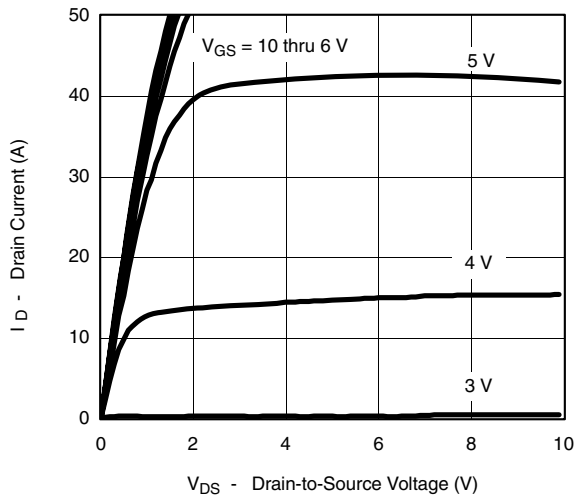
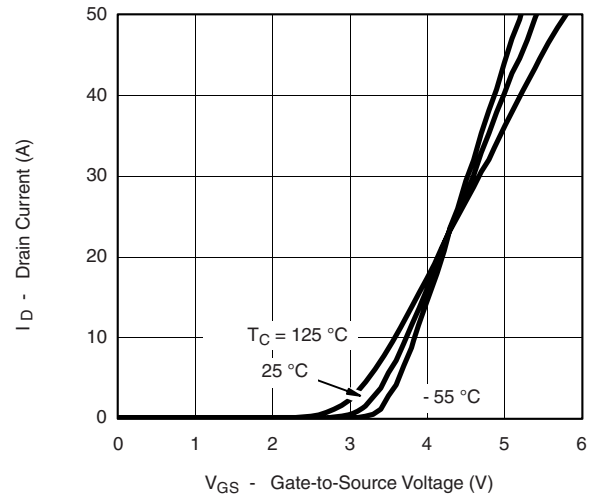
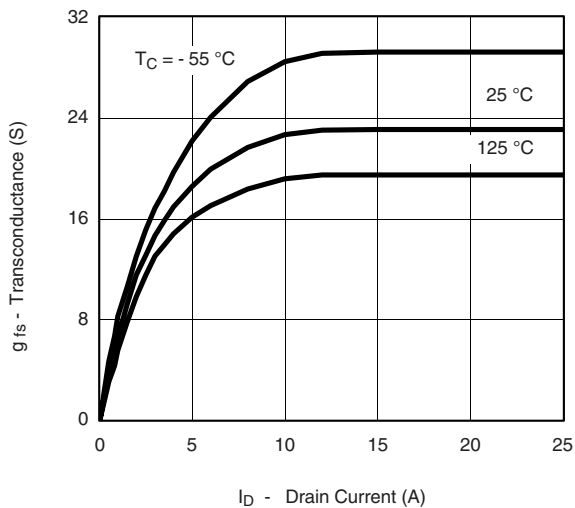
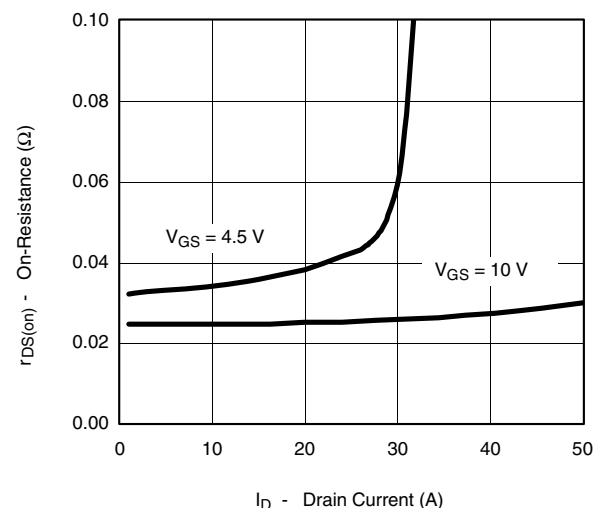
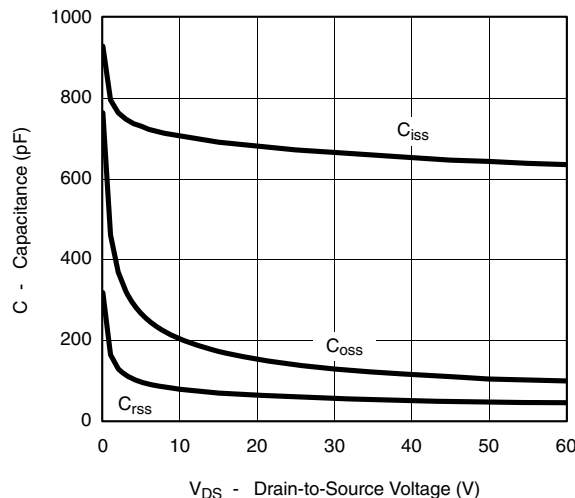
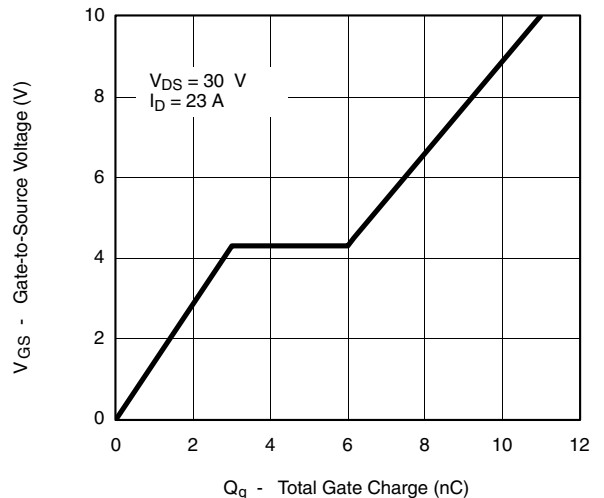


