

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

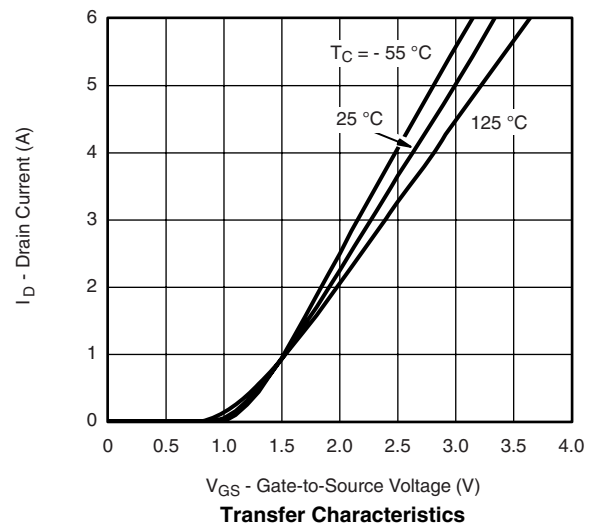
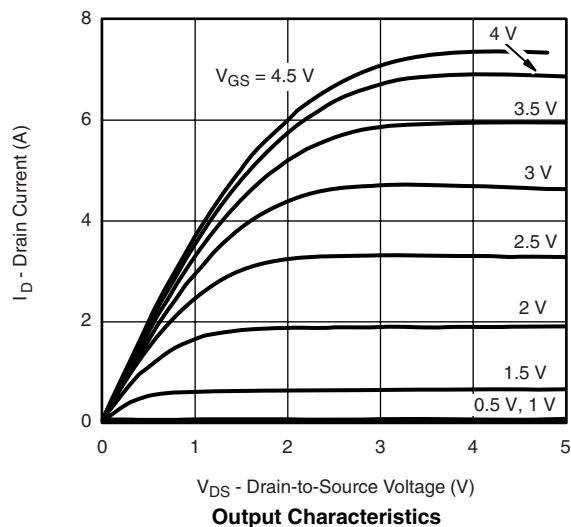
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Static						
Gate-Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = -250\ \mu\text{A}$	-0.45			V
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0\ \text{V}$, $V_{GS} = \pm 4.5\ \text{V}$			± 1	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -9.6\ \text{V}$, $V_{GS} = 0\ \text{V}$ $V_{DS} = -9.6\ \text{V}$, $V_{GS} = 0\ \text{V}$, $T_J = 70^\circ\text{C}$			-1 -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	$R_{DS(on)}$	$V_{GS} = -4.5\ \text{V}$, $I_D = -1\ \text{A}$		0.240	0.290	Ω
		$V_{GS} = -2.5\ \text{V}$, $I_D = -0.5\ \text{A}$		0.350	0.435	
		$V_{GS} = -1.8\ \text{V}$, $I_D = -0.3\ \text{A}$		0.480	0.580	
Forward Transconductance ^a	g_{fs}	$V_{DS} = -5\ \text{V}$, $I_D = -1\ \text{A}$		3.5		S
Diode Forward Voltage ^a	V_{SD}	$I_S = -1\ \text{A}$, $V_{GS} = 0\ \text{V}$			-1.2	V
Dynamic^b						
Total Gate Charge	Q_g	$V_{DS} = -6\ \text{V}$, $V_{GS} = -4.5\ \text{V}$, $I_D = -1\ \text{A}$		3.2	5	nC
Gate-Source Charge	Q_{gs}			0.69		
Gate-Drain Charge	Q_{gd}			0.61		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD} = -6\ \text{V}$, $R_L = 6\ \Omega$ $I_D \cong -1\ \text{A}$, $V_{GEN} = -4.5\ \text{V}$, $R_g = 6\ \Omega$		210	340	ns
Rise Time	t_r			450	720	
Turn-Off Delay Time	$t_{d(off)}$			910	1550	
Fall Time	t_f			1000	1600	
Source-Drain Reverse Recovery Time	t_{rr}	$I_F = -1\ \text{A}$, $dI/dt = 100\ \text{A}/\mu\text{s}$		540	860	

Notes:

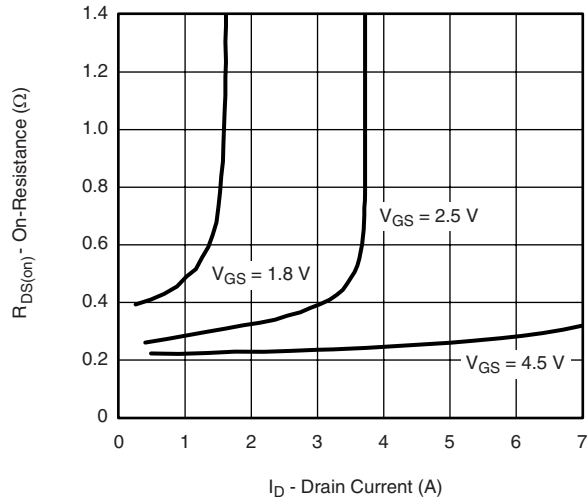
a. Pulse test; pulse width $\leq 300\ \mu\text{s}$, duty cycle $\leq 2\%$.

