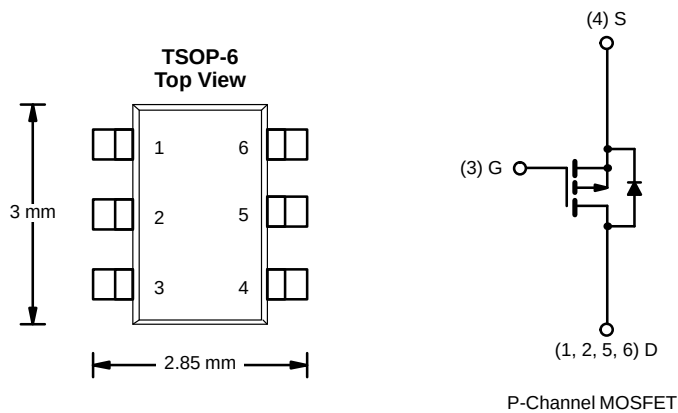




P-Channel 30-V (D-S) MOSFET

PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
-30	0.065 @ $V_{GS} = -10$ V	± 4.3
	0.100 @ $V_{GS} = -4.5$ V	± 3.4

TrenchFET®
Power MOSFETs



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)				
Parameter		Symbol	Limit	Unit
Drain-Source Voltage		V_{DS}	-30	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current ($T_J = 150^\circ\text{C}$) ^a	$T_A = 25^\circ\text{C}$	I_D	± 4.3	A
	$T_A = 70^\circ\text{C}$		± 3.4	
Pulsed Drain Current		I_{DM}	± 20	
Continuous Source Current (Diode Conduction) ^a		I_S	-1.7	
Maximum Power Dissipation ^a	$T_A = 25^\circ\text{C}$	P_D	2	W
	$T_A = 70^\circ\text{C}$		1.3	
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55 to 150	$^\circ\text{C}$

THERMAL RESISTANCE RATINGS			
Parameter	Symbol	Limit	Unit
Maximum Junction-to-Ambient ^a	R_{thJA}	62.5	$^\circ\text{C/W}$

Notes

a. Surface Mounted on FR4 Board, $t \leq 5$ 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} = -30 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -30 V, V _{GS} = 0 V, T _J = 70 °C			-5	
On-State Drain Current ^a	I _{D(on)}	V _{DS} = -5 V, V _{GS} = -10 V	-15			A
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = -10 V, I _D = -4.3 A			0.065	Ω
		V _{GS} = -4.5 V, I _D = -3.4 A			0.100	
Forward Transconductance ^a	g _{fs}	V _{DS} = -15 V, I _D = -4.3 A		6		S
Diode Forward Voltage ^a	V _{SD}	I _S = -1.7 A, V _{GS} = 0 V			-1.2	V
Dynamic^b						
Total Gate Charge	Q _g	V _{DS} = -15 V, V _{GS} = -10 V, I _D = -4.3 A		11	20	nC
Gate-Source Charge	Q _{gs}			2.2		
Gate-Drain Charge	Q _{gd}			1.7		
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	15	ns
Rise Time	t _r			11	20	
Turn-Off Delay Time	t _{d(off)}			30	50	
Fall Time	t _f			11	20	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = -1.7 A, di/dt = 100 A/μs		50	80	