SPECIFICATIONS $T_J = 25\text{ }^{\circ}\text{C}$, unless otherwise noted						
Parameter	Symbol	Test Conditions	Min	Typ ^a	Max	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}$, $I_D = 250\text{ }\mu\text{A}$	60			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = 250\text{ }\mu\text{A}$	1.0	2.0	3.0	
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0\text{ V}$, $V_{GS} = \pm 20\text{ V}$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 60\text{ V}$, $V_{GS} = 0\text{ V}$			1	μA
		$V_{DS} = 60\text{ V}$, $V_{GS} = 0\text{ V}$, $T_J = 125\text{ }^{\circ}\text{C}$			50	
		$V_{DS} = 60\text{ V}$, $V_{GS} = 0\text{ V}$, $T_J = 175\text{ }^{\circ}\text{C}$			250	
On-State Drain Current ^b	$I_{D(on)}$	$V_{DS} = 5\text{ V}$, $V_{GS} = 10\text{ V}$	50			A
Drain-Source On-State Resistance ^b	$r_{DS(on)}$	$V_{GS} = 10\text{ V}$, $I_D = 15\text{ A}$		0.025	0.031	Ω
		$V_{GS} = 10\text{ V}$, $I_D = 15\text{ A}$, $T_J = 125\text{ }^{\circ}\text{C}$			0.055	
		$V_{GS} = 10\text{ V}$, $I_D = 15\text{ A}$, $T_J = 175\text{ }^{\circ}\text{C}$			0.069	
		$V_{GS} = 4.5\text{ V}$, $I_D = 10\text{ A}$		0.037	0.045	
Forward Transconductance ^b	g_{fs}	$V_{DS} = 15\text{ V}$, $I_D = 15\text{ A}$		20		S
Dynamic ^a						
Input Capacitance	C_{iss}	$V_{GS} = 0\text{ V}$, $V_{DS} = 25\text{ V}$, $f = 1\text{ MHz}$		670		pF
Output Capacitance	C_{oss}			140		
Reverse Transfer Capacitance	C_{rss}			60		
Total Gate Charge ^c	Q_g	$V_{DS} = 30\text{ V}$, $V_{GS} = 10\text{ V}$, $I_D = 23\text{ A}$		11	17	nC
Gate-Source Charge ^c	Q_{gs}			3		
Gate-Drain Charge ^c	Q_{gd}			3		
Turn-On Delay Time ^c	$t_{d(on)}$	$V_{DD} = 30\text{ V}$, $R_L = 1.3\text{ }\Omega$ $I_D \cong 23\text{ A}$, $V_{GEN} = 10\text{ V}$, $R_g = 2.5\text{ }\Omega$		8	15	ns
Rise Time ^c	t_r			15	25	
Turn-Off Delay Time ^c	$t_{d(off)}$			30	45	
Fall Time ^c	t_f			25	40	
Source-Drain Diode Ratings and Characteristics ($T_C = 25\text{ }^{\circ}\text{C}$)						
Pulsed Current	I_{SM}				50	A
Diode Forward Voltage	V_{SD}	$I_F = 15\text{ A}$, $V_{GS} = 0\text{ V}$		1.0	1.5	V
Reverse Recovery Time	t_{rr}	$I_F = 15\text{ A}$, $di/dt = 100\text{ A}/\mu\text{s}$		30	60	ns

