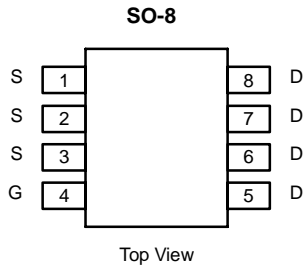




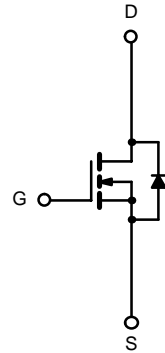
N-Channel 2.5-V (G-S) MOSFET

2.5-V Rated

PRODUCT SUMMARY		
V _{DS} (V)	r _{DS(on)} (Ω)	I _D (A)
20	0.0135 @ V _{GS} = 4.5 V	10
	0.0160 @ V _{GS} = 2.5 V	9.3



Ordering Information: Si9426DY
Si9426DY-T1 (with Tape and Reel)



ABSOLUTE MAXIMUM RATINGS (T _A = 25°C UNLESS OTHERWISE NOTED)			
Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V _{DS}	20	V
Gate-Source Voltage	V _{GS}	±8	
Continuous Drain Current (T _J = 150°C) ^a	I _D	T _A = 25°C	10
		T _A = 70°C	8
Pulsed Drain Current	I _{DM}	30	A
Continuous Source Current (Diode Conduction) ^a	I _S	2.3	
Maximum Power Dissipation ^a	P _D	T _A = 25°C	2.5
		T _A = 70°C	1.6
Operating Junction and Storage Temperature Range	T _J , T _{stg}	-55 to 150	°C

THERMAL RESISTANCE RATINGS			
Parameter	Symbol	Limit	Unit
Maximum Junction-to-Ambient ^a	R _{thJA}	50	°C/W

Notes
a. Surface Mounted on FR4 Board, t ≤ 10 sec.

