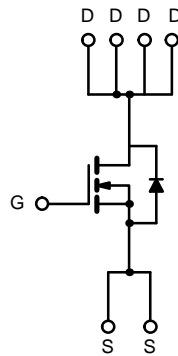
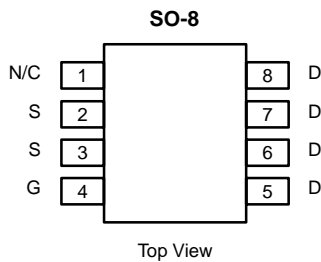




N-Channel Enhancement-Mode MOSFET

PRODUCT SUMMARY

V_{DS} (V)	$R_{DS(ON)}$ (Ω)	I_D (A)
200	1.0 @ $V_{GS} = 10$ V	± 1.0



N-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

PARAMETER		SYMBOL	LIMIT	UNIT
Drain-Source Voltage		V_{DS}	200	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current ($T_J = 150^\circ\text{C}$) ^A	$T_A = 25^\circ\text{C}$	I_D	± 1.0	A
	$T_A = 70^\circ\text{C}$		± 0.8	
Pulsed Drain Current		I_{DM}	± 10	
Avalanche Current		I_{AS}	5	mJ
Single Avalanche Energy		E_{AS}	1.3	
Continuous Source Current (Diode Conduction) ^A		I_S	1.0	A
Maximum Power Dissipation ^A	$T_A = 25^\circ\text{C}$	P_D	2.5	W
	$T_A = 70^\circ\text{C}$		1.6	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55 to 150	$^\circ\text{C}$

THERMAL RESISTANCE RATINGS

PARAMETER	SYMBOL	LIMIT	UNIT
Maximum Junction-to-Ambient ^A	R_{thJA}	50	$^\circ\text{C/W}$

Notes

A. Surface Mounted on FR4 Board, $t \leq 10$ sec.

Updates to this data sheet may be obtained via facsimile by calling Siliconix FaxBack, 1-408-970-5600. Please request FaxBack document #70123.

SPECIFICATIONS (T_J = 25°C UNLESS OTHERWISE NOTED)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP ^A	MAX	UNIT
STATIC						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250 μA	2			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±20 V	2		±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 160 V, V _{GS} = 0 V			2	μA
		V _{DS} = 160 V, V _{GS} = 0 V, T _J = 55°C			25	
On-State Drain Current ^B	I _{D(on)}	V _{DS} ≥ 10 V, V _{GS} = 10 V	5.0			A
Drain-Source On-State Resistance ^B	r _{DS(on)}	V _{GS} = 10 V, I _D = 1.0 A		0.8	1.0	Ω
Forward Transconductance ^B	g _{fs}	V _{DS} = 15 V, I _D = 1.0 A		1.5		S
Diode Forward Voltage ^B	V _{SD}	I _S = 1.0 A, V _{GS} = 0 V		0.7	1.2	V
DYNAMIC^A						
Total Gate Charge	Q _g	V _{DS} = 100 V, V _{GS} = 10 V, I _D = 1.0 A		8.6	16	nC
Gate-Source Charge	Q _{gs}			1.5		
Gate-Drain Charge	Q _{gd}			3.2		
Turn-On Delay Time	t _{d(on)}	V _{DD} = 100 V, R _L = 100 Ω I _D = 1.0 A, V _{GEN} = 10 V, R _G = 6 Ω		7	14	ns
Rise Time	t _r			12	24	
Turn-Off Delay Time	t _{d(off)}			26	50	
Fall Time	t _f			15	30	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = 1.0 A, di/dt = 100 A/μs		130		