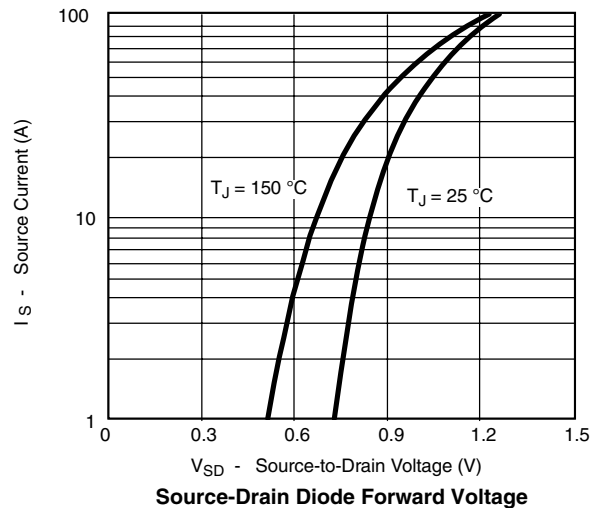
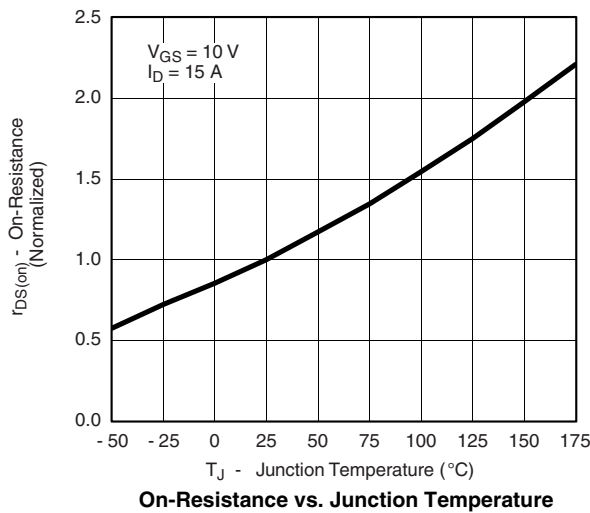
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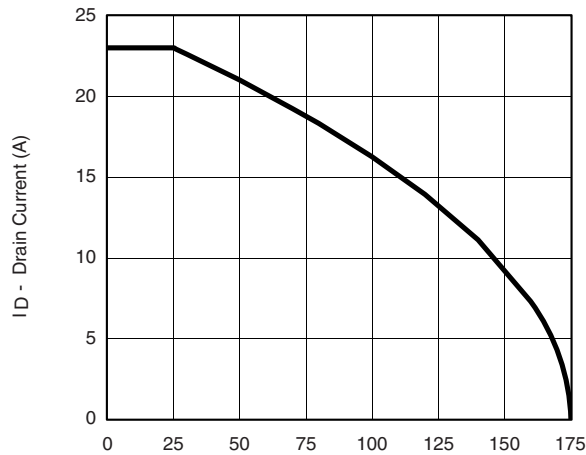
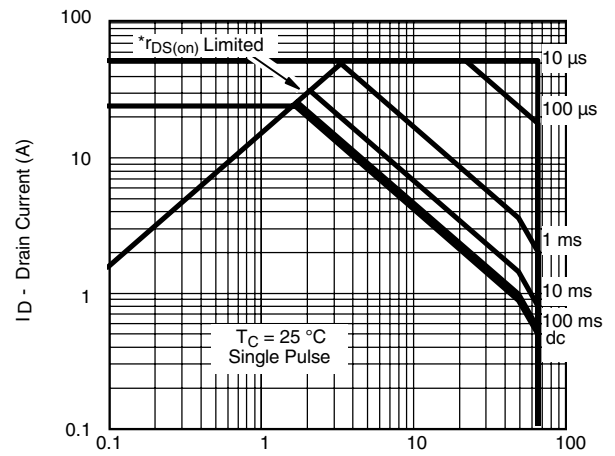
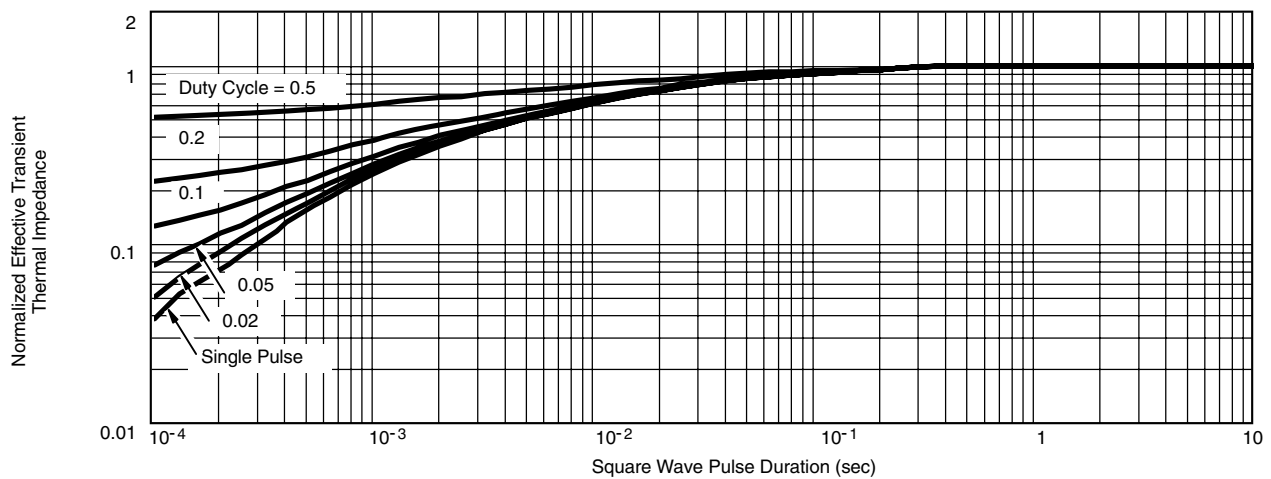
- a. For design aid only; not subject to production testing.
b. Pulse test; pulse width $\leq 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$.
c. Independent of operating temperature.

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 noted

Output Characteristics

Transfer Characteristics

Transconductance

On-Resistance vs. Drain Current

Capacitance

Gate Charge

TYPICAL CHARACTERISTICS 25 °C unless noted



**THERMAL RATINGS** T_A - Ambient Temperature (°C)**Maximum Drain Current
vs. Ambient Temperature** V_{DS} - Drain-to-Source Voltage (V)* V_{GS} > minimum V_{GS} at which $r_{DS(on)}$ is specified**Safe Operating Area****Normalized Thermal Transient Impedance, Junction-to-Case**

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