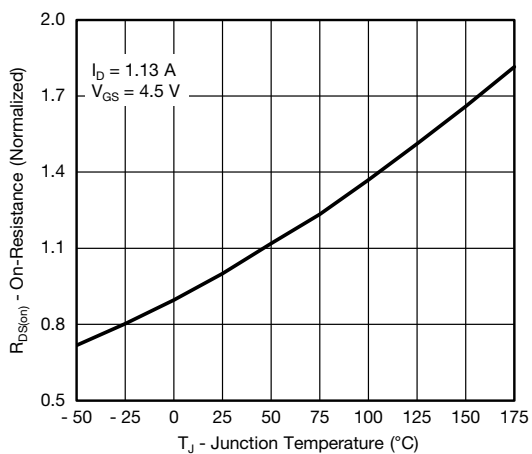
TYPICAL CHARACTERISTICS (25 °C, unless otherwise noted)



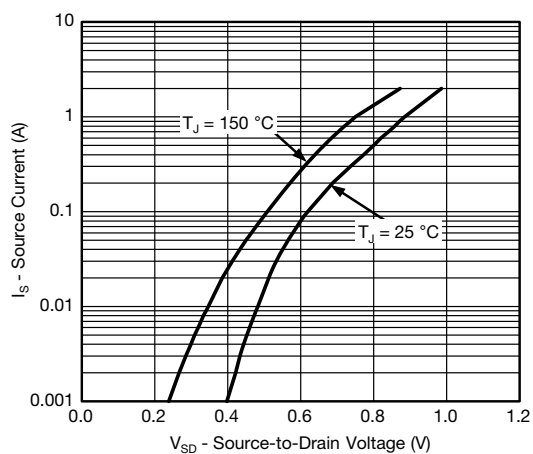
Capacitance



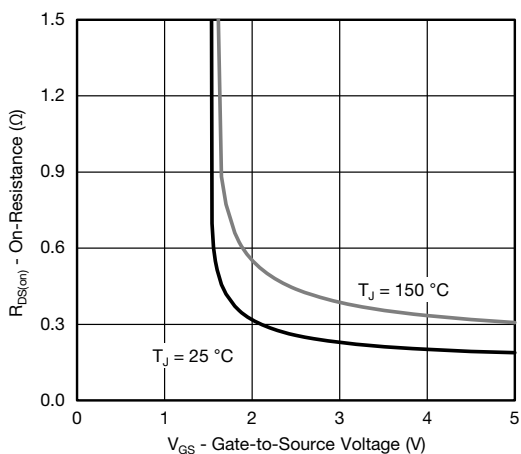
Gate Charge



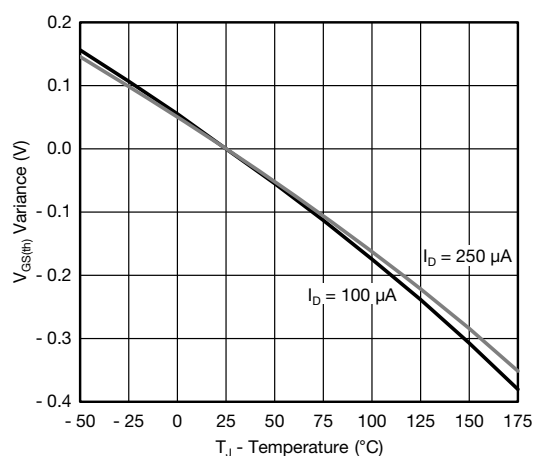
On-Resistance vs. Junction Temperature



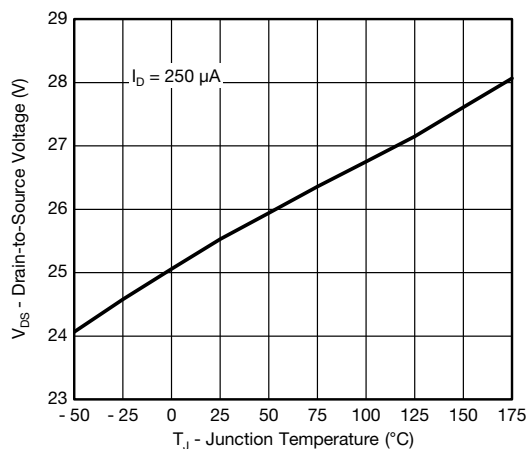
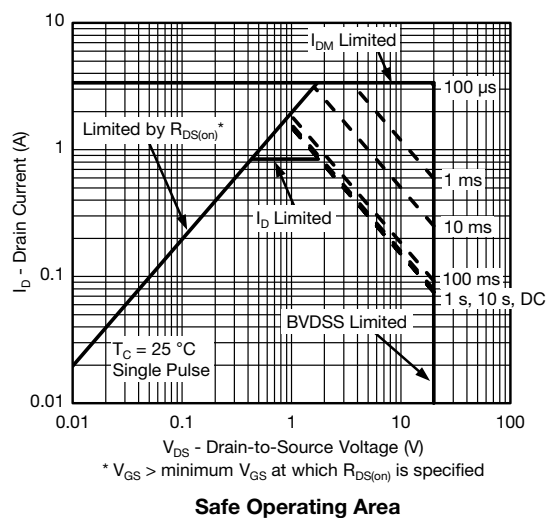
Source Drain Diode Forward Voltage