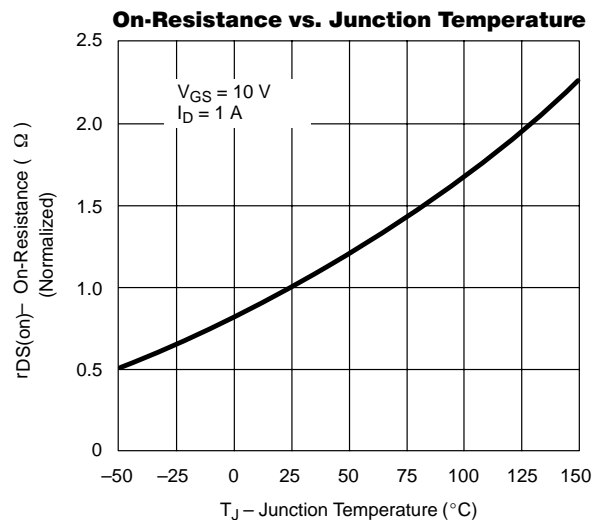
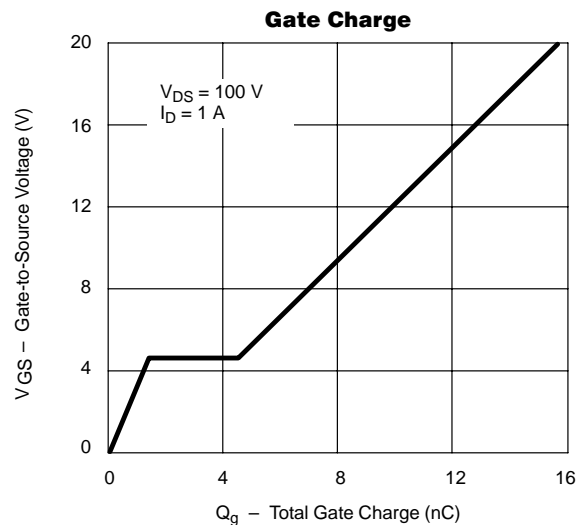
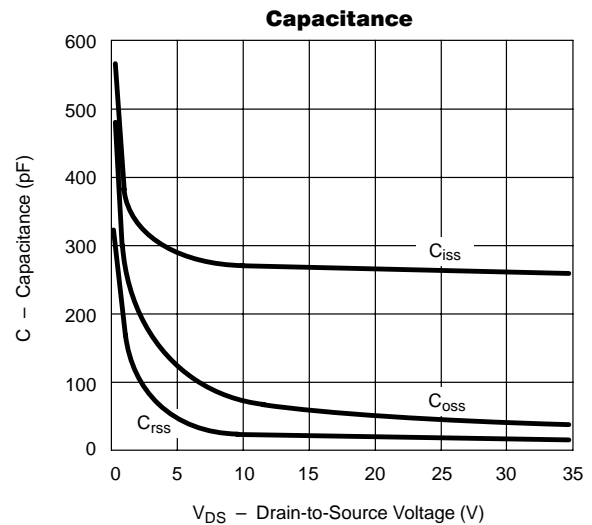
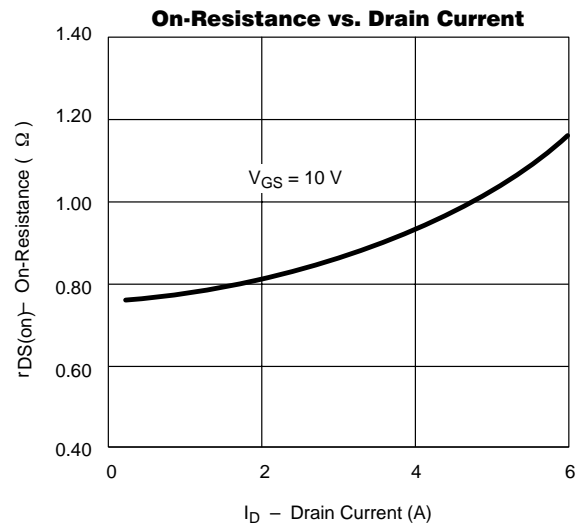
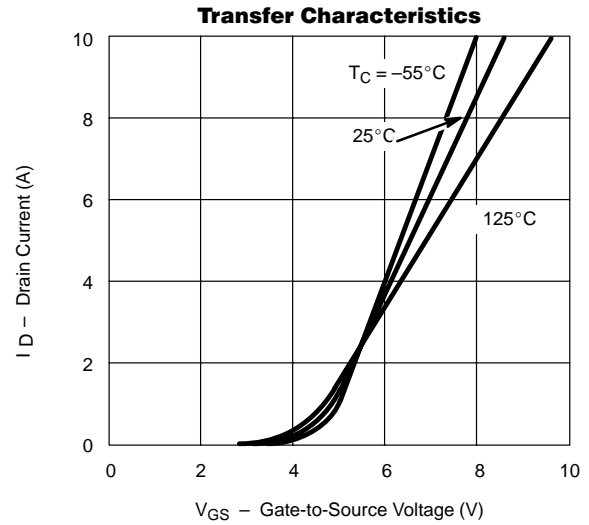
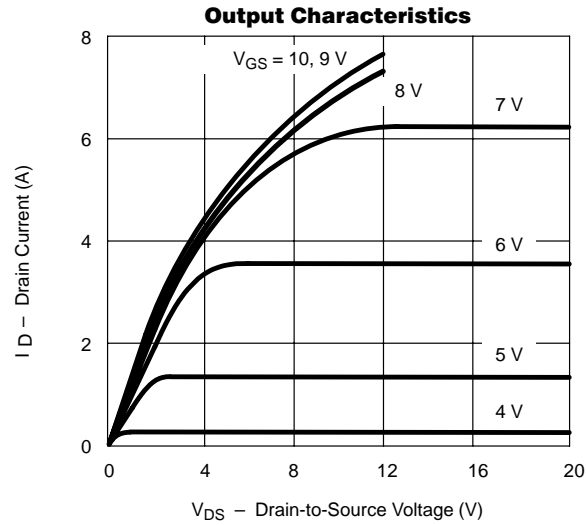
Notes

