

SPECIFICATIONS ($T_J = 25\text{ }^{\circ}\text{C}$, unless otherwise noted)

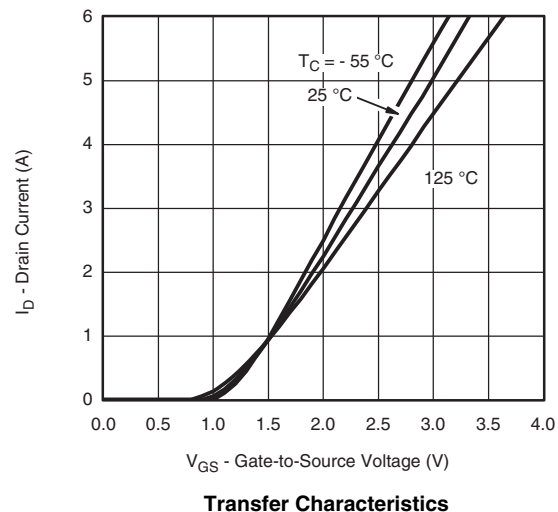
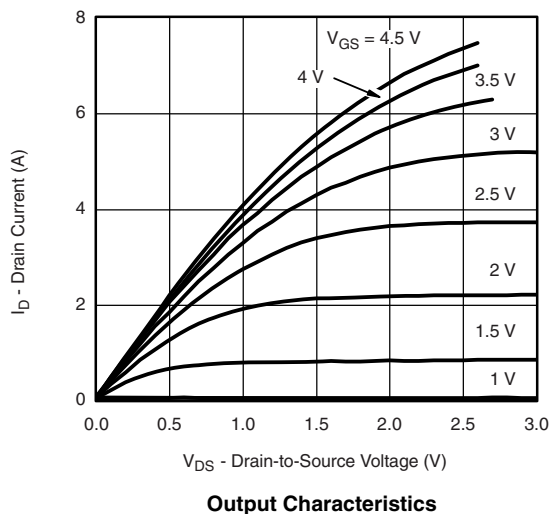
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Static						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = -250\text{ }\mu\text{A}$	-0.45			V
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0\text{ V}$, $V_{GS} = \pm 8\text{ V}$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -8\text{ V}$, $V_{GS} = 0\text{ V}$			-1	μA
		$V_{DS} = -8\text{ V}$, $V_{GS} = 0\text{ V}$, $T_J = 70\text{ }^{\circ}\text{C}$			-5	
On-State Drain Current ^a	$I_{D(on)}$	$V_{DS} = -5\text{ V}$, $V_{GS} = -4.5\text{ V}$	-3			A
Drain-Source On-State Resistance ^a	$R_{DS(on)}$	$V_{GS} = -4.5\text{ V}$, $I_D = -1\text{ A}$		0.230	0.280	Ω
		$V_{GS} = -2.5\text{ V}$, $I_D = -0.5\text{ A}$		0.315	0.380	
		$V_{GS} = -1.8\text{ V}$, $I_D = -0.3\text{ A}$		0.440	0.530	
Forward Transconductance ^a	g_{fs}	$V_{DS} = -5\text{ V}$, $I_D = -1\text{ A}$		3.5		S
Diode Forward Voltage ^a	V_{SD}	$I_S = -0.3\text{ A}$, $V_{GS} = 0\text{ V}$			-1.2	V
Dynamic^b						
Total Gate Charge	Q_g	$V_{DS} = -4\text{ V}$, $V_{GS} = -4.5\text{ V}$, $I_D = -1\text{ A}$		2.6	4	nC
Gate-Source Charge	Q_{gs}			0.6		
Gate-Drain Charge	Q_{gd}			0.5		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = -4\text{ V}$, $R_L = 4\text{ }\Omega$ $I_D \cong -1\text{ A}$, $V_{GEN} = -4.5\text{ V}$, $R_g = 6\text{ }\Omega$		8	15	ns
Rise Time	t_r			55	80	
Turn-Off Delay Time	$t_{d(off)}$			17	25	
Fall Time	t_f			12	20	
Source-Drain Reverse Recovery Time	t_{rr}	$I_F = -1\text{ A}$, $di/dt = 100\text{ A}/\mu\text{s}$		27	45	