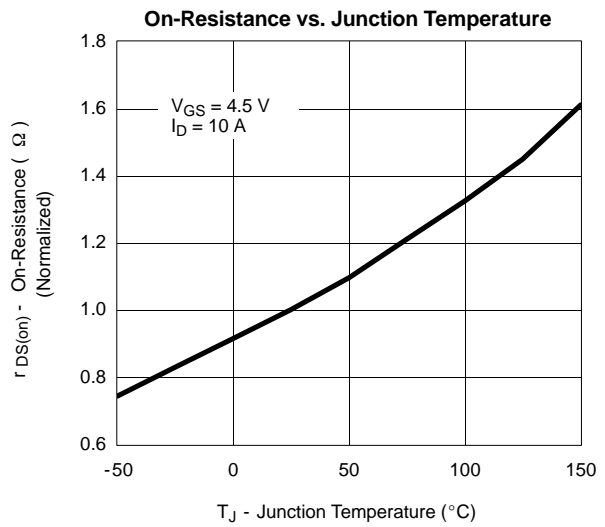
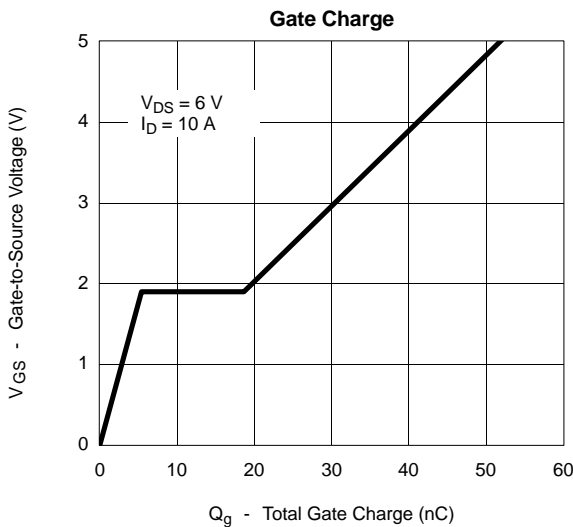
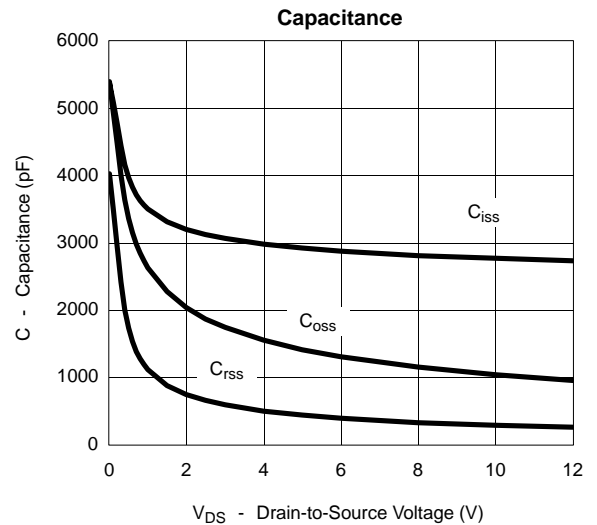
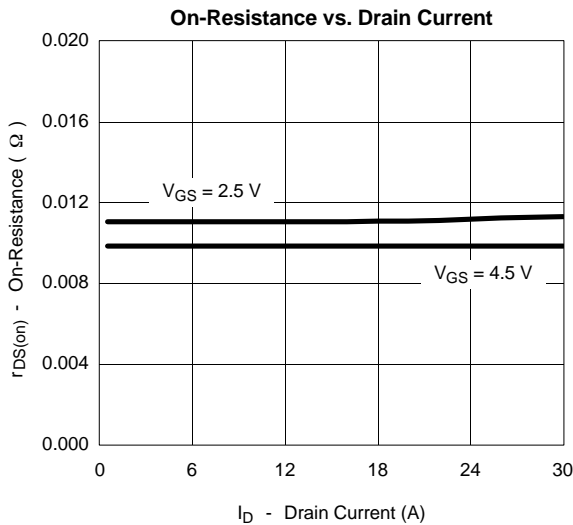
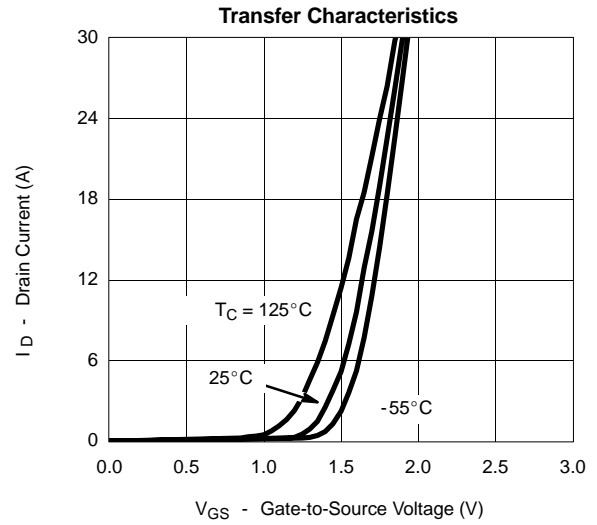
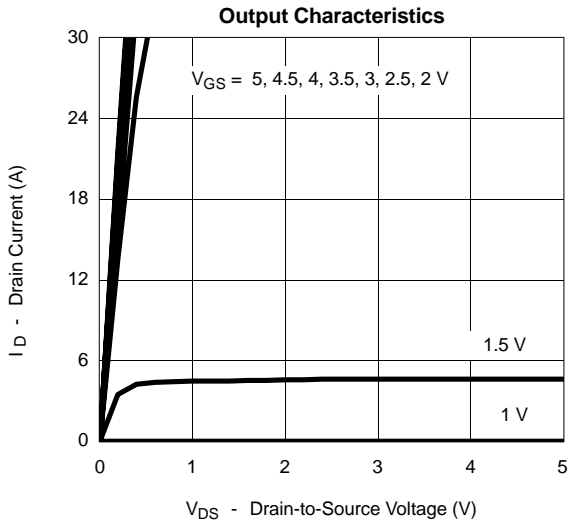
SPECIFICATIONS (T _J = 25 °C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min	Typ ^a	Max	Unit
Static						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250 μA	0.6			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ± 8 V			± 100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 20 V, V _{GS} = 0 V			1	μA
		V _{DS} = 20 V, V _{GS} = 0 V, T _J = 55 °C			5	
On-State Drain Current ^b	I _{D(on)}	V _{DS} ≥ 5 V, V _{GS} = 4.5 V	30			A
Drain-Source On-State Resistance ^b	r _{DS(on)}	V _{GS} = 4.5 V, I _D = 10 A		0.0098	0.0135	Ω
		V _{GS} = 2.5 V, I _D = 8 A		0.011	0.0160	
Forward Transconductance ^b	g _{fs}	V _{DS} = 10 V, I _D = 10 A		57		S
Diode Forward Voltage ^b	V _{SD}	I _S = 2.3 A, V _{GS} = 0 V		0.71	1.2	V
Dynamic^a						
Total Gate Charge	Q _g	V _{DS} = 6 V, V _{GS} = 4.5 V, I _D = 10 A		46.5	80	nC
Gate-Source Charge	Q _{gs}			5.5		
Gate-Drain Charge	Q _{gd}			13.5		
Gate Resistance	R _g		1		3.9	Ω
Turn-On Delay Time	t _{d(on)}	V _{DD} = 6 V, R _L = 6 Ω I _D ≅ 1 A, V _{GEN} = 4.5 V, R _G = 6 Ω		50	100	ns
Rise Time	t _r			110	200	
Turn-Off Delay Time	t _{d(off)}			150	300	
Fall Time	t _f			55	100	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = 2.3 A, di/dt = 100 A/μs		59	100	

