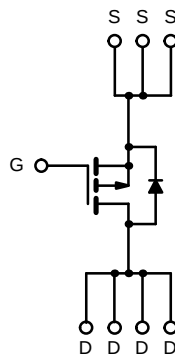
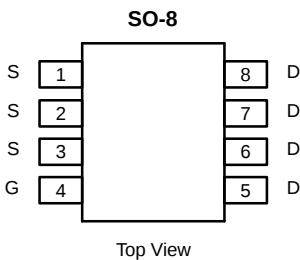




P-Channel 1.8-V (G-S) MOSFET

PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
-12	0.011 @ $V_{GS} = -4.5$ V	± 12
	0.014 @ $V_{GS} = -2.5$ V	± 11
	0.020 @ $V_{GS} = -1.8$ V	± 9

TrenchFET[®]
Power MOSFETs
1.8-V Rated



P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS (T _A = 25 °C UNLESS OTHERWISE NOTED)				
Parameter		Symbol	Limit	Unit
Drain-Source Voltage		V _{DS}	−12	V
Gate-Source Voltage		V _{GS}	± 8	
Continuous Drain Current (T _J = 150 °C) ^{a, b}	T _A = 25 °C	I _D	± 12	A
	T _A = 70 °C		± 9.8	
Pulsed Drain Current		I _{DM}	± 40	
Continuous Source Current (Diode Conduction) ^{a, b}		I _S	−2.1	
Maximum Power Dissipation ^{a, b}	T _A = 25 °C	P _D	2.5	W
	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	Typical	Maximum	Unit
Maximum Junction-to-Ambient ^a	$t \leq 10$ sec	R_{thJA}		50	$^\circ\text{C/W}$
	Steady State		80		

Notes

- a. Surface Mounted on FR4 Board.
b. $t \leq 10$ sec.



