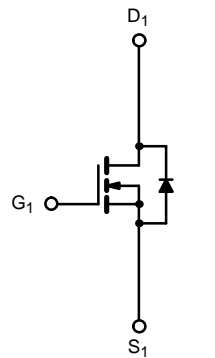
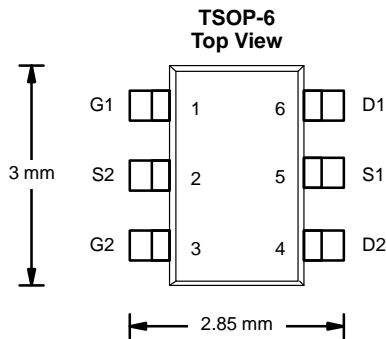




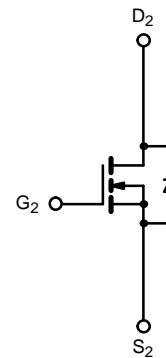
Dual N-Channel 30-V (D-S) MOSFET

TrenchFET[®]
Power MOSFETs

PRODUCT SUMMARY		
V _{DS} (V)	r _{DS(on)} (Ω)	I _D (A)
30	0.105 @ V _{GS} = 10 V	±2.5
	0.175 @ V _{GS} = 4.5 V	±2.0



N-Channel MOSFET



N-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS (T _A = 25 °C UNLESS OTHERWISE NOTED)			
Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V _{DS}	30	V
Gate-Source Voltage	V _{GS}	±20	
Continuous Drain Current (T _J = 150 °C) ^{a, b}	I _D	T _A = 25 °C	±2.5
		T _A = 70 °C	±2.0
Pulsed Drain Current (10 μs Pulse Width)	I _{DM}	±8	A
Continuous Source Current (Diode Conduction) ^{a, b}	I _S	1.05	
Maximum Power Dissipation ^{a, b}	P _D	T _A = 25 °C	1.15
		T _A = 70 °C	0.73
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	R _{thJA}	t ≤ 5 sec	93	110	°C/W
		Steady State	130	150	
Maximum Junction-to-Lead	R _{thJL}	75	90		

Notes

- a. Surface Mounted on FR4 Board.
- b. t ≤ 5 sec.

