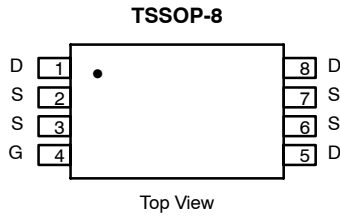


N-Channel 2.5-V (G-S) MOSFET

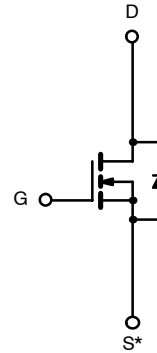
PRODUCT SUMMARY		
V _{DS} (V)	r _{DS(on)} (Ω)	I _D (A)
20	0.014 @ V _{GS} = 4.5 V	8.1
	0.020 @ V _{GS} = 2.5 V	6.6

FEATURES

- TrenchFET® Power MOSFET
- 100% R_g Tested



Ordering Information: Si6466ADQ-T1



* Source Pins 2, 3, 6 and 7 must be tied common.

N-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS (T _A = 25 °C UNLESS OTHERWISE NOTED)					
Parameter		Symbol	10 secs	Steady State	Unit
Drain-Source Voltage		V _{DS}	20		V
Gate-Source Voltage		V _{GS}	± 8		
Continuous Drain Current (T _J = 150 °C) ^a	T _A = 25 °C	I _D	8.1	6.8	A
	T _A = 70 °C		6.6	5.4	
Pulsed Drain Current (10 μs Pulse Width)		I _{DM}	30		
Continuous Source Current (Diode Conduction) ^a		I _S	1.35	0.95	W
Maximum Power Dissipation ^a	T _A = 25 °C	P _D	1.5	1.05	
	T _A = 70 °C		1.0	0.67	
Operating Junction and Storage Temperature Range		T _J , T _{stg}	-55 to 150		°C

THERMAL RESISTANCE RATINGS					
Parameter		Symbol	Typical	Maximum	Unit
Maximum Junction-to-Ambient ^a	t ≤ 10 sec	R _{thJA}	65	83	°C/W
	Steady State		100	120	
Maximum Junction-to-Foot	Steady State	R _{thJF}	43	52	

Notes

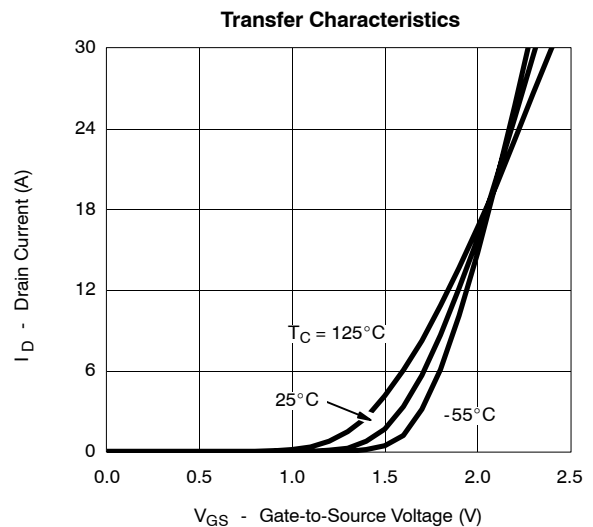
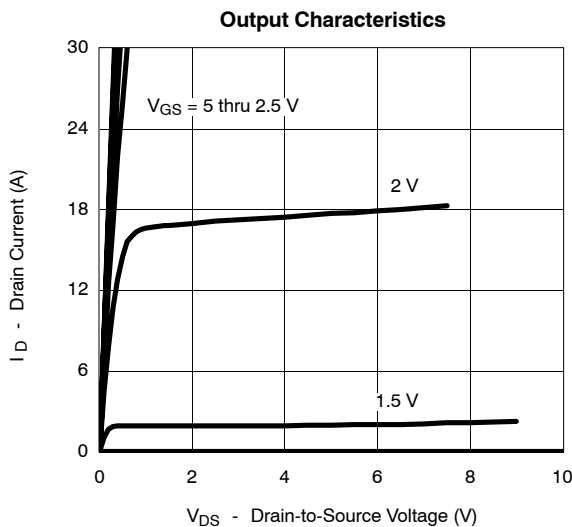
a. Surface Mounted on 1" x 1" FR4 Board.