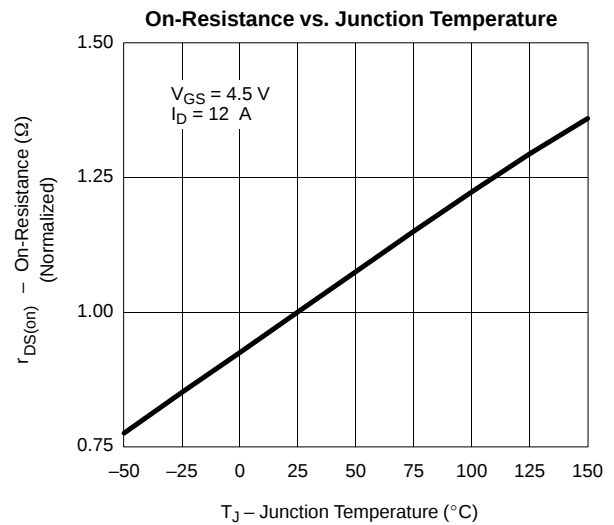
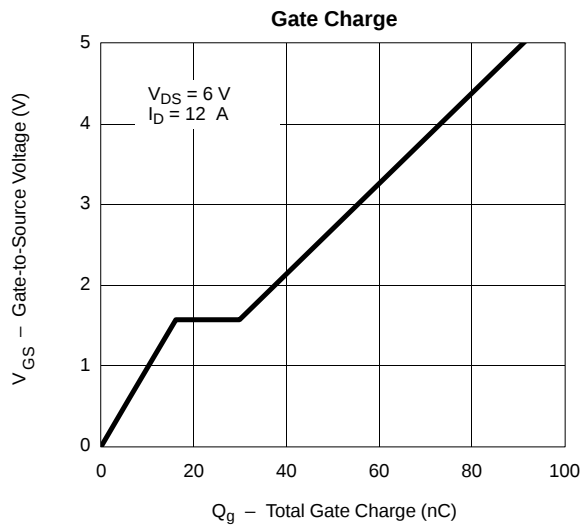
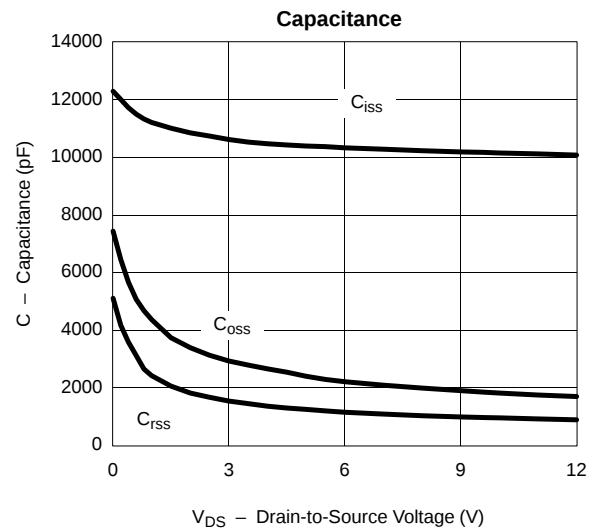
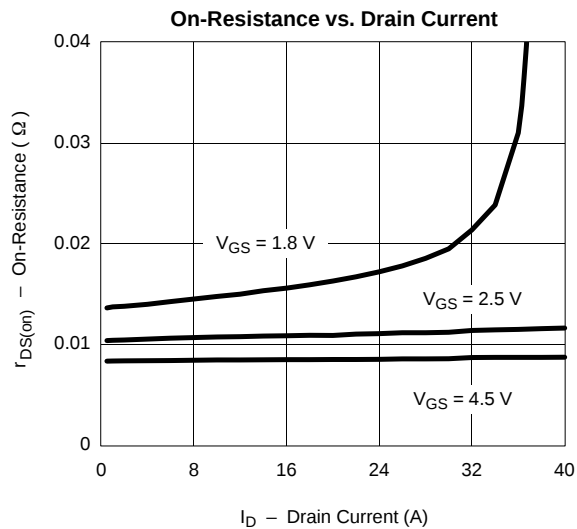
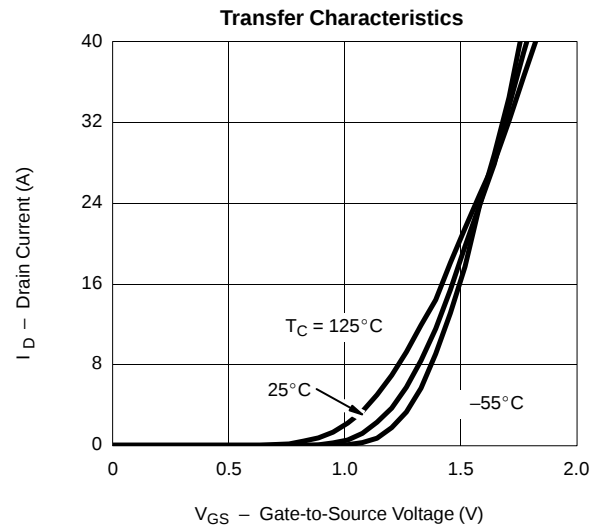
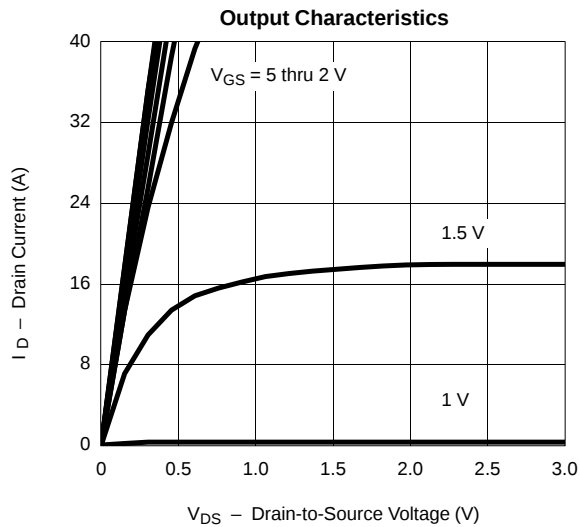
SPECIFICATIONS (T _J = 25°C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-0.45			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±8 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -9.6 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -9.6 V, V _{GS} = 0 V, T _J = 70°C			-5	
On-State Drain Current ^a	I _{D(on)}	V _{DS} ≥ -10 V, V _{GS} = -4.5 V	-20			A
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = -4.5 V, I _D = -12 A		0.0085	0.011	Ω
		V _{GS} = -2.5 V, I _D = -11 A		0.011	0.014	
		V _{GS} = -1.8 V, I _D = -9 A		0.015	0.020	
Forward Transconductance ^a	g _{fs}	V _{DS} = -10 V, I _D = -12 A		55		S
Diode Forward Voltage ^a	V _{SD}	I _S = -2.1 A, V _{GS} = 0 V		0.7	-1.2	V
Dynamic^b						
Total Gate Charge	Q _g	V _{DS} = -6 V, V _{GS} = -4.5 V, I _D = -12 A		85	120	nC
Gate-Source Charge	Q _{gs}			17		
Gate-Drain Charge	Q _{gd}			15		
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		40	80	ns
Rise Time	t _r			60	120	
Turn-Off Delay Time	t _{d(off)}			470	900	
Fall Time	t _f			230	450	
Source-Drain Reverse Recovery Time	t _{rr}			80	120	