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

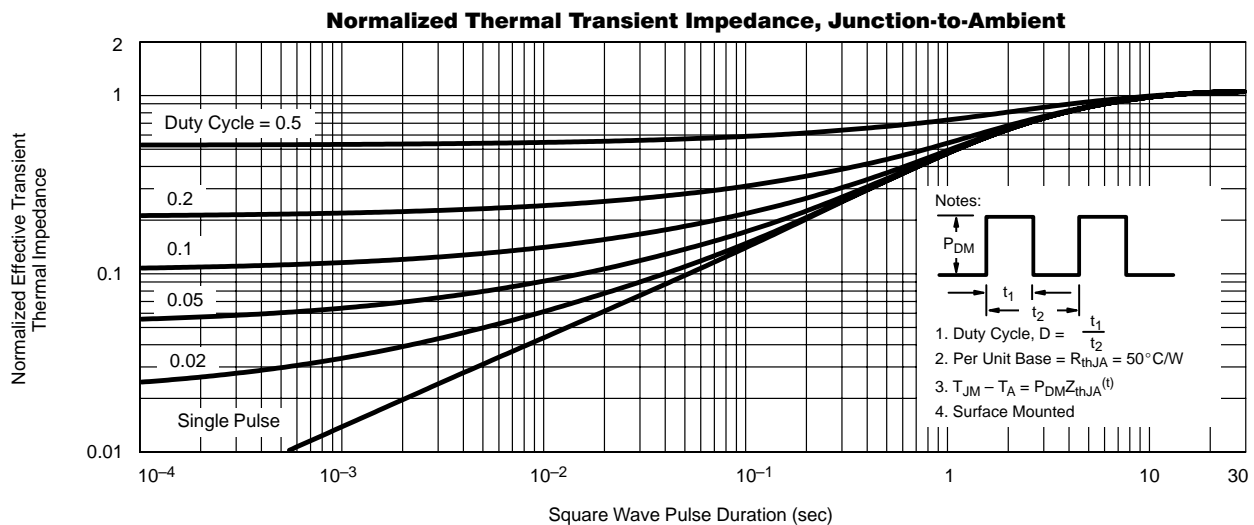
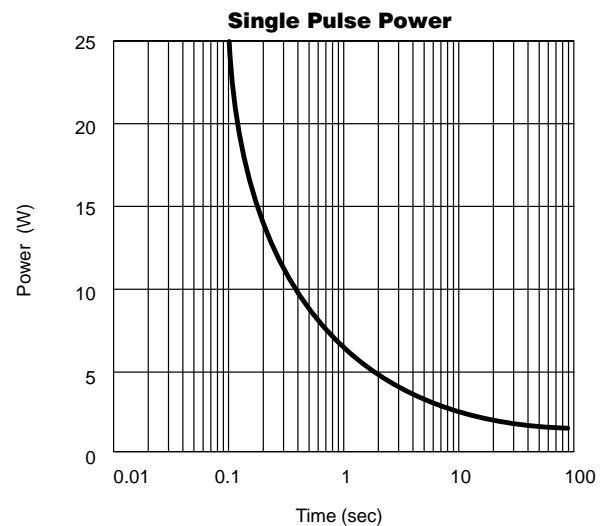
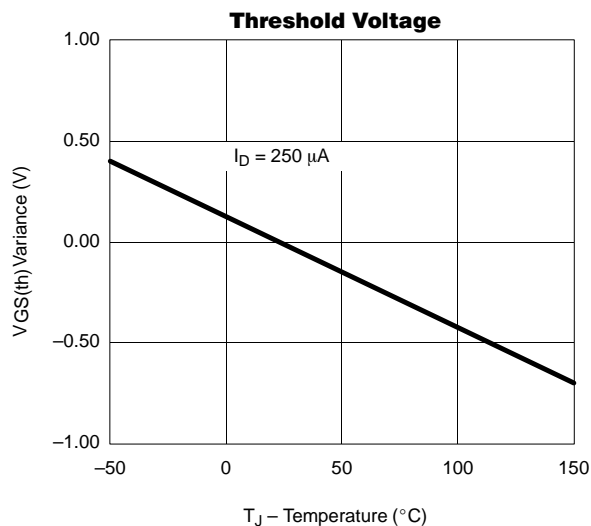
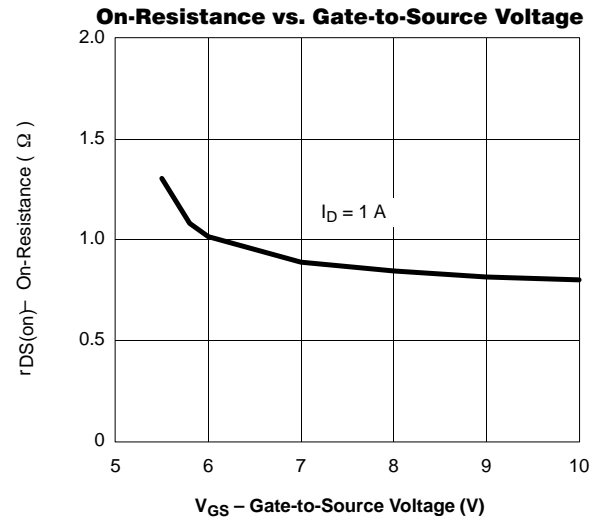
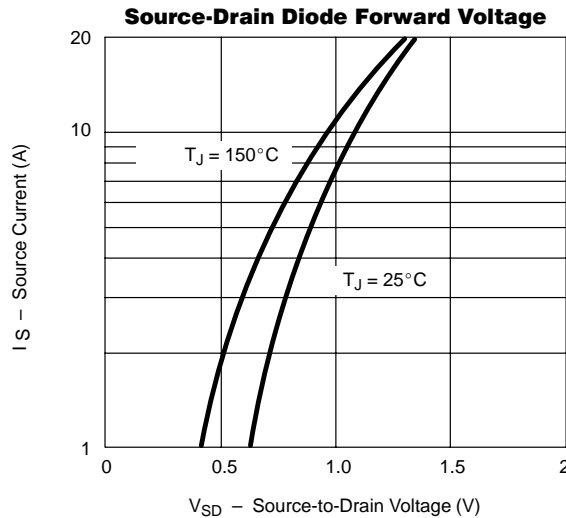
B. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.



TYPICAL CHARACTERISTICS (25°C UNLESS OTHERWISE NOTED)



TYPICAL CHARACTERISTICS (25°C UNLESS OTHERWISE NOTED)





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