SPECIFICATIONS (T_J = 25 °C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250 μA	0.45			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} = 16 V, V _{GS} = 0 V			1	μA
		V _{DS} = 16 V, V _{GS} = 0 V, T _J = 70 °C			10	
On-State Drain Current ^a	I _{D(on)}	V _{DS} = 5 V, V _{GS} = 4.5 V	20			A
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = 4.5 V, I _D = 8.1 A		0.011	0.014	Ω
		V _{GS} = 2.5 V, I _D = 6.6 A		0.017	0.020	
Forward Transconductance ^a	g _{fs}	V _{DS} = 10 V, I _D = 8.1 A		30		S
Diode Forward Voltage ^a	V _{SD}	I _S = 1.35 A, V _{GS} = 0 V		0.65	1.1	V
Dynamic^b						
Total Gate Charge	Q _g	V _{DS} = 10 V, V _{GS} = 5 V, I _D = 8.1 A		18	27	nC
Gate-Source Charge	Q _{gs}			3.2		
Gate-Drain Charge	Q _{gd}			4		
Gate Resistance	R _g		0.5		1.8	Ω
Turn-On Delay Time	t _{d(on)}	V _{DD} = 10 V, R _L = 10 Ω I _D ≅ 1 A, V _{GEN} = 4.5 V, R _G = 6 Ω		27	45	ns
Rise Time	t _r			34	50	
Turn-Off Delay Time	t _{d(off)}			76	120	
Fall Time	t _f			30	50	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = 1.5 A, di/dt = 100 A/μs		35	70	

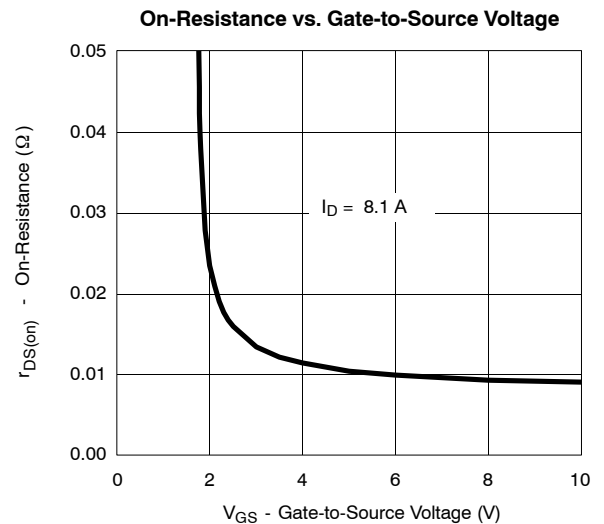
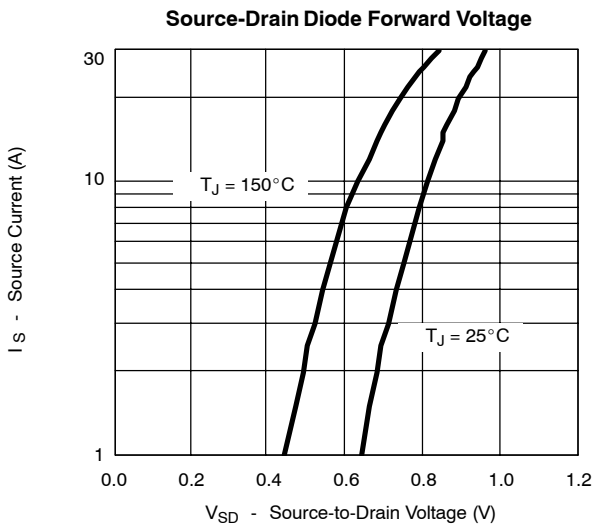
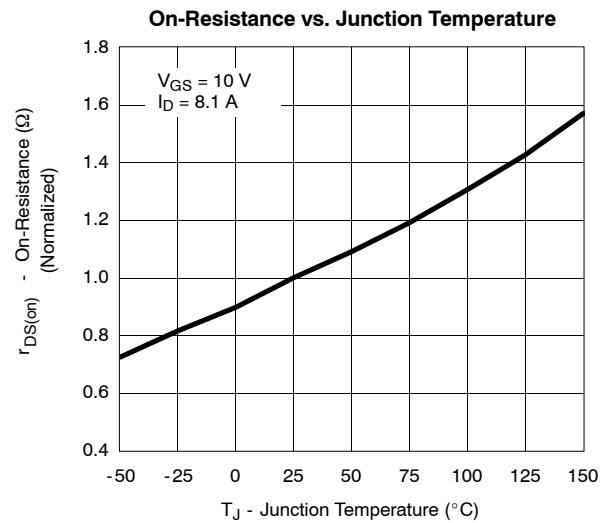
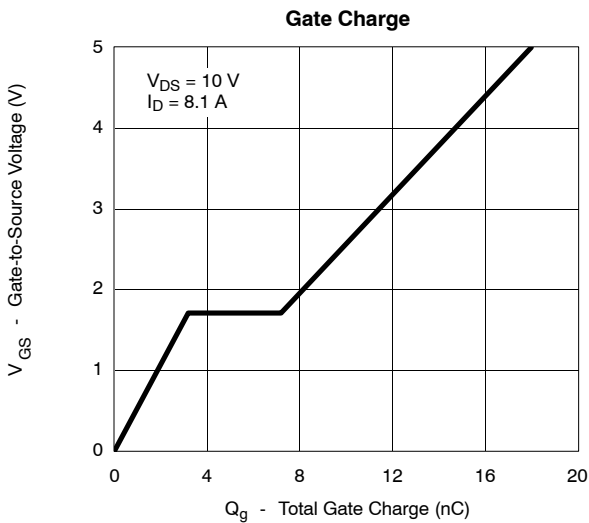
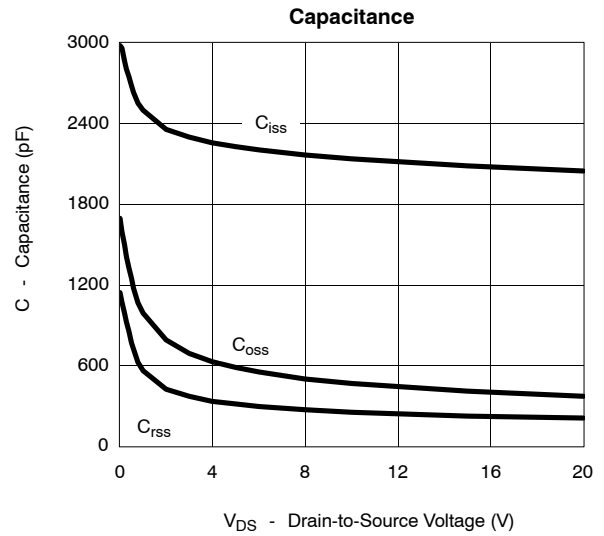
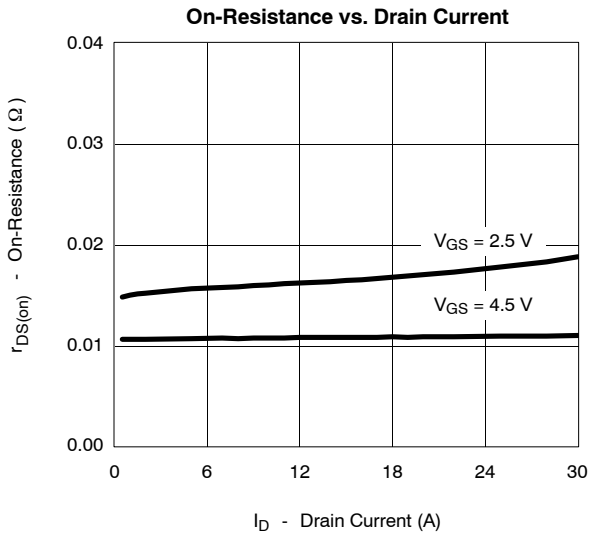
Notes