Notes:

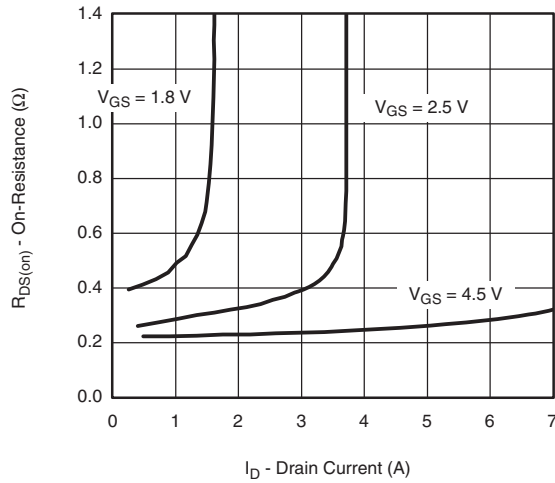
a. Pulse test; pulse width $\leq 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$.

b. Guaranteed by design, not subject to production testing.

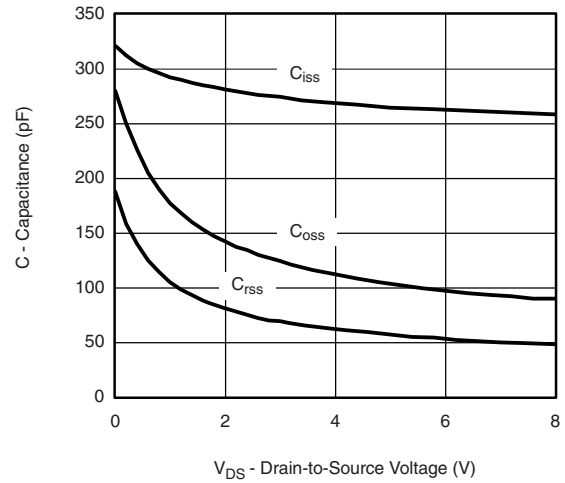
Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure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

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

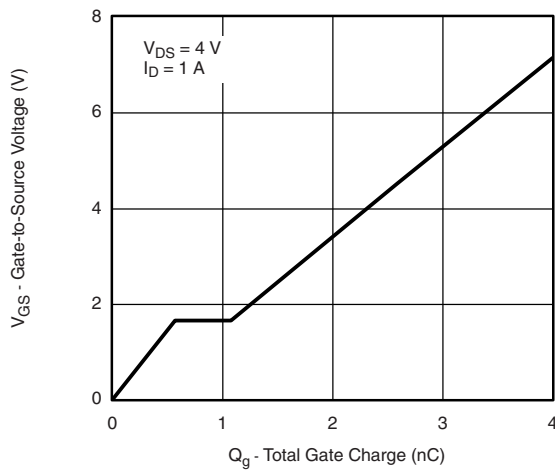
TYPICAL CHARACTERISTICS (25 °C, unless otherwise noted)



