

Dual N-Channel 25-V (D-S) MOSFET

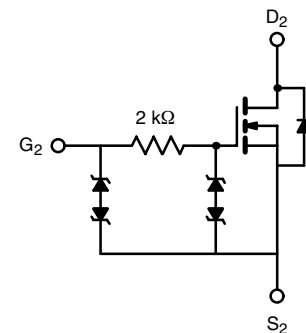
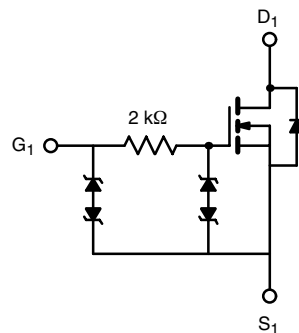
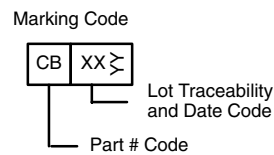
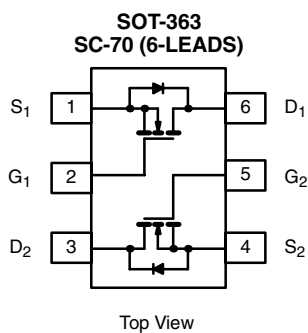
PRODUCT SUMMARY		
V _{DS} (V)	r _{DS(on)} (Ω)	I _D (A)
25	0.810 @ V _{GS} = 4.5 V	0.73
	1.04 @ V _{GS} = 2.5 V	0.65

FEATURES

- TrenchFET® Power MOSFETS: 2.5-V Rated
- ESD Protected: 1800 V
- Thermally Enhanced SC-70 Package

APPLICATIONS

- Load Switching
- PA Switch
- Level Switch



ABSOLUTE MAXIMUM RATINGS (T _A = 25°C UNLESS OTHERWISE NOTED)					
Parameter	Symbol	5 secs	Steady State	Unit	
Drain-Source Voltage	V _{DS}	25		V	
Gate-Source Voltage	V _{GS}	± 8			
Continuous Drain Current (T _J = 150°C) ^a	I _D	T _A = 25°C	0.73	0.64	A
		T _A = 85°C	0.53	0.46	
Pulsed Drain Current	I _{DM}	2			
Continuous Diode Current (Diode Conduction) ^a	I _S	0.61	0.48		
Maximum Power Dissipation ^a	P _D	T _A = 25°C	0.74	0.57	W
		T _A = 85°C	0.38	0.30	
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	130	170	°C/W
		Steady State	170	220	
Maximum Junction-to-Foot (Drain)	R _{thJF}	80	100		

Notes

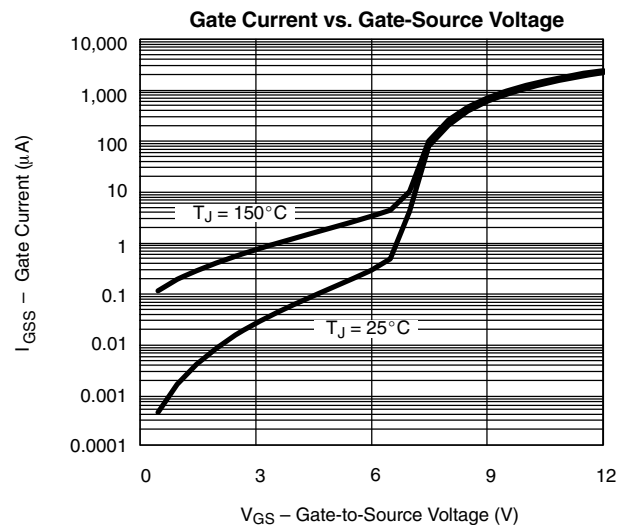
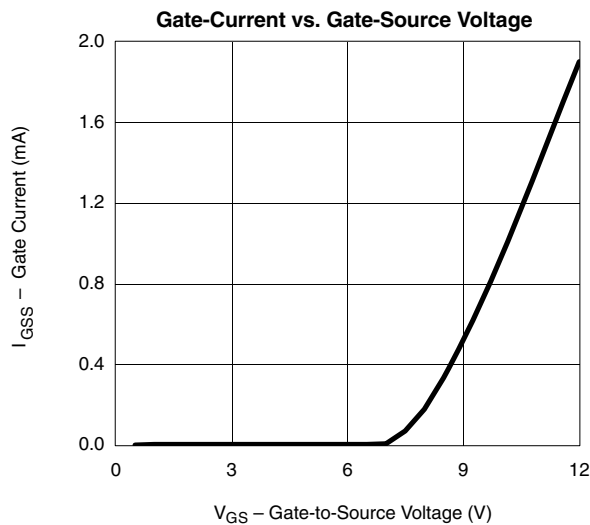
a. Surface Mounted on 1" x 1" FR4 Board.

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	0.6			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±4.5 V			±1	μA
		V _{DS} = 0 V, V _{GS} = ±8 V			±1	mA
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 = 85 °C			5	
On-State Drain Current ^a	I _{D(on)}	V _{DS} = 5 V, V _{GS} = 4.5 V	2			A
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = 4.5 V, I _D = 0.64 A		0.630	0.810	Ω
		V _{GS} = 2.5 V, I _D = 0.2 A		0.830	1.04	
Forward Transconductance ^a	g _{fs}	V _{DS} = 10 V, I _D = 0.64 A		1.1		S
Diode Forward Voltage ^a	V _{SD}	I _S = 0.48 A, V _{GS} = 0 V		0.80	1.2	V
Dynamic^b						
Total Gate Charge	Q _g	V _{DS} = 15 V, V _{GS} = 4.5 V, I _D = 0.64 A		0.66	1.0	nC
Gate-Source Charge	Q _{gs}			0.14		
Gate-Drain Charge	Q _{gd}			0.26		
Turn-On Delay Time	t _{d(on)}	V _{DD} = 15 V, R _L = 30 Ω I _D ≅ 0.5 A, V _{GEN} = 4.5 V, R _g = 6 Ω		42	65	ns
Rise Time	t _r			85	130	
Turn-Off Delay Time	t _{d(off)}			200	300	
Fall Time	t _f			160	240	

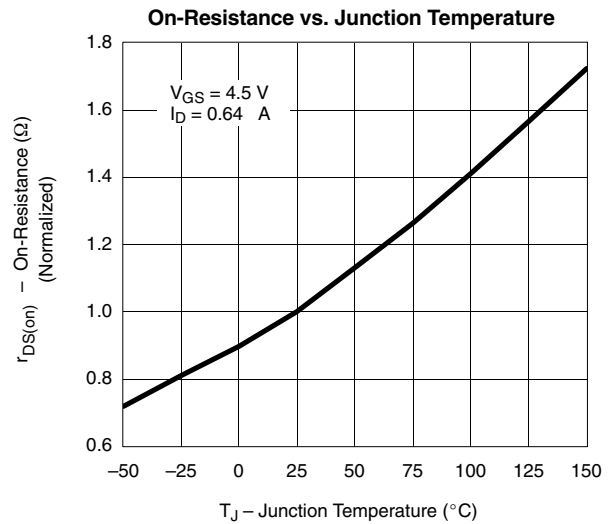
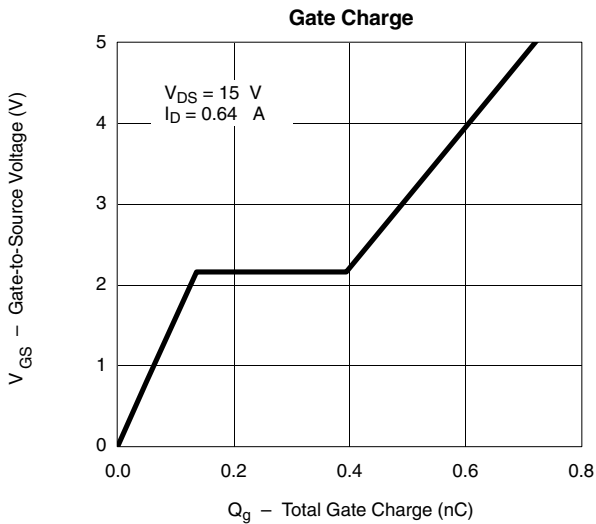
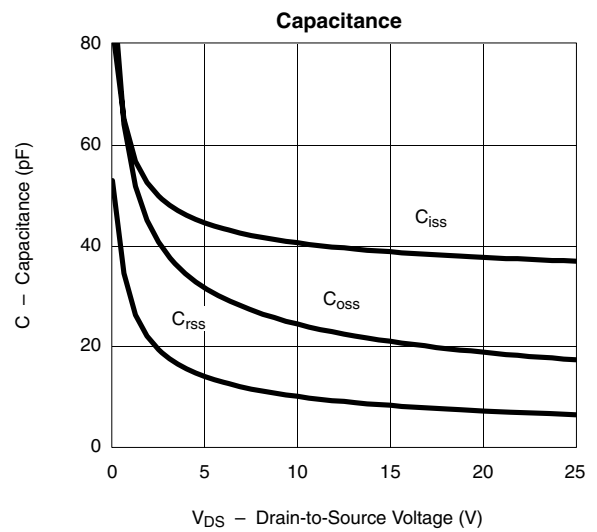
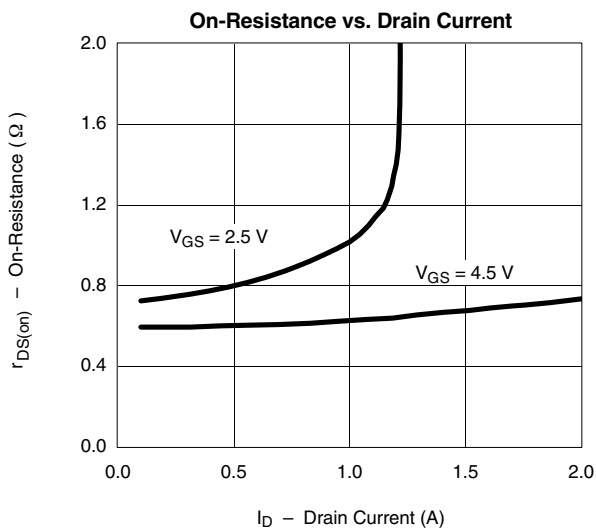
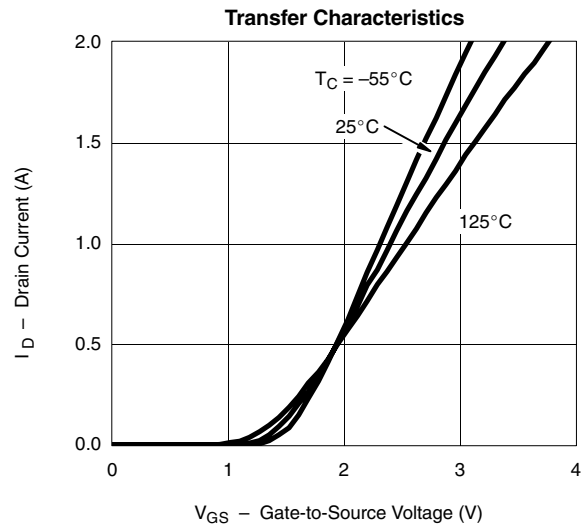
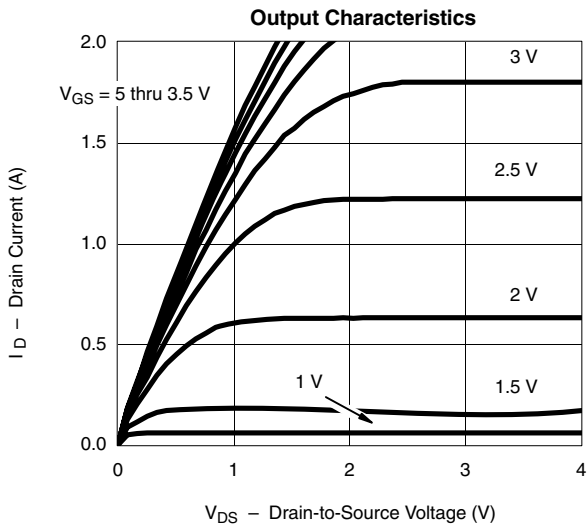
Notes

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

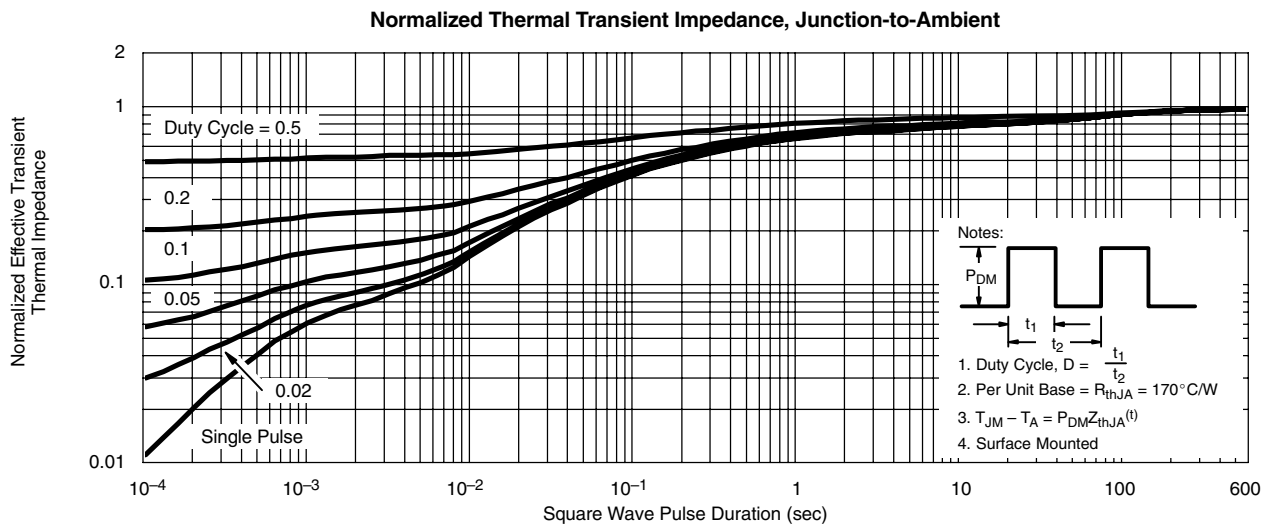
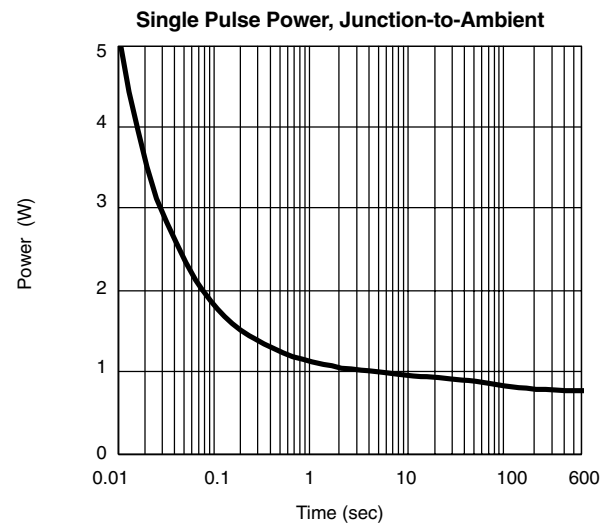
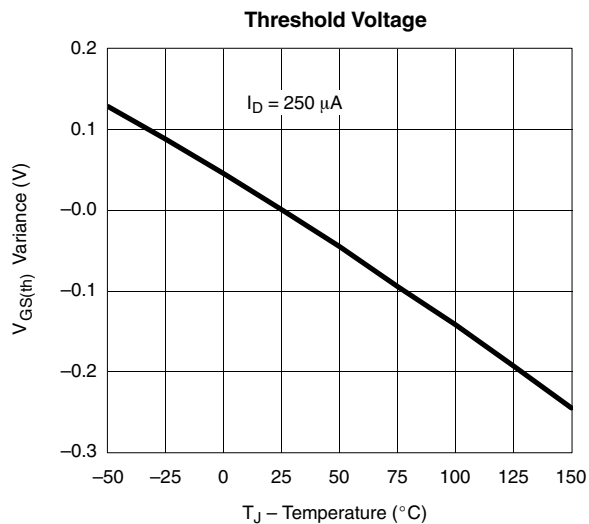
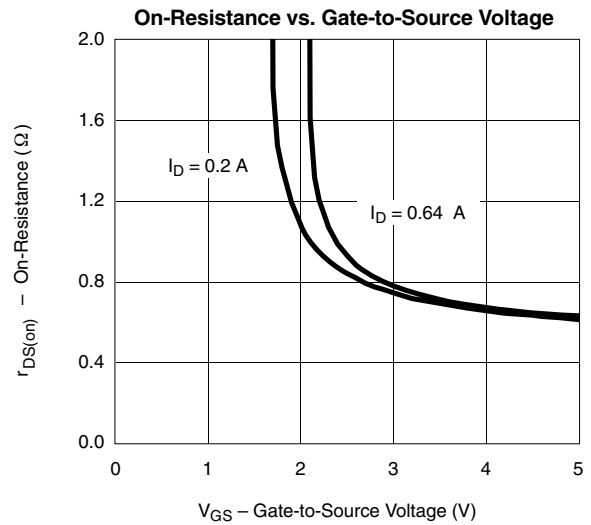
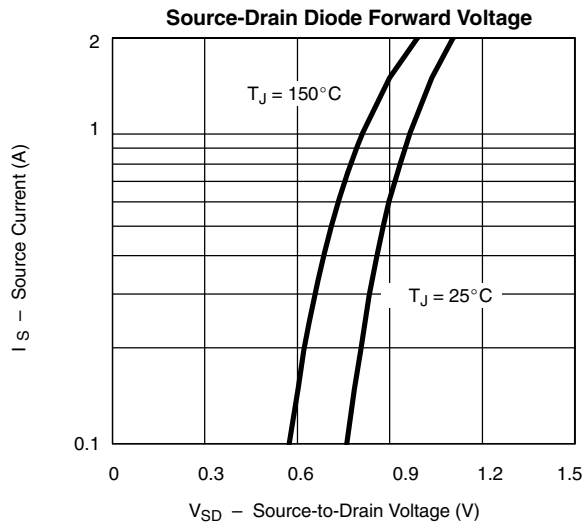
TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)



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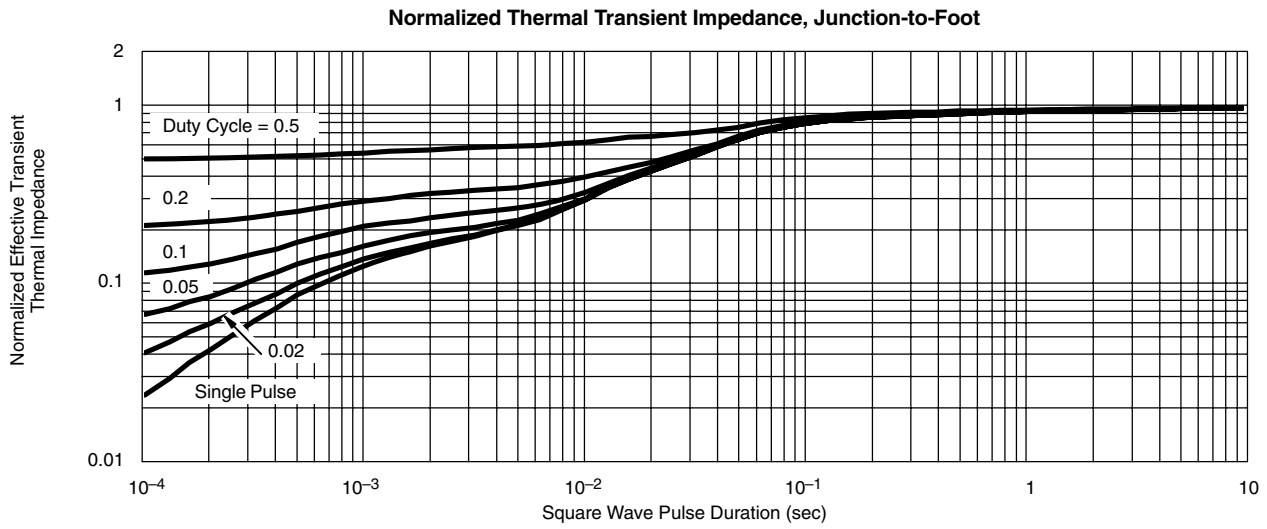


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