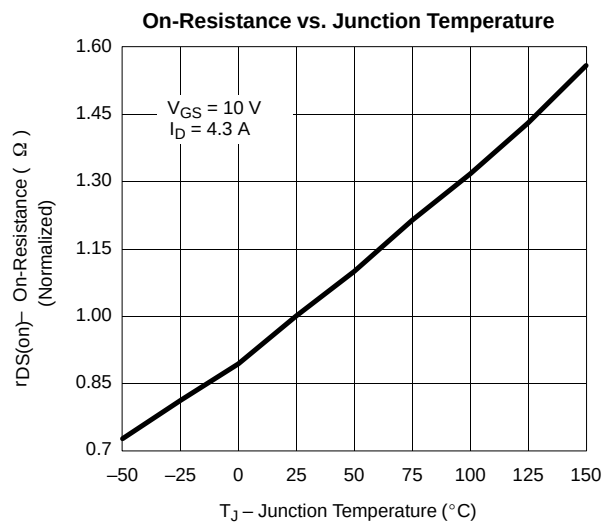
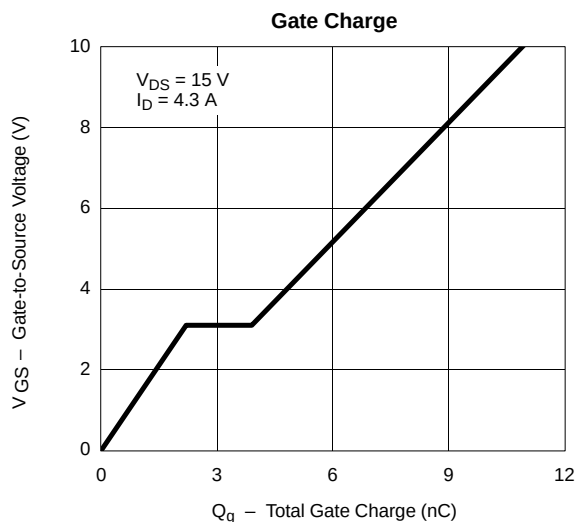
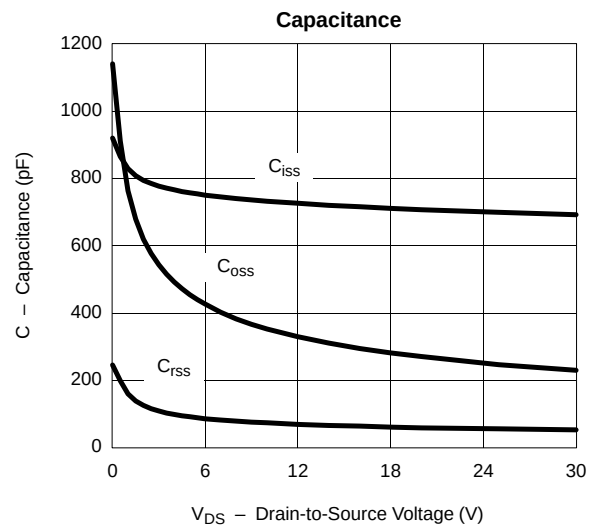
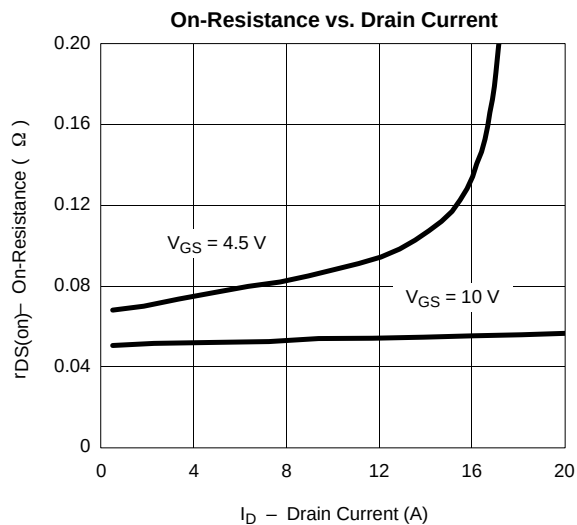
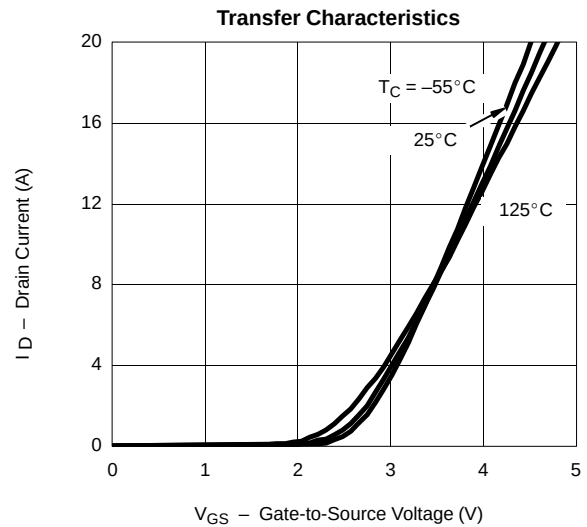
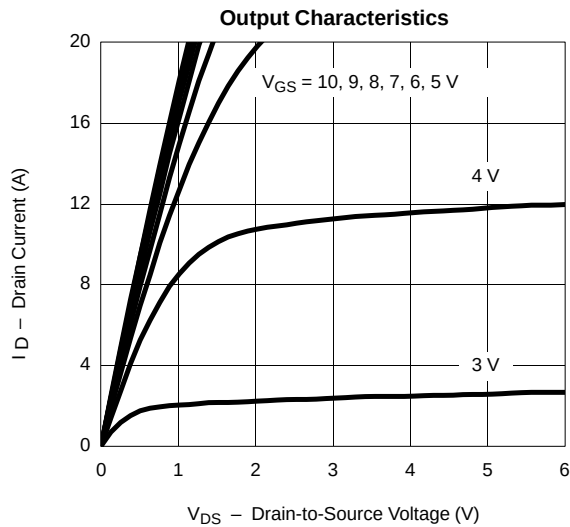
Notes

a. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.

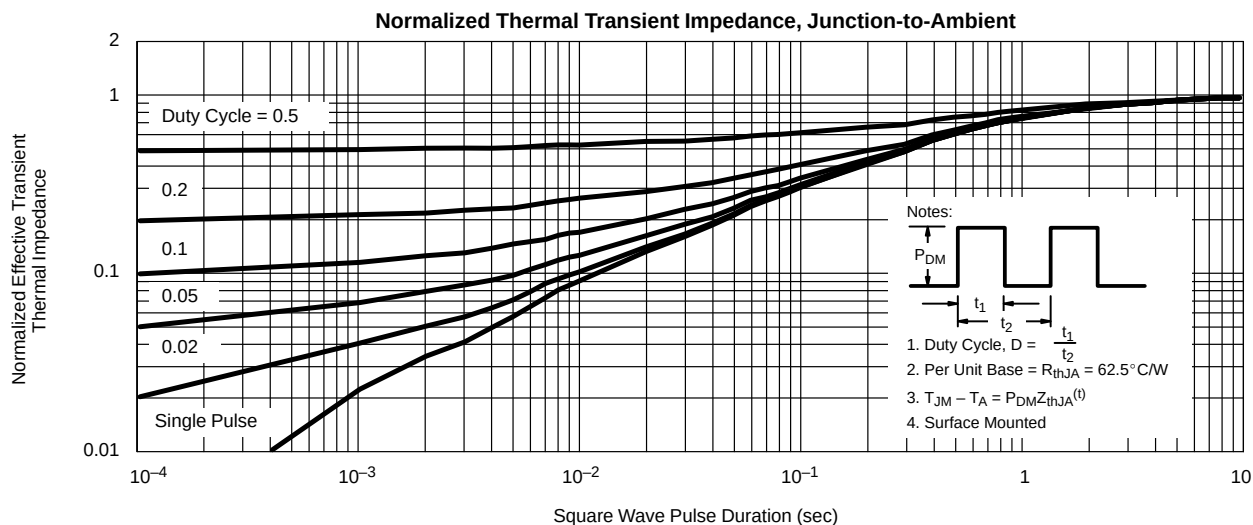
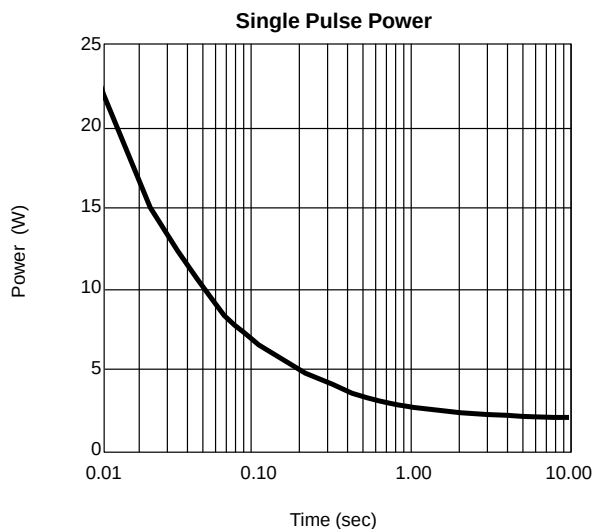
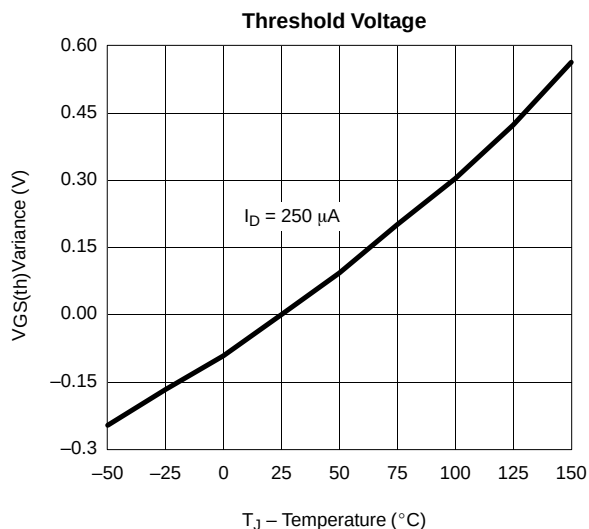
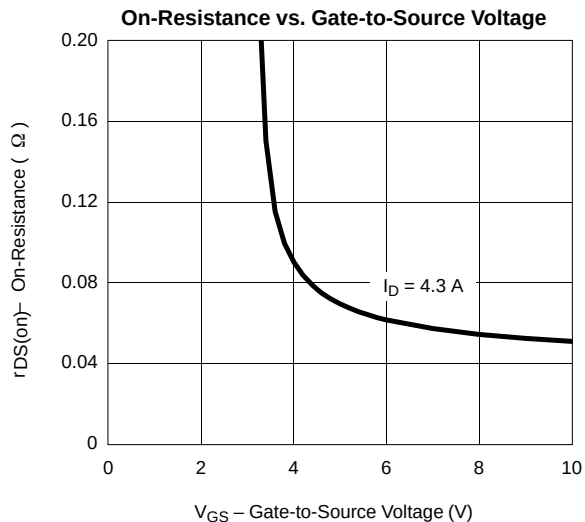
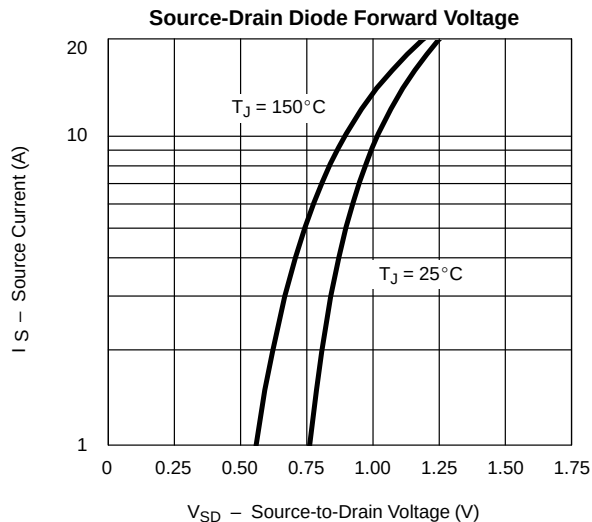
b. Guaranteed by design, not subject to production testing.



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)





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