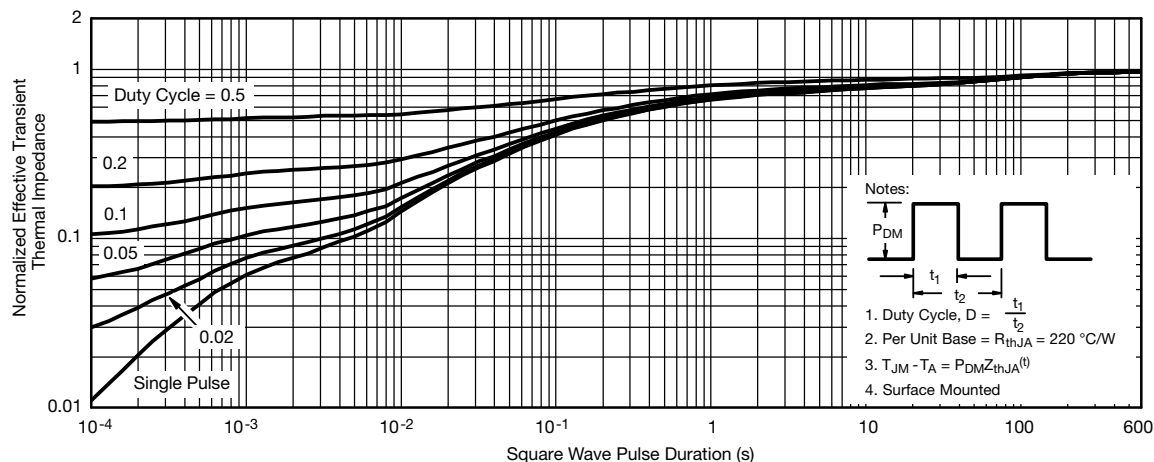
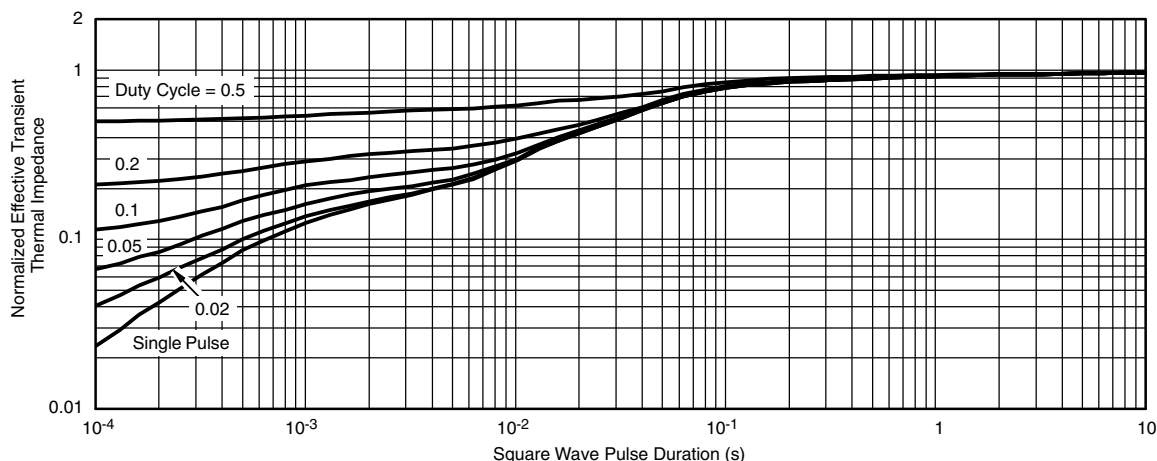


On-Resistance vs. Gate-to-Source Voltage



Threshold Voltage

TYPICAL CHARACTERISTICS ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise noted)

Drain Source Breakdown vs. Junction Temperature


THERMAL RATINGS ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise noted)

Normalized Thermal Transient Impedance, Junction-to-Ambient

Normalized Thermal Transient Impedance, Junction-to-Foot
Note

- The characteristics shown in the two graphs
 - Normalized Transient Thermal Impedance Junction-to-Ambient ($25\text{ }^{\circ}\text{C}$)
 - Normalized Transient Thermal Impedance Junction-to-Foot ($25\text{ }^{\circ}\text{C}$)
- are given for general guidelines only to enable the user to get a "ball park" indication of part capabilities. The data are extracted from single pulse transient thermal impedance characteristics which are developed from empirical measurements. The latter is valid for the part mounted on printed circuit board - FR4, size 1" x 1" x 0.062", double sided with 2 oz. copper, 100 % on both sides. The part capabilities can widely vary depending on actual application parameters and operating conditions.

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