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

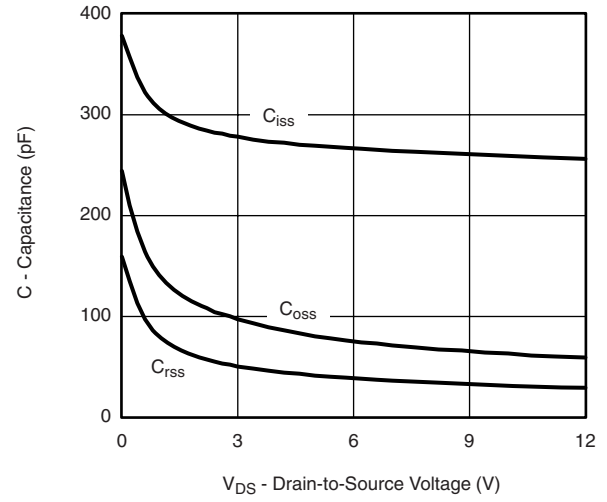
Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure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

TYPICAL CHARACTERISTICS 25°C , unless otherwise noted

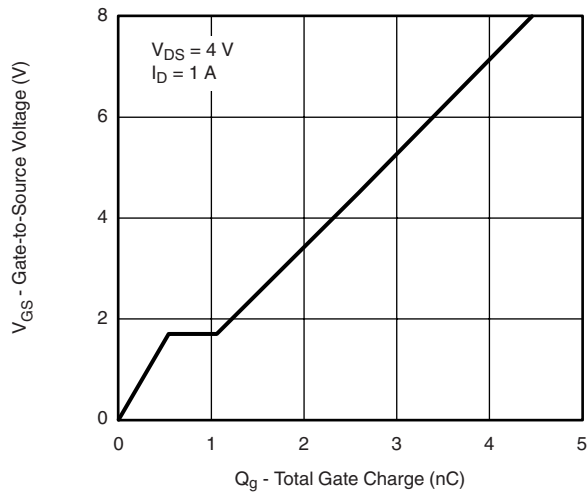
TYPICAL CHARACTERISTICS 25 °C, unless otherwise noted



