

SPECIFICATIONS (T_J = 25 °C UNLESS OTHERWISE NOTED)

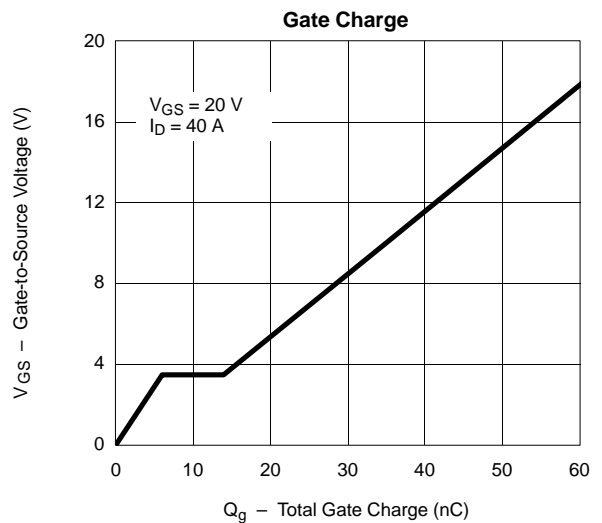
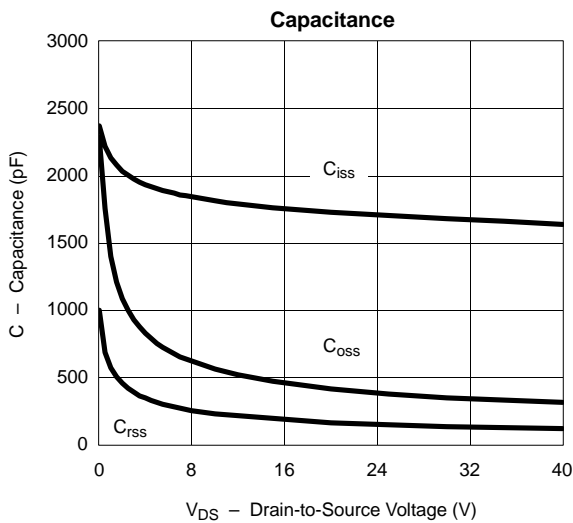
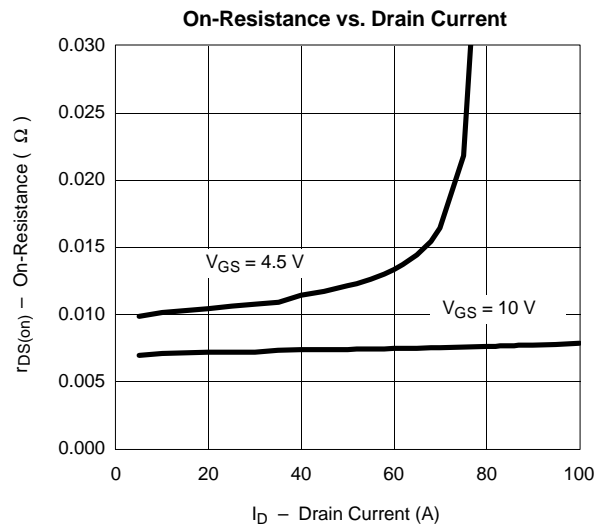
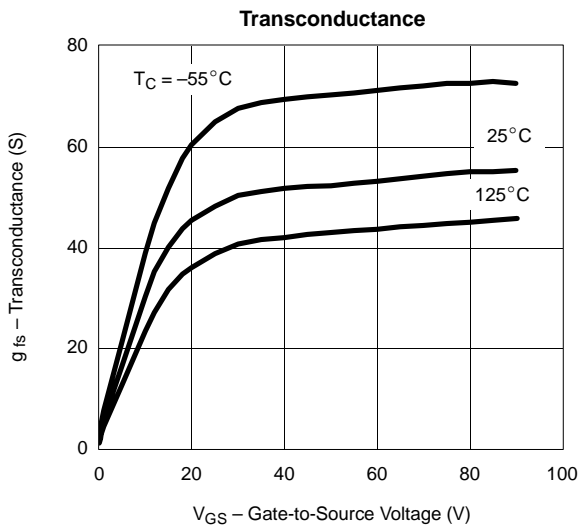
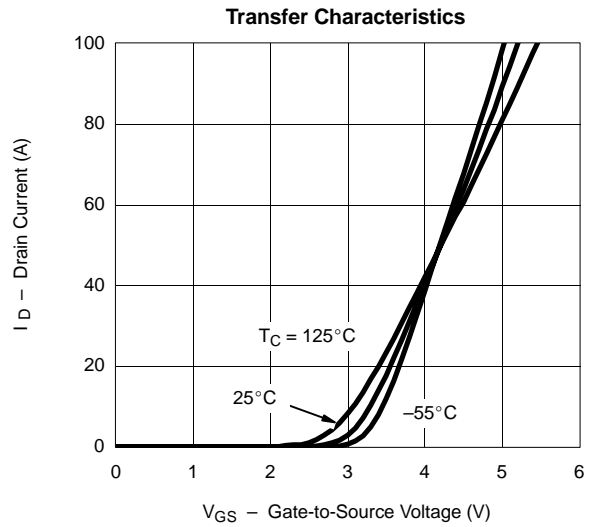
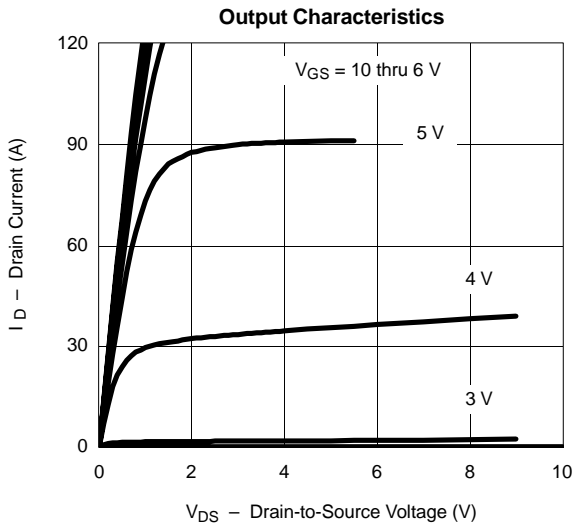
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0 V, I _D = 250 μA	40			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _{DS} = 250 μA	1		3	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±20 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 32 V, V _{GS} = 0 V			1	μA
		V _{DS} = 32 V, V _{GS} = 0 V, T _J = 125 °C			50	
		V _{DS} = 32 V, V _{GS} = 0 V, T _J = 175 °C			150	
On-State Drain Current ^a	I _{D(on)}	V _{DS} = 5 V, V _{GS} = 10 V	40			A
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = 10 V, I _D = 40 A		0.0075	0.010	Ω
		V _{GS} = 10 V, I _D = 40 A, T _J = 125 °C		0.012	0.016	
		V _{GS} = 10 V, I _D = 40 A, T _J = 175 °C		0.015	0.020	
		V _{GS} = 4.5 V, I _D = 10 A		0.011	0.014	
		V _{GS} = 4.5 V, I _D = 10 A, T _J = 125 °C		0.018	0.022	
V _{GS} = 4.5 V, I _D = 10 A, T _J = 175 °C		0.022	0.028			
Forward Transconductance ^a	g _{fs}	V _{DS} = 15 V, I _D = 40 A	20	40		S
Dynamic^b						
Input Capacitance	C _{iss}	V _{GS} = 0 V, V _{DS} = 25 V, f = 1 MHz		1700		pF
Output Capacitance	C _{oss}			370		
Reverse Transfer Capacitance	C _{rss}			145		
Total Gate Charge ^c	Q _g	V _{DS} = 20 V, V _{GS} = 10 V, I _D = 40 A		35		nC
Gate-Source Charge ^c	Q _{gs}			6		
Gate-Drain Charge ^c	Q _{gd}			8		
Turn-On Delay Time ^c	t _{d(on)}	V _{DD} = 20 V, R _L = 0.5 Ω I _D = 40 A, V _{GEN} = 10 V, R _G = 2.5 Ω		14	30	ns
Rise Time ^c	t _r			7.5	15	
Turn-Off Delay Time ^c	t _{d(off)}			30	60	
Fall Time ^c	t _f			14	30	
Source-Drain Diode Ratings and Characteristics (T_C = 25 °C)^b						
Continuous Current	I _s				40	A
Pulsed Current	I _{SM}				100	
Forward Voltage ^a	V _{SD}	I _F = 40 A, V _{GS} = 0 V		1.0	1.50	V
Reverse Recovery Time	t _{rr}	I _F = 40 A, di/dt = 100 A/μs		30	60	ns