Notes

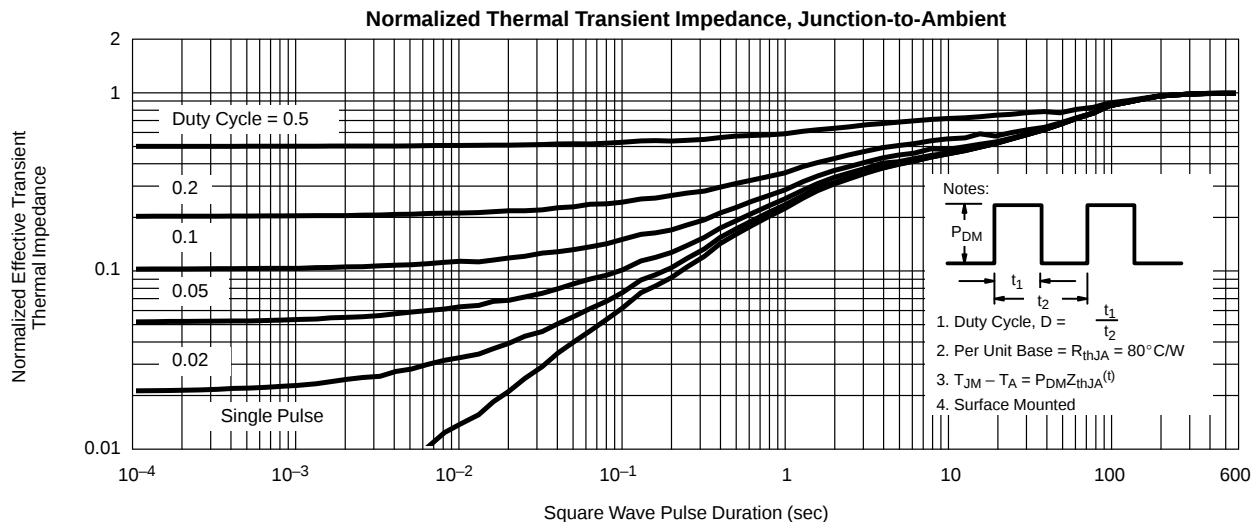
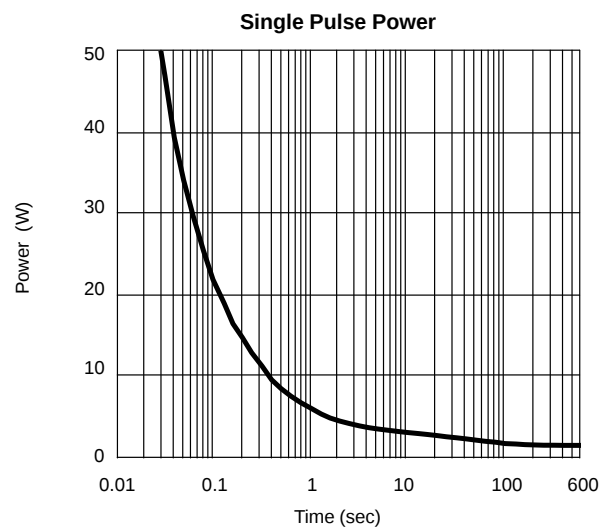
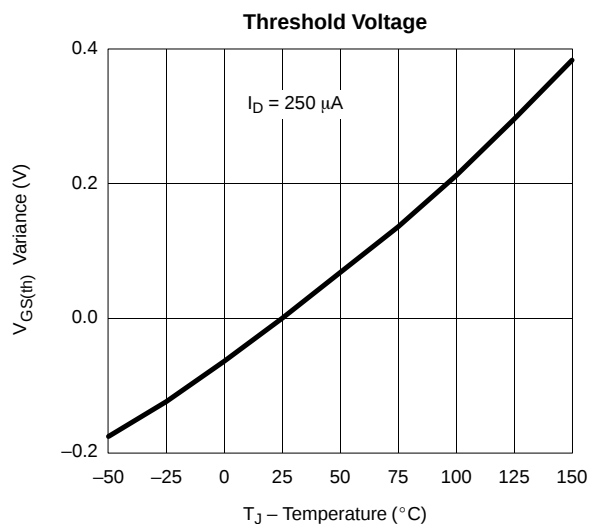
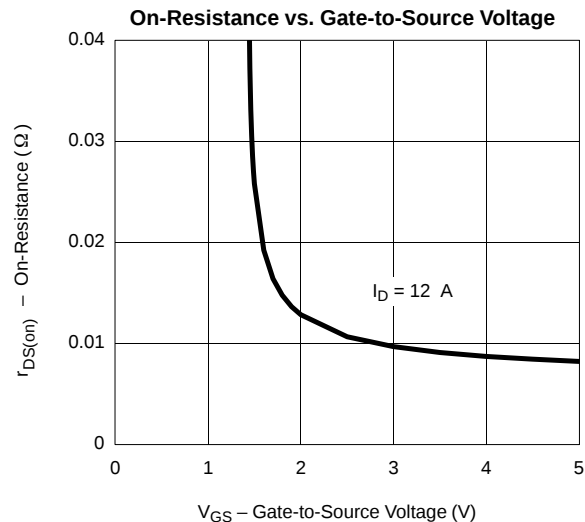
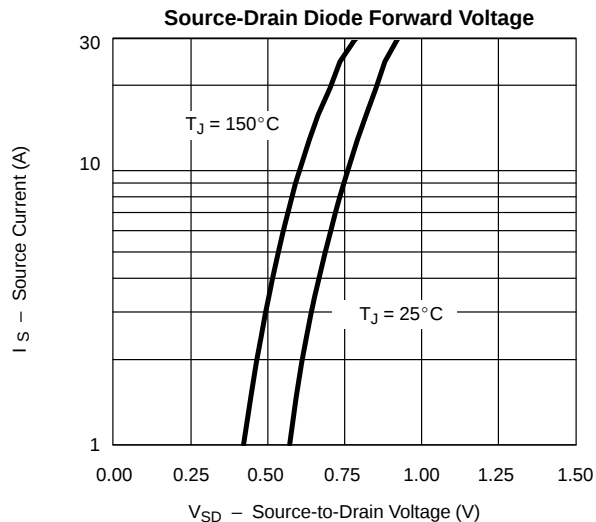
- a. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.
b. Guaranteed by design, not subject to production testing.



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)





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