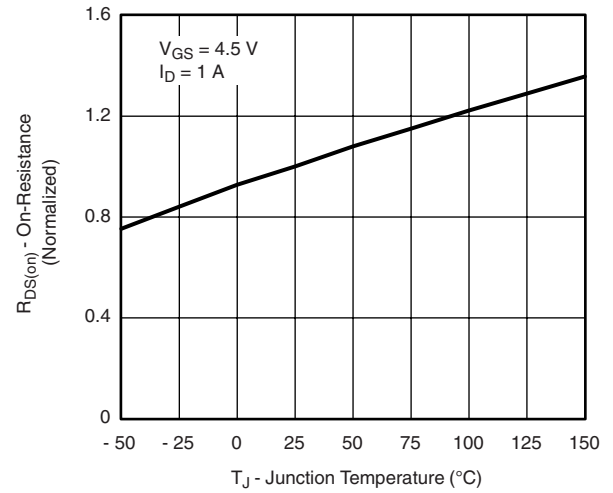
On-Resistance vs. Drain Current



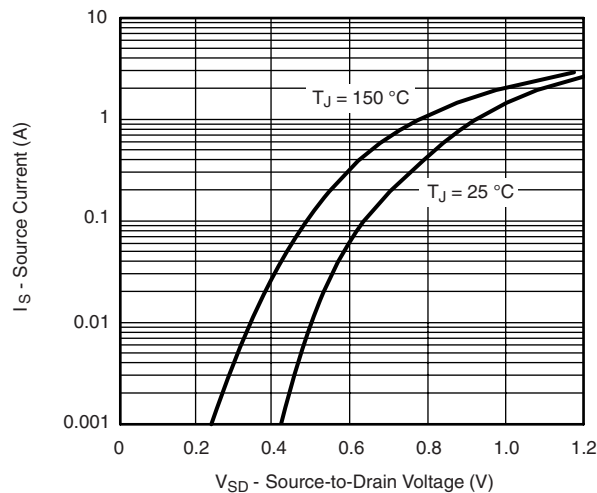
Capacitance



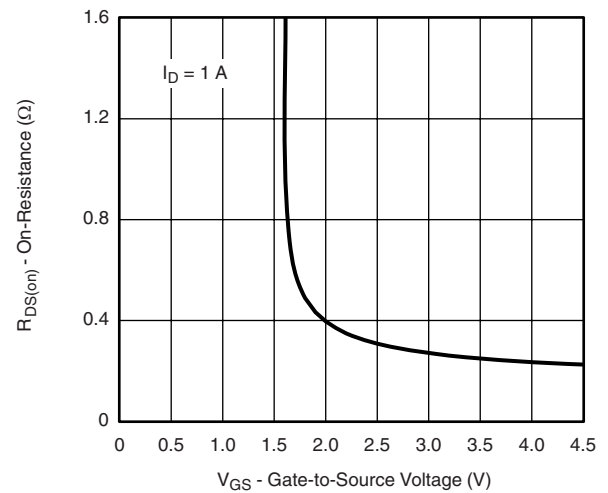
Gate Charge



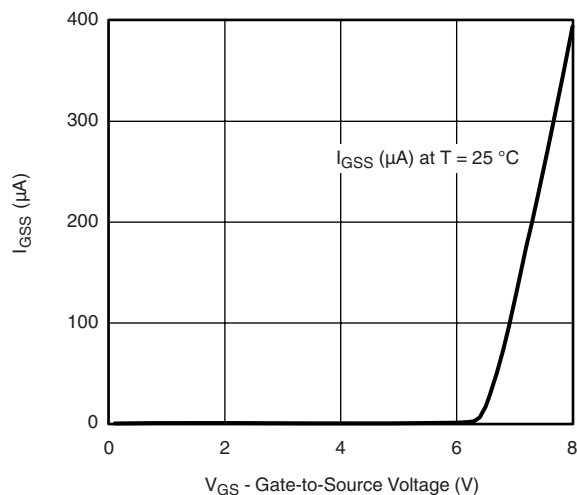
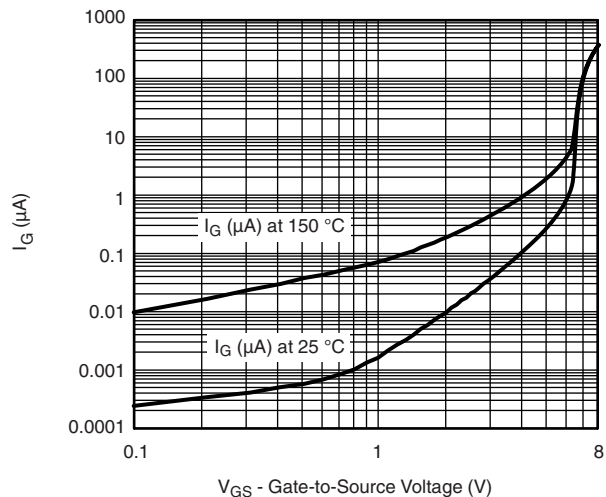
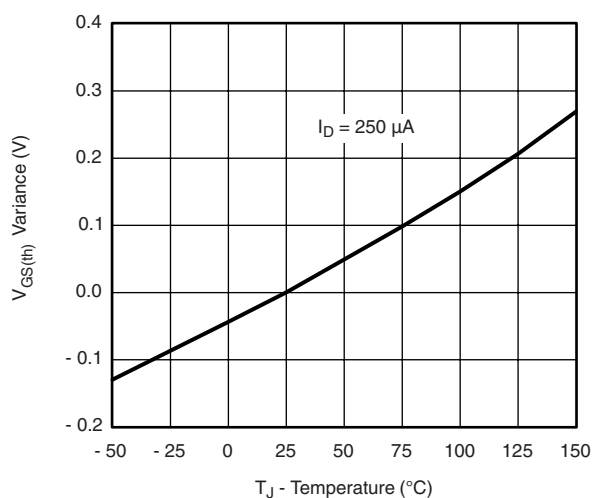
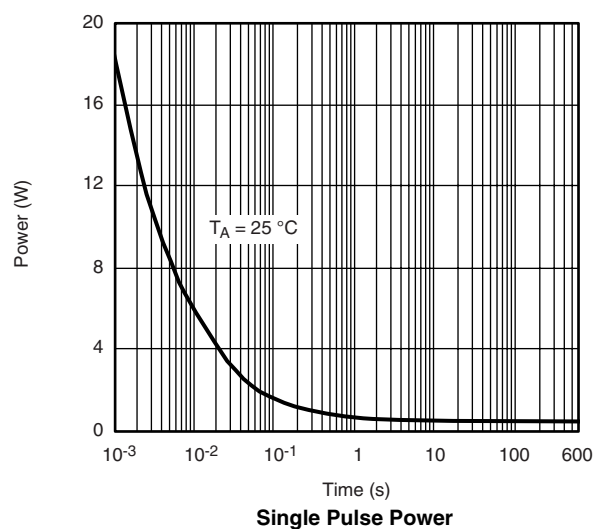
On-Resistance vs. Junction Temperature