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

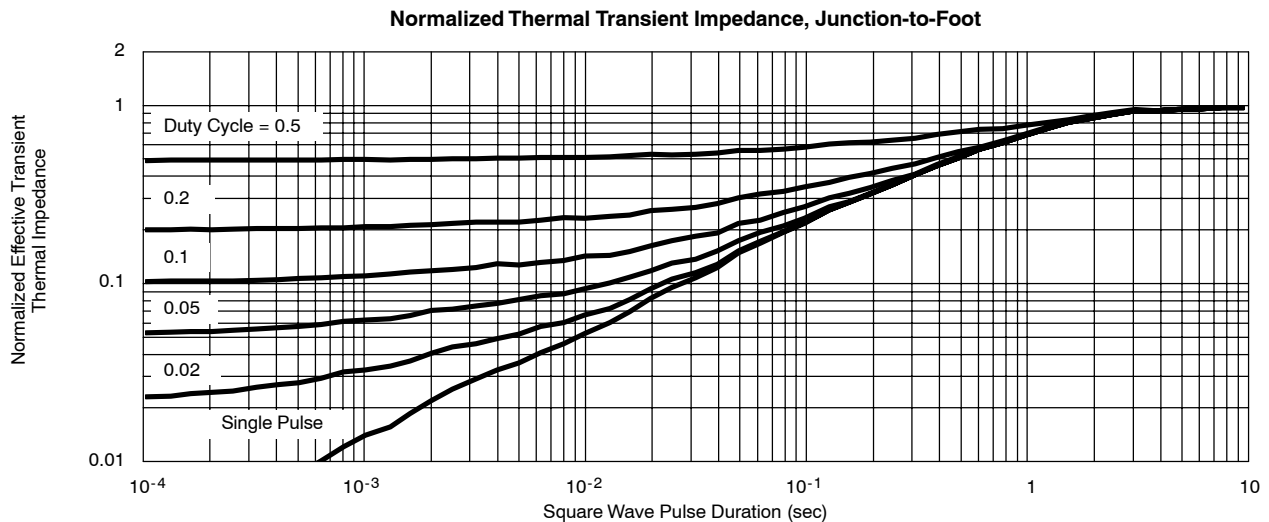
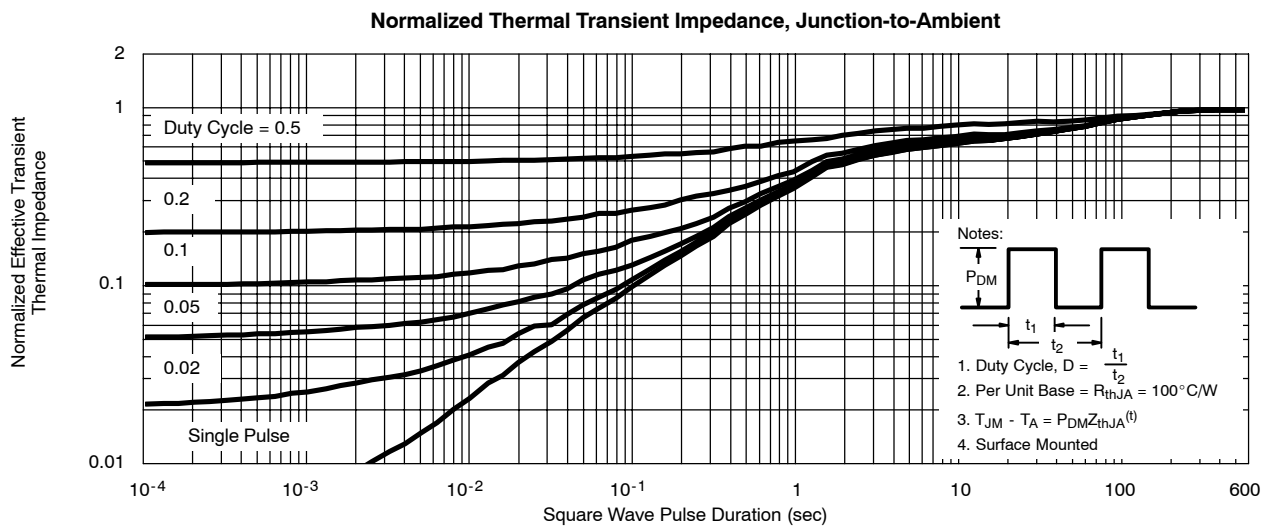
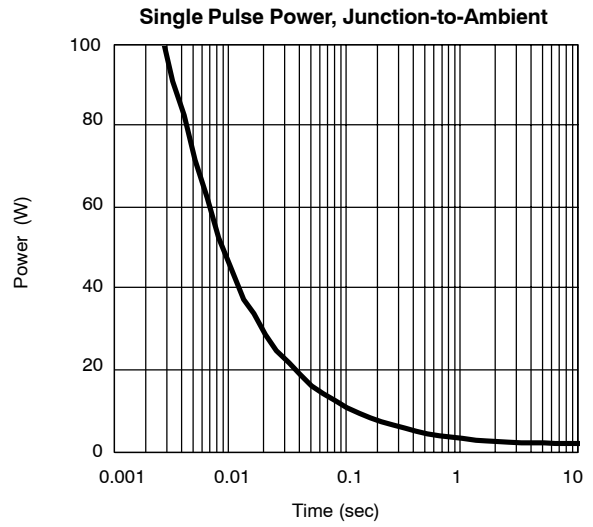
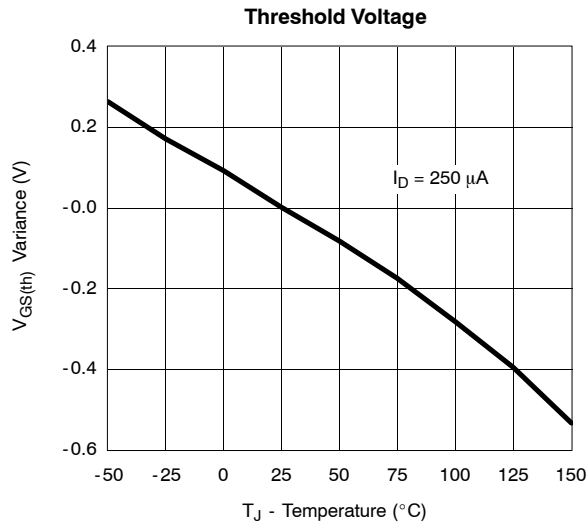
TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)



TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)



TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)





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