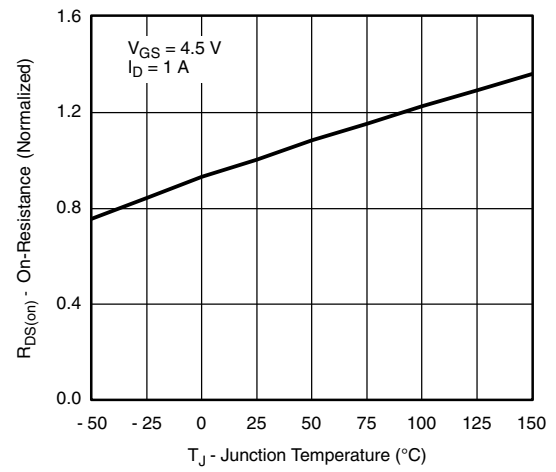
On-Resistance vs. Drain Current



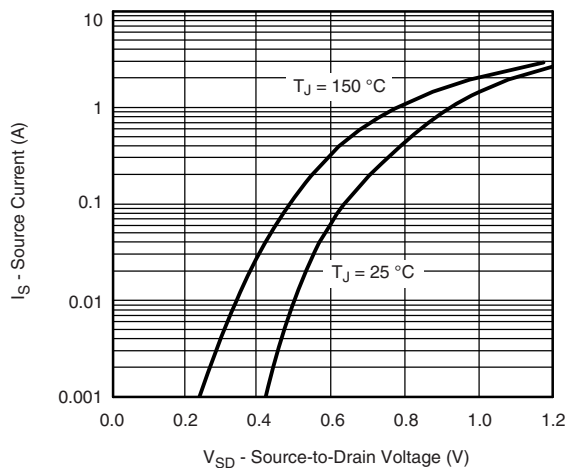
Capacitance



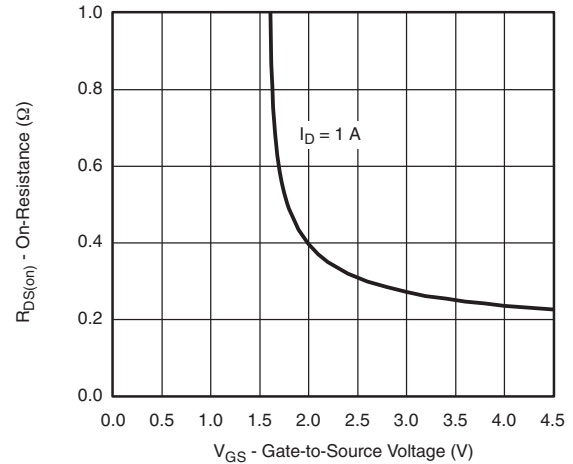
Gate Charge



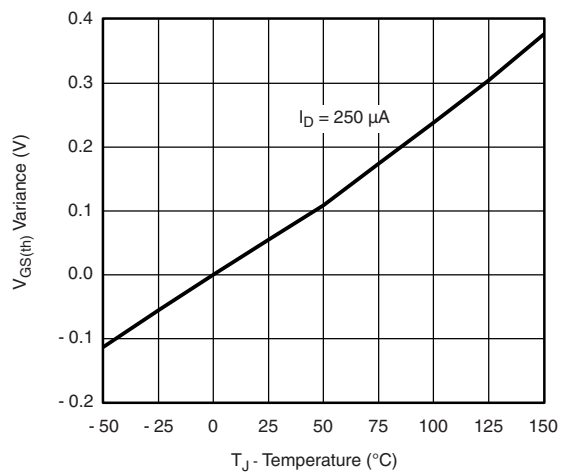
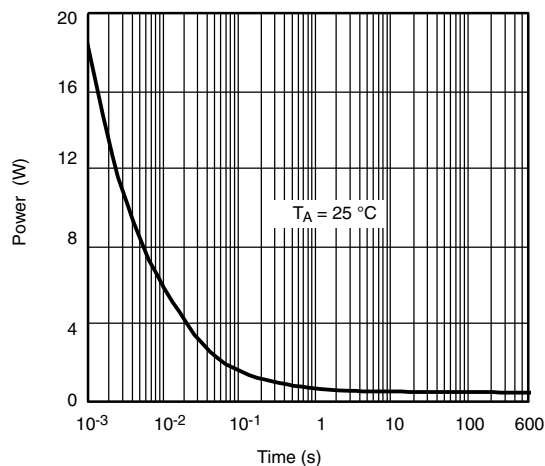
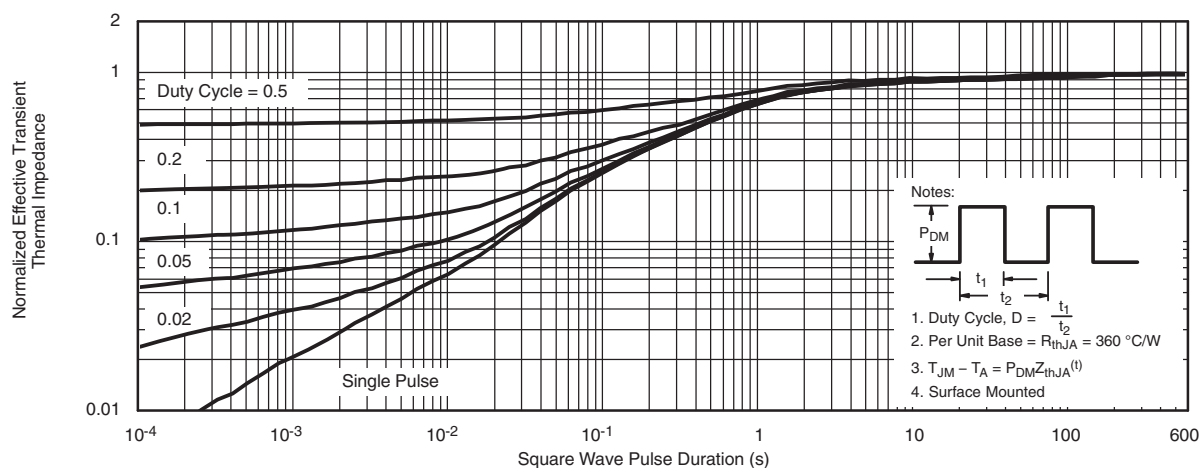
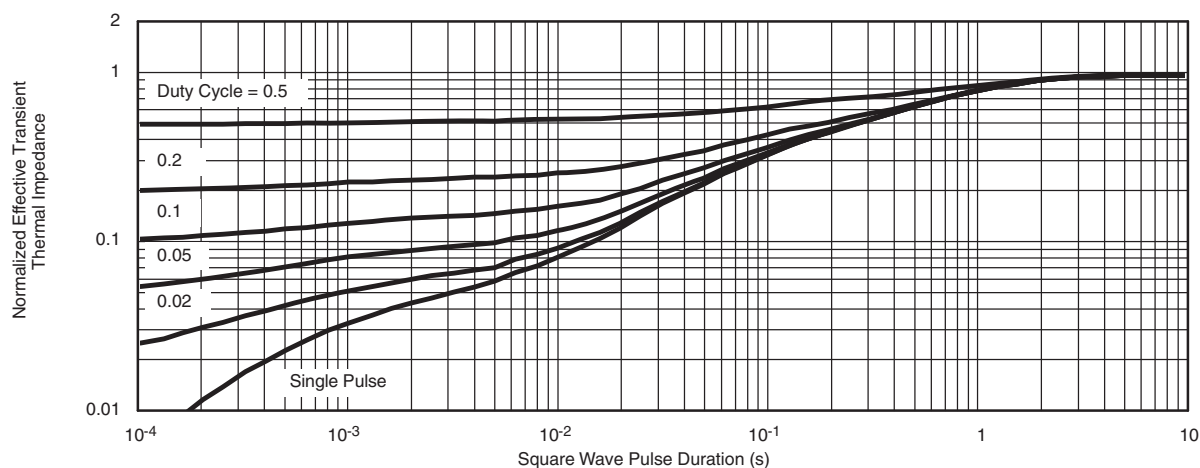
On-Resistance vs. Junction Temperature



Source-Drain Diode Forward Voltage



On-Resistance vs. Gate-to-Source Voltage

TYPICAL CHARACTERISTICS (25 °C, unless otherwise noted)**Threshold Voltage****Single Pulse Power****Normalized Thermal Transient Impedance, Junction-to-Ambient****Normalized Thermal Transient Impedance, Junction-to-Foot**

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