Notes:

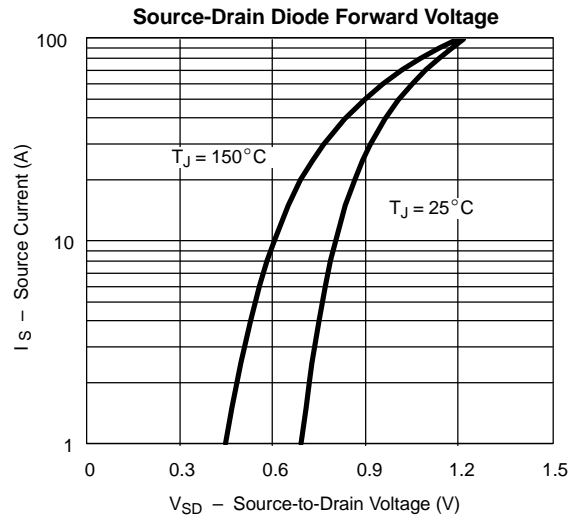
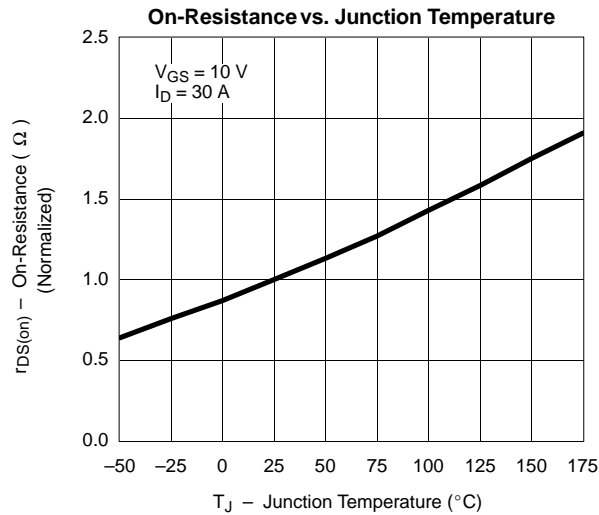
- Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.
- Guaranteed by design, not subject to production testing.
- Independent of operating temperature.