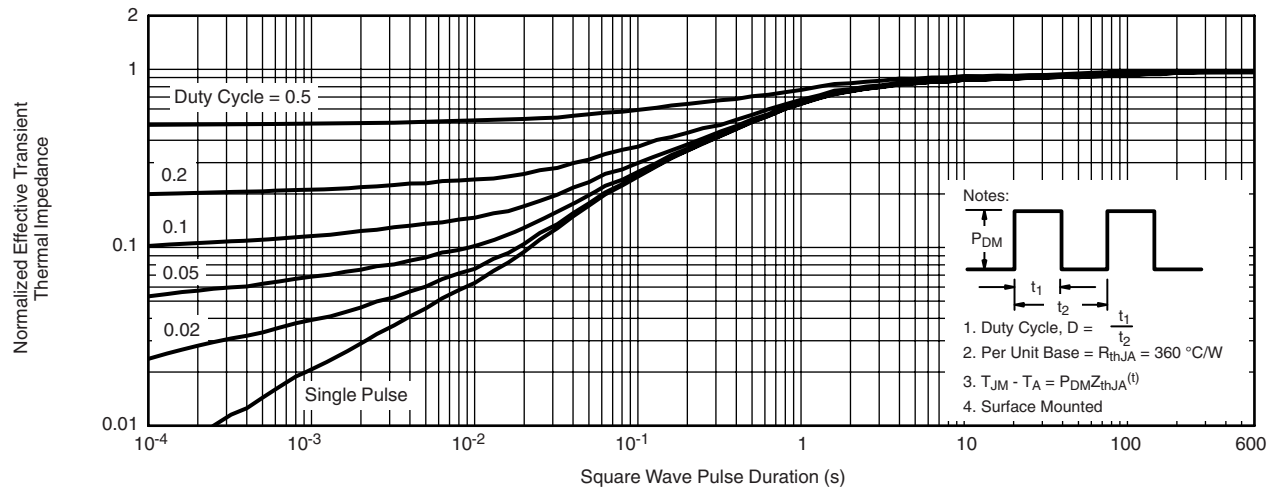
Source-Drain Diode Forward Voltage



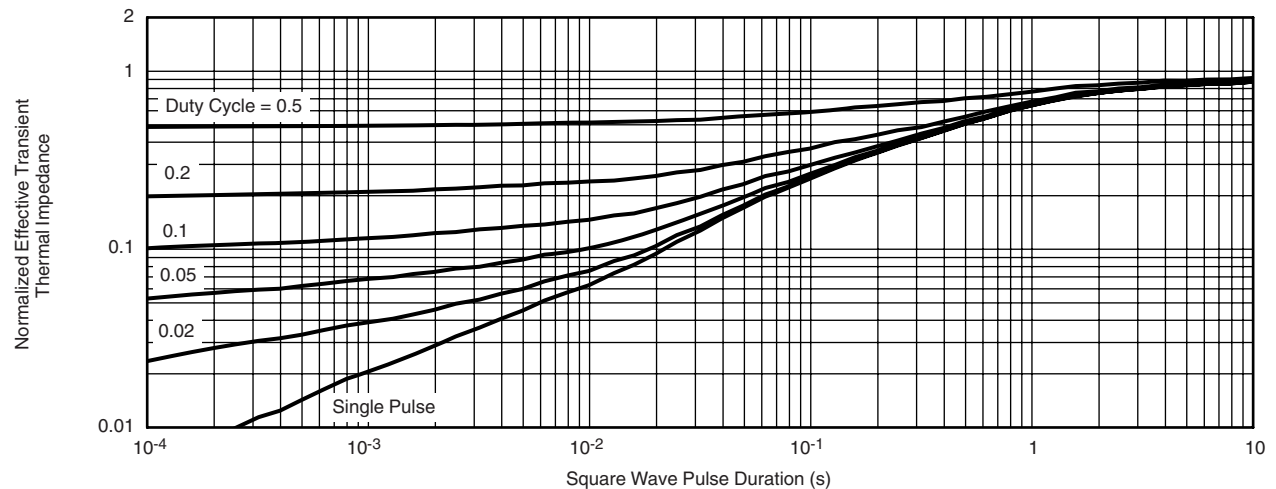
On-Resistance vs. Gate-Source Voltage

TYPICAL CHARACTERISTICS 25 °C, unless otherwise noted**Gate-Current vs. Gate-to-Source Voltage****Gate-to-Source Voltage vs. Gate Current****Threshold Voltage****Single Pulse Power**

TYPICAL CHARACTERISTICS 25 °C, unless otherwise noted



Normalized Thermal Transient Impedance, Junction-to-Ambient



Normalized Thermal Transient Impedance, Junction-to-Foot

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