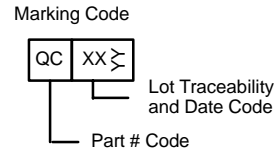
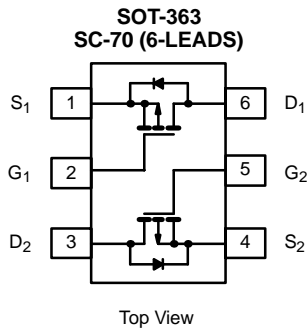


Dual P-Channel 1.8-V (G-S) MOSFET

TrenchFET[®]
Power MOSFETs
1.8-V Rated

PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
-12	0.650 @ $V_{GS} = -4.5$ V	± 0.56
	0.925 @ $V_{GS} = -2.5$ V	± 0.47
	1.310 @ $V_{GS} = -1.8$ V	± 0.39



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	$T_A = 25^\circ\text{C}$	± 0.56	± 0.53	A
	$T_A = 85^\circ\text{C}$	± 0.40	± 0.38	
Pulsed Drain Current	I_{DM}	± 1.0		
Continuous Diode Current (Diode Conduction) ^a	I_S	-0.25	-0.23	
Maximum Power Dissipation ^a	$T_A = 25^\circ\text{C}$	0.30	0.27	W
	$T_A = 85^\circ\text{C}$	0.16	0.14	
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	360	415	$^\circ\text{C/W}$
	Steady State	400	460	
Maximum Junction-to-Foot (Drain)	Steady State	300	350	

Notes

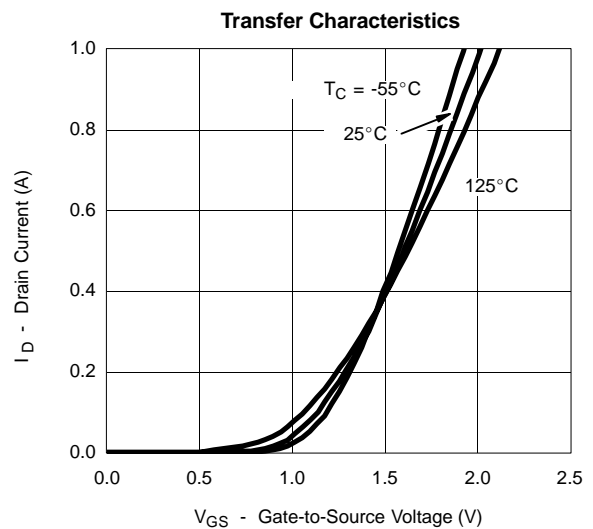
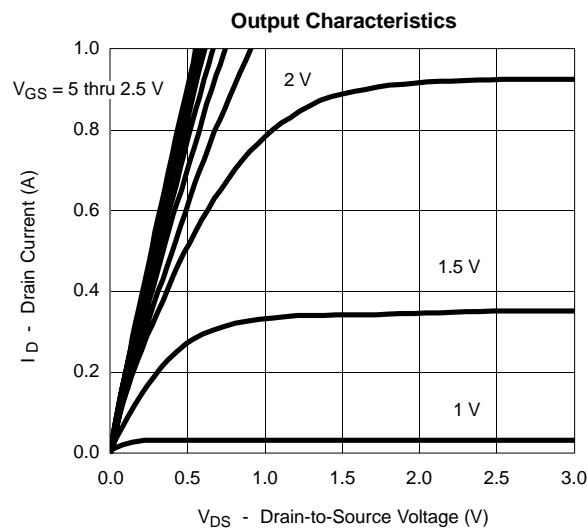
a. Surface Mounted on 1" x 1" FR4 Board.

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 = 85 °C			-5	
On-State Drain Current ^a	I _{D(on)}	V _{DS} = -5 V, V _{GS} = -4.5 V	-1.0			A
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = -4.5 V, I _D = -0.53 A		0.570	0.650	Ω
		V _{GS} = -2.5 V, I _D = -0.44 A		0.800	0.925	
		V _{GS} = -1.8 V, I _D = -0.20 A		1.250	1.310	
Forward Transconductance ^a	g _{fs}	V _{DS} = -10 V, I _D = -0.53 A		1.1		S
Diode Forward Voltage ^a	V _{SD}	I _S = -0.23 A, V _{GS} = 0 V		-0.8	-1.2	V
Dynamic^b						
Total Gate Charge	Q _g	V _{DS} = -6 V, V _{GS} = -4.5 V, I _D = -0.53 A		1.5	2.3	nC
Gate-Source Charge	Q _{gs}			0.40		
Gate-Drain Charge	Q _{gd}			0.25		
Turn-On Delay Time	t _{d(on)}	V _{DD} = -6 V, R _L = 12 Ω I _D ≅ -0.5 A, V _{GEN} = -4.5 V, R _G = 6 Ω		6	12	ns
Rise Time	t _r			20	40	
Turn-Off Delay Time	t _{d(off)}			10	20	
Fall Time	t _f			10	20	
Source-Drain Reverse Recovery Time	t _{rr}		I _F = -0.23 A, di/dt = 100 A/μs		20	

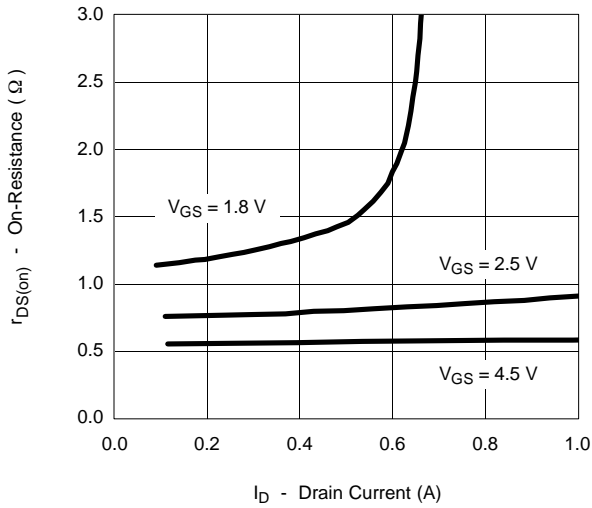
Notes

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