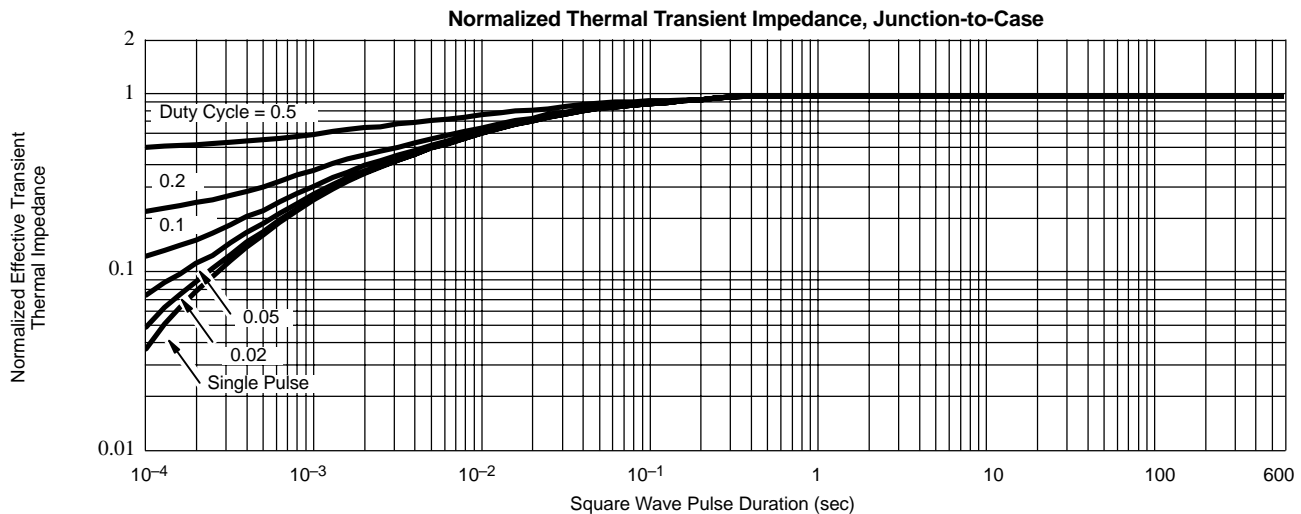
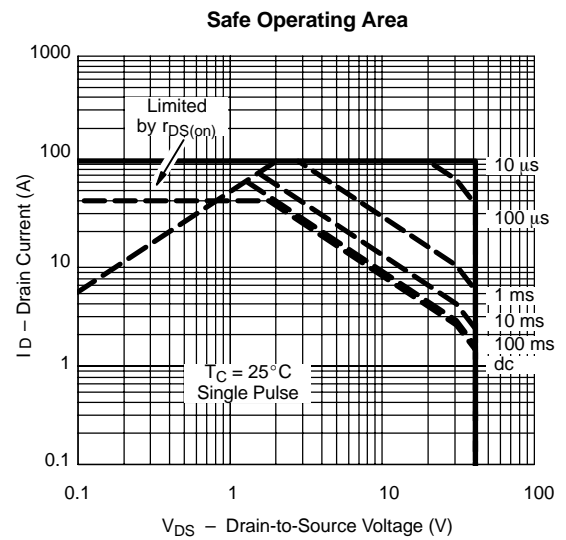
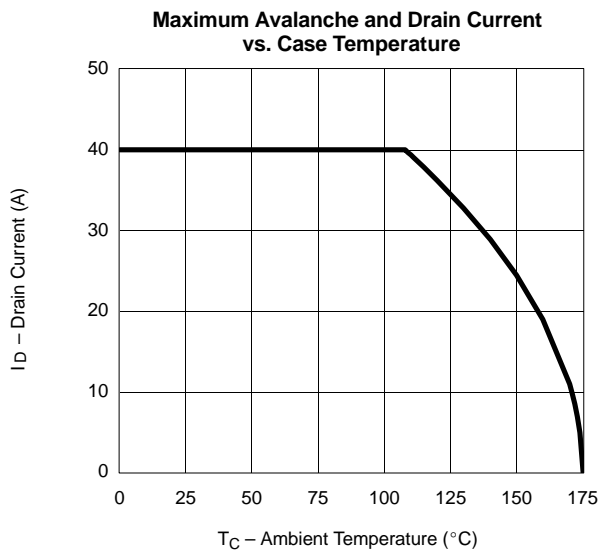
TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)



THERMAL RATINGS





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