Notes

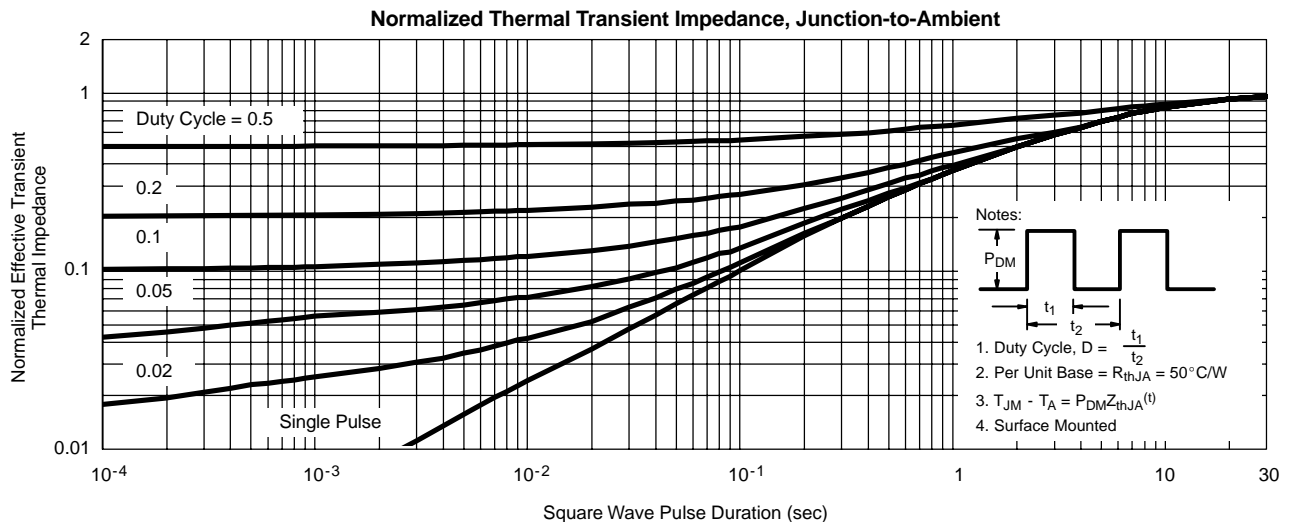
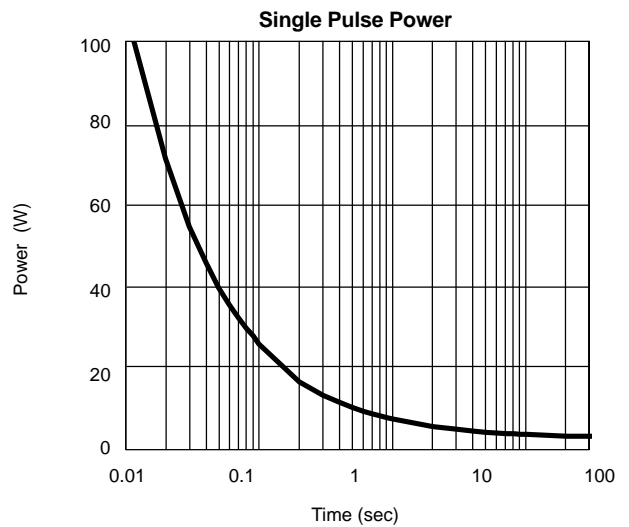
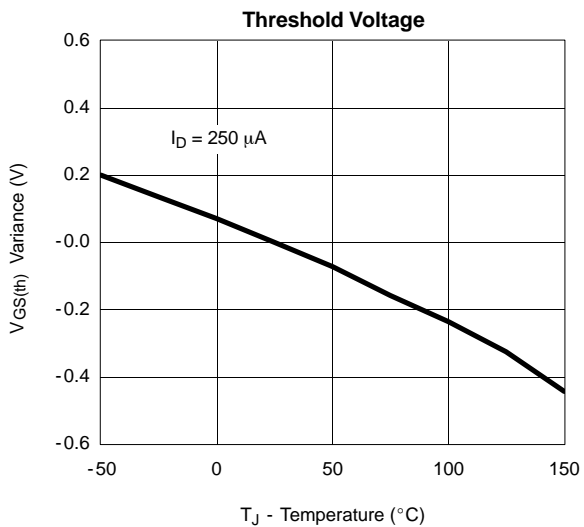
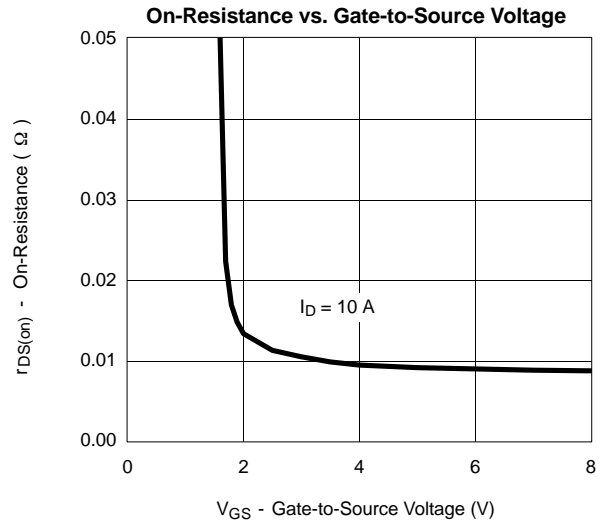
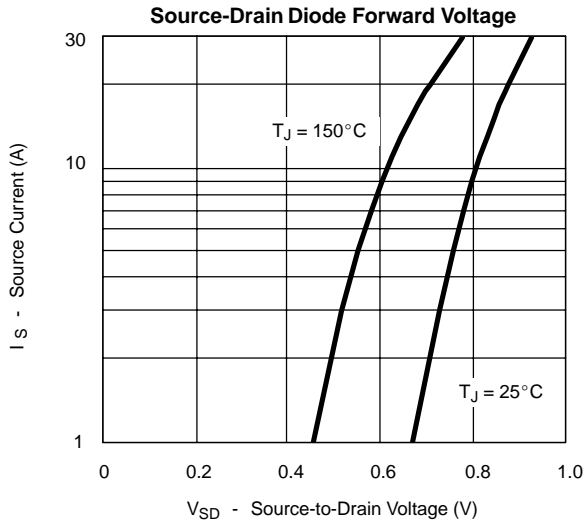
- a. Guaranteed by design, not subject to production testing.
 b. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)



TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)



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