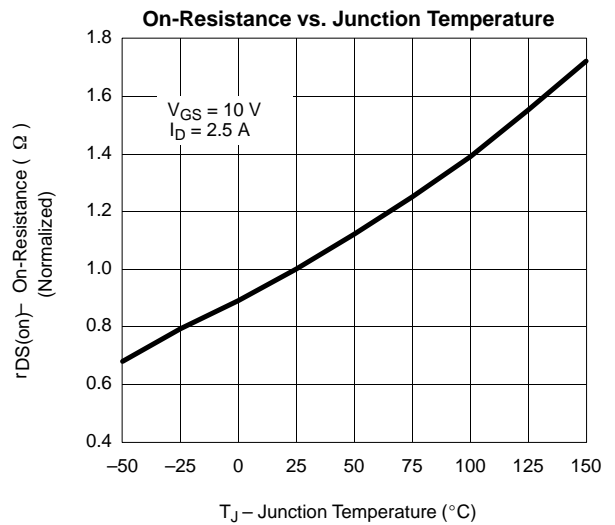
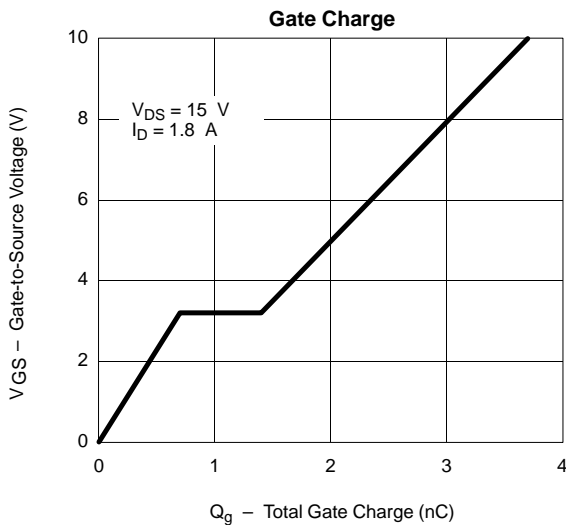
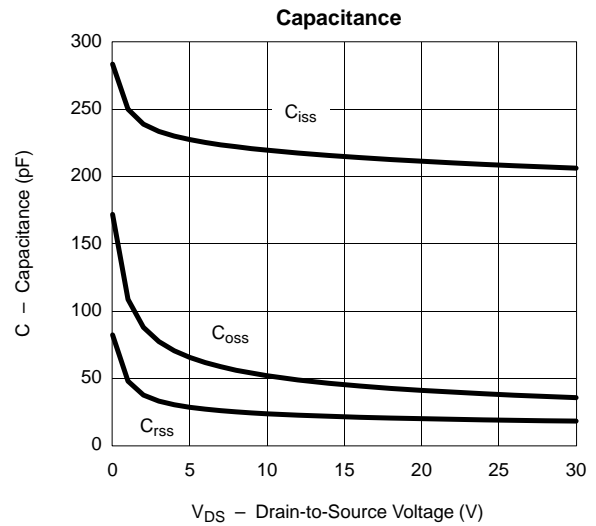
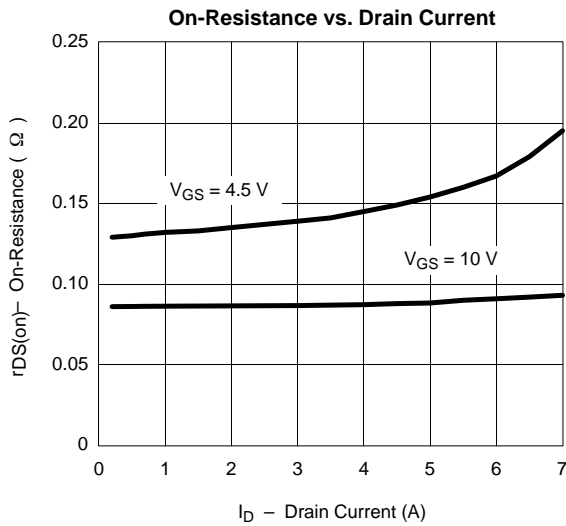
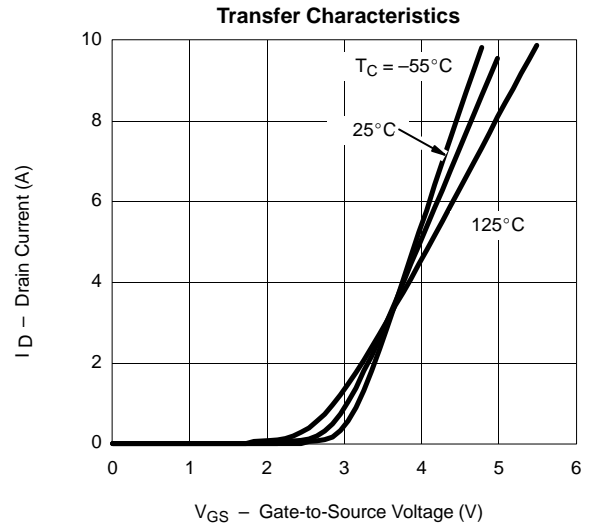
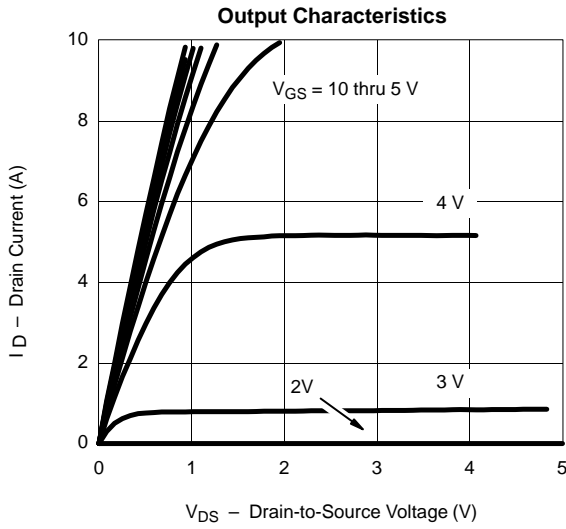


SPECIFICATIONS (T _J = 25 °C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250 μA	1.0			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±20 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 24 V, V _{GS} = 0 V			1	μA
		V _{DS} = 24 V, V _{GS} = 0 V, T _J = 55 °C			5	
On-State Drain Current ^a	I _{D(on)}	V _{DS} ≥ 5 V, V _{GS} = 10 V	5			A
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = 10 V, I _D = 2.5 A		0.0085	0.105	Ω
		V _{GS} = 4.5 V, I _D = 2.0 A		0.140	0.175	
Forward Transconductance ^a	g _{fs}	V _{DS} = 10 V, I _D = 2.5 A		4.3		S
Diode Forward Voltage ^a	V _{SD}	I _S = 1.05 A, V _{GS} = 0 V		0.81	1.1	V
Dynamic^b						
Total Gate Charge	Q _g	V _{DS} = 15 V, V _{GS} = 5.0 V, I _D = 1.8 A		2.1	3.2	nC
Gate-Source Charge	Q _{gs}			0.7		
Gate-Drain Charge	Q _{gd}			0.7		
Turn-On Delay Time	t _{d(on)}	V _{DD} = 15 V, R _L = 15 Ω I _D ≅ 1 A, V _{GEN} = 10 V, R _G = 6 Ω		7	11	ns
Rise Time	t _r			9	14	
Turn-Off Delay Time	t _{d(off)}			13	20	
Fall Time	t _f			5	8	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = 1.05 A, di/dt = 100 A/μs		35	60	

Notes

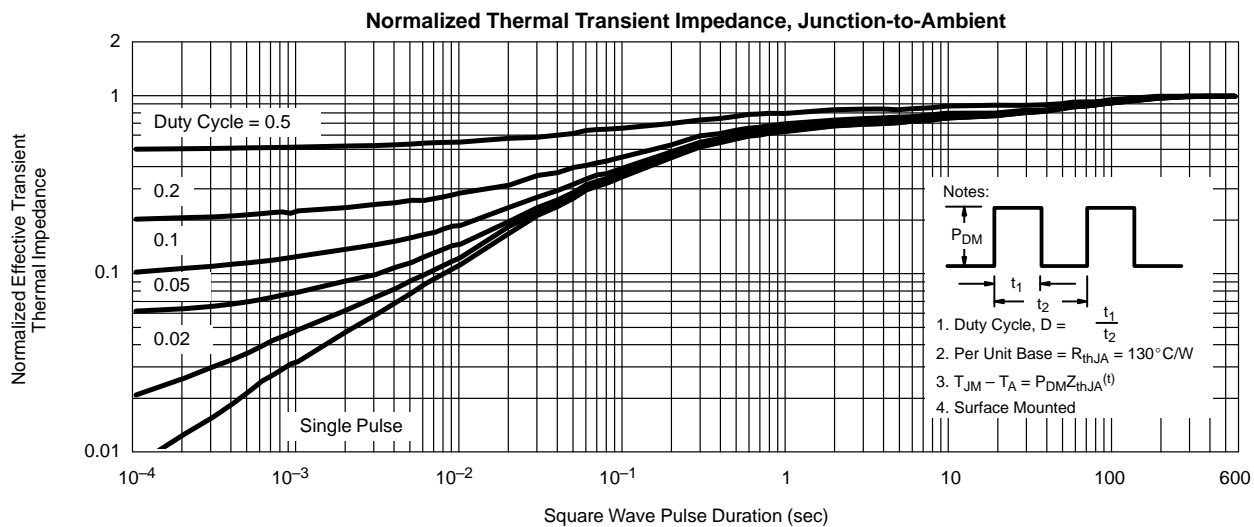
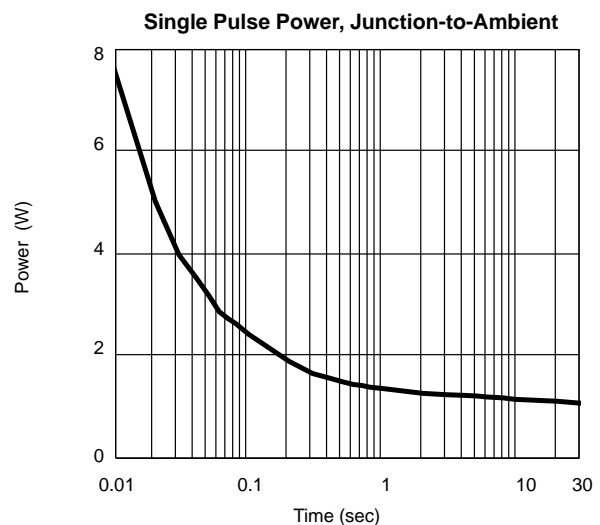
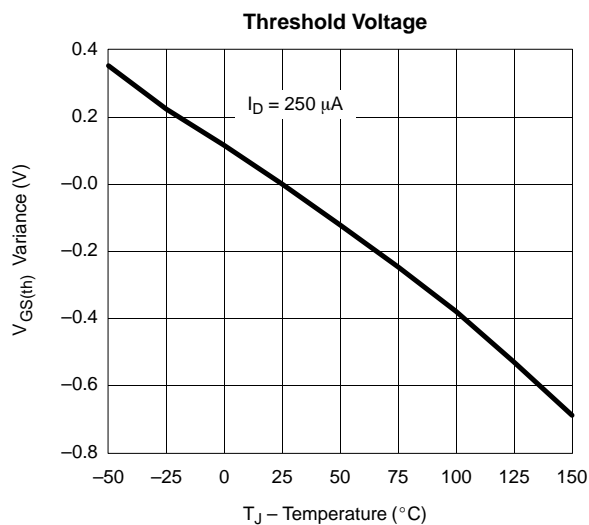
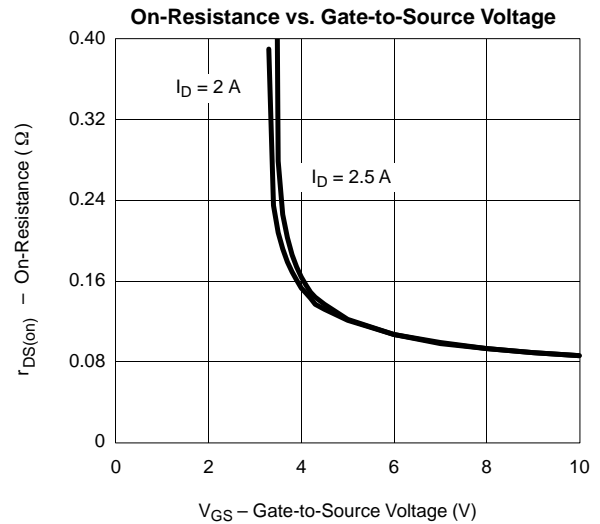
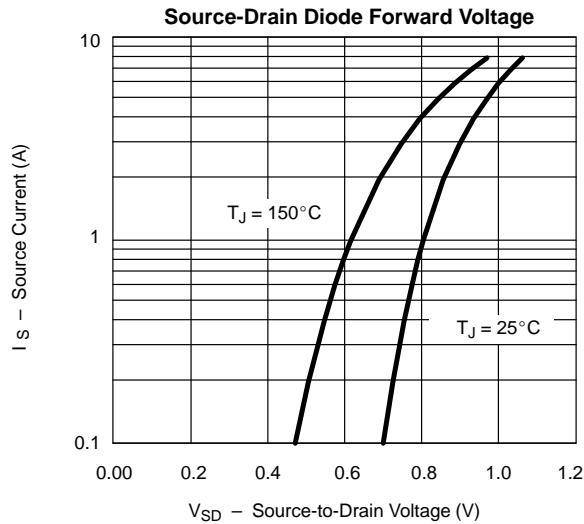
- a. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.
 b. Guaranteed by design, not subject to production testing.

TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)



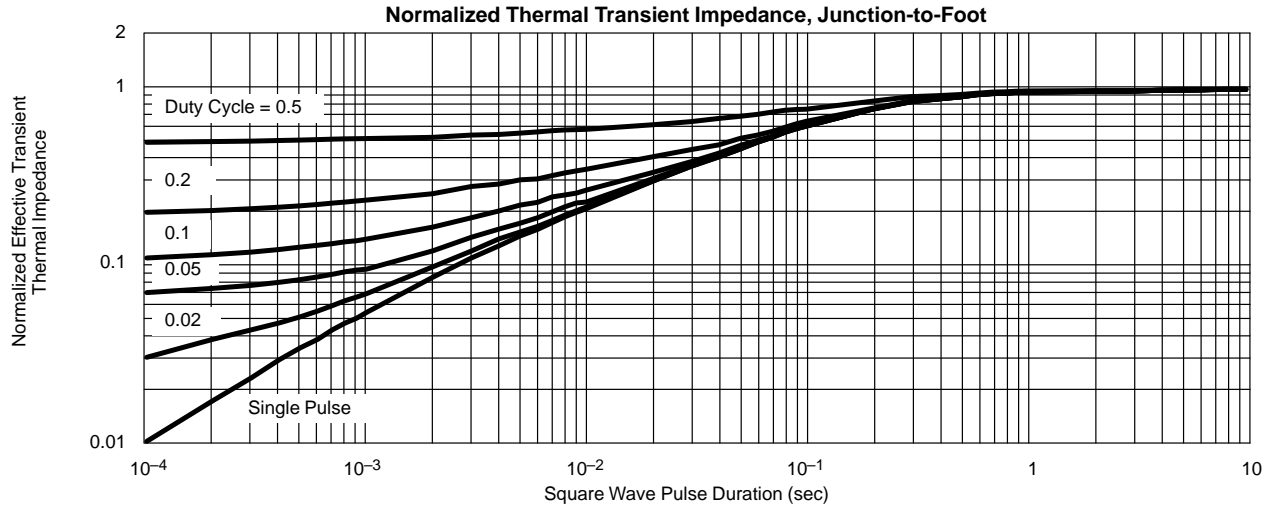


TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)





TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)





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