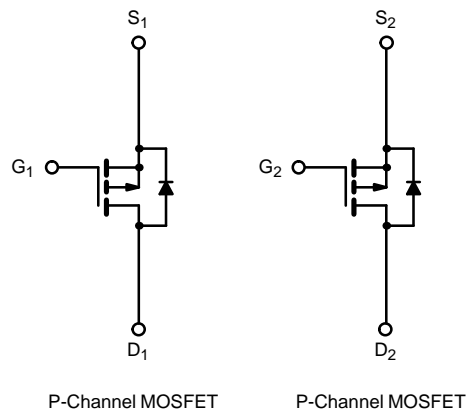
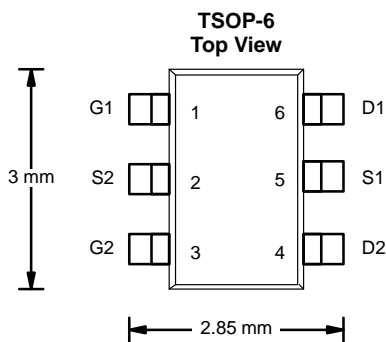




Dual P-Channel 12-V (D-S) MOSFET

PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
-12	0.120 @ $V_{GS} = -4.5$ V	-2.5
	0.175 @ $V_{GS} = -2.5$ V	-2.0
	0.240 @ $V_{GS} = -1.8$ V	-1.7

TrenchFET[®]
Power MOSFETs
1.8-V Rated



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)					
Parameter		Symbol	5 secs	Steady State	Unit
Drain-Source Voltage		V_{DS}	-12		V
Gate-Source Voltage		V_{GS}	± 8		
Continuous Drain Current ($T_J = 150^\circ\text{C}$) ^a	$T_A = 25^\circ\text{C}$	I_D	-2.5	-2.0	A
	$T_A = 70^\circ\text{C}$		-2.0	-1.7	
Pulsed Drain Current		I_{DM}	-7		
Continuous Source Current (Diode Conduction) ^a		I_S	-1.05	-0.75	W
Maximum Power Dissipation ^a	$T_A = 25^\circ\text{C}$	P_D	1.15	0.83	
	$T_A = 70^\circ\text{C}$		0.73	0.53	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55 to 150		$^\circ\text{C}$

THERMAL RESISTANCE RATINGS					
Parameter		Symbol	Typical	Maximum	Unit
Maximum Junction-to-Ambient ^a	$t \leq 5$ sec	R_{thJA}	93	110	$^\circ\text{C/W}$
	Steady State		130	150	
Maximum Junction-to-Foot (Drain)	Steady State	R_{thJF}	75	90	

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

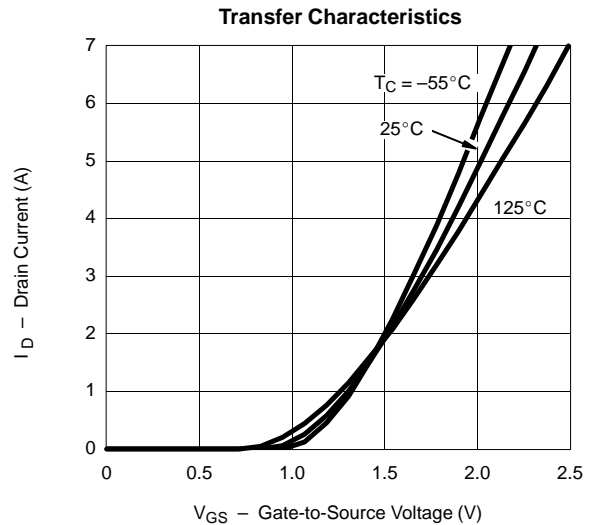
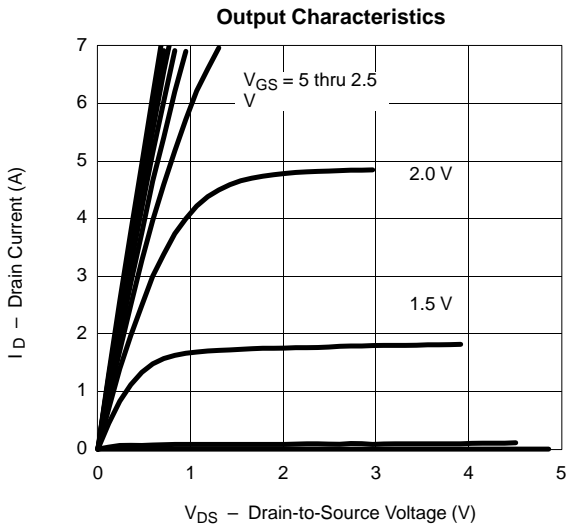


SPECIFICATIONS (T _J = 25 °C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-0.45			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±8 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -9.6 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -9.6 V, V _{GS} = 0 V, T _J = 55 °C			-5	
On-State Drain Current ^a	I _{D(on)}	V _{DS} ≤ -5 V, V _{GS} = -4.5 V	-5			A
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = -4.5 V, I _D = -2.5 A		0.100	0.120	Ω
		V _{GS} = -2.5 V, I _D = -2.0 A		0.142	0.175	
		V _{GS} = -1.8 V, I _D = -1 A		0.200	0.240	
Forward Transconductance ^a	g _{fs}	V _{DS} = -4.5 V, I _D = -2.5 A		5.3		S
Diode Forward Voltage ^a	V _{SD}	I _S = -1.05 A, V _{GS} = 0 V		-0.79	-1.1	V
Dynamic^b						
Total Gate Charge	Q _g	V _{DS} = -6 V, V _{GS} = -4.5 V, I _D = -2.5 A		5	7.5	nC
Gate-Source Charge	Q _{gs}			1.1		
Gate-Drain Charge	Q _{gd}			1.1		
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		15	25	ns
Rise Time	t _r			42	65	
Turn-Off Delay Time	t _{d(off)}			33	50	
Fall Time	t _f			32	50	
Source-Drain Reverse Recovery Time	t _{rr}		I _F = -1.05 A, di/dt = 100 A/μs		20	

Notes

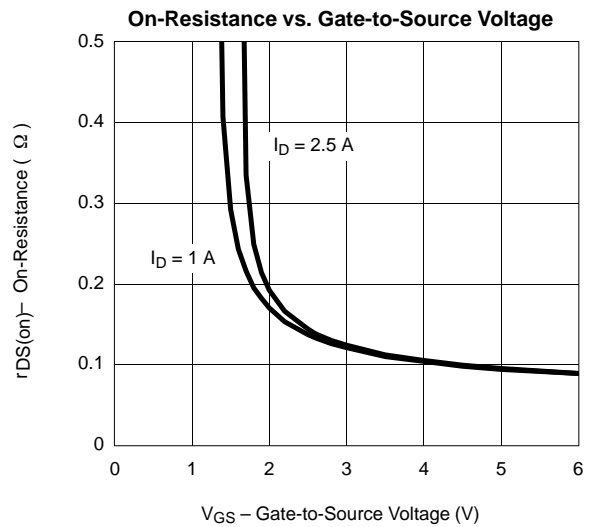
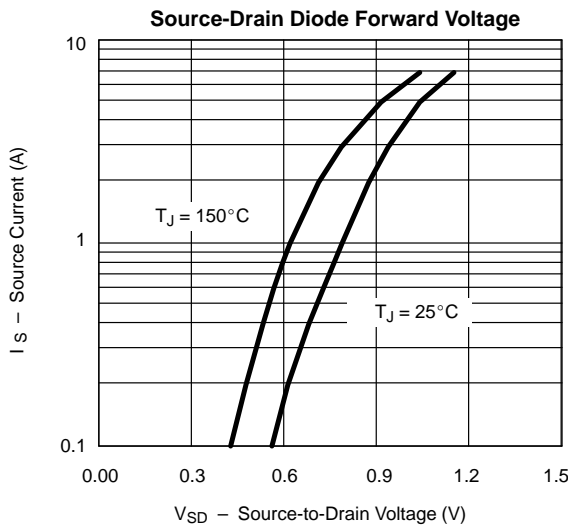
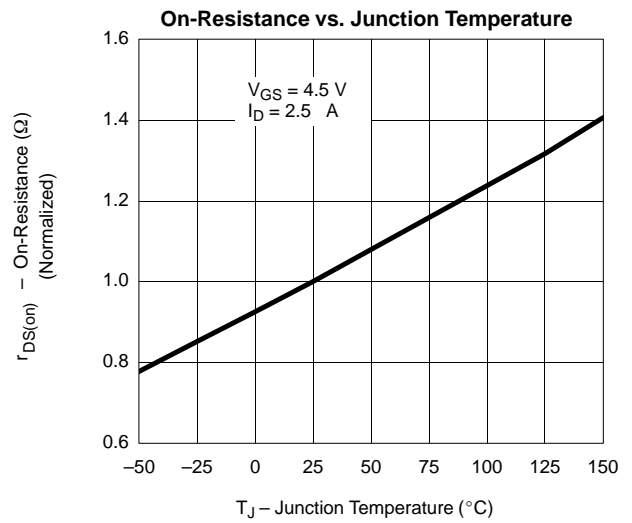
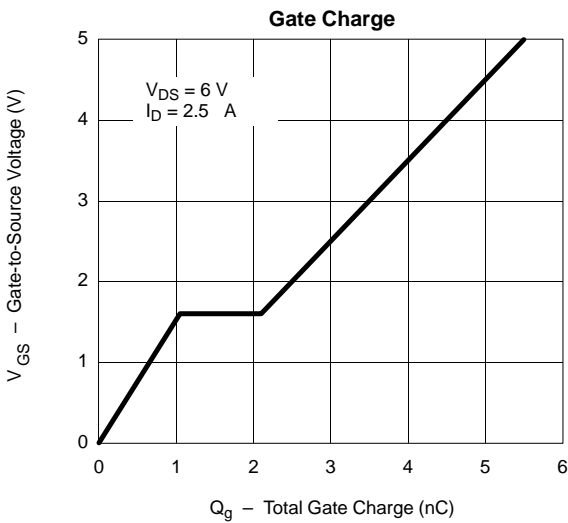
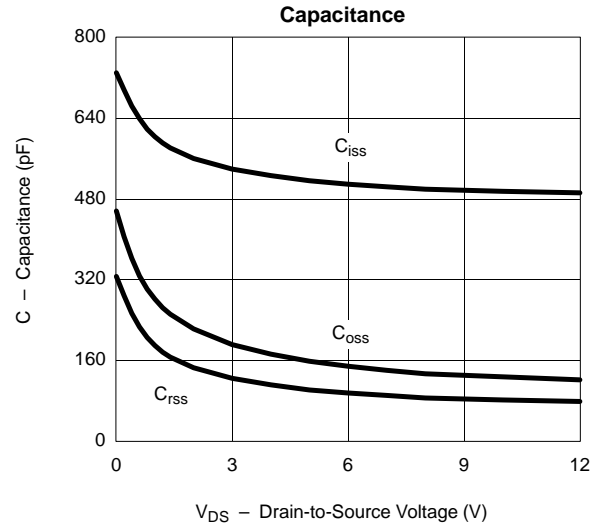
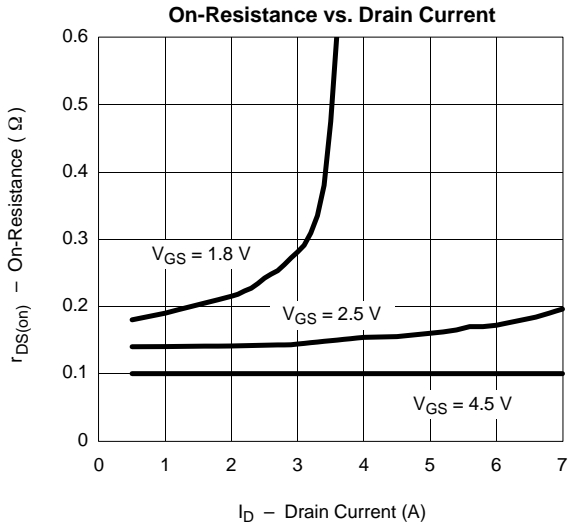
- a. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.
- b. Guaranteed by design, not subject to production testing.

TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)



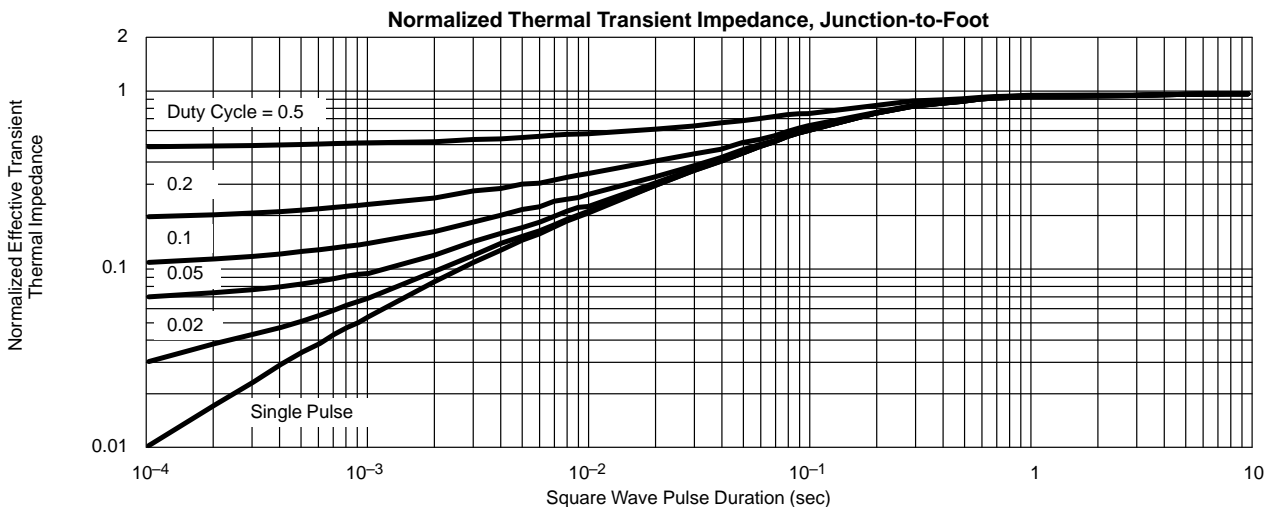
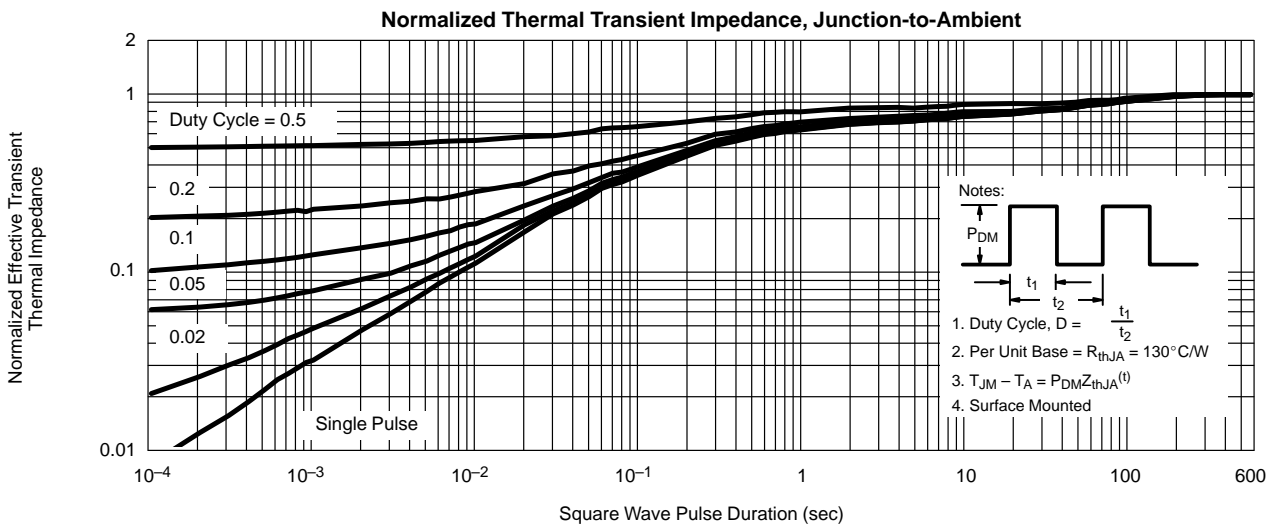
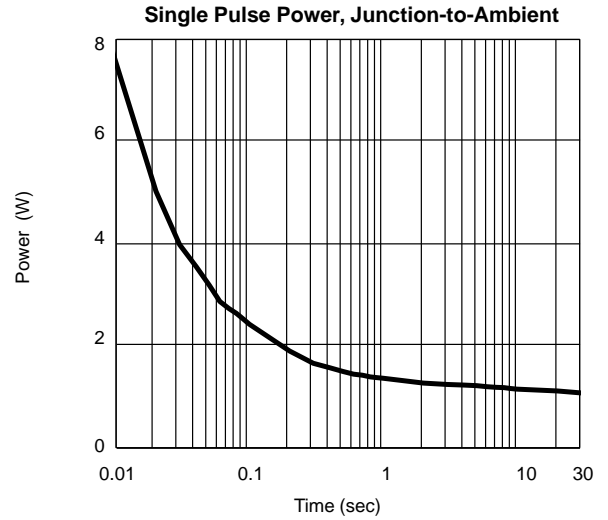
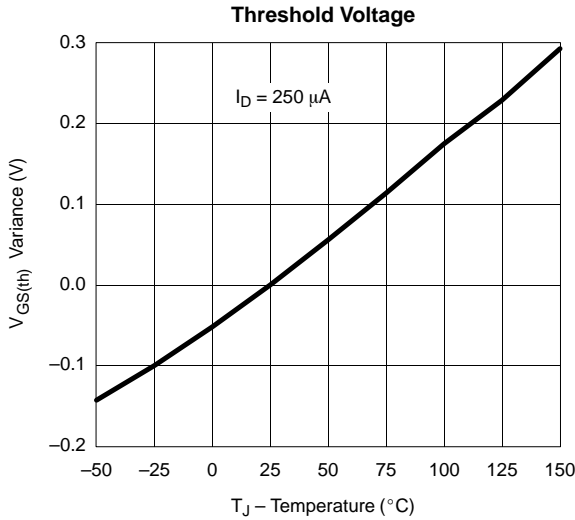


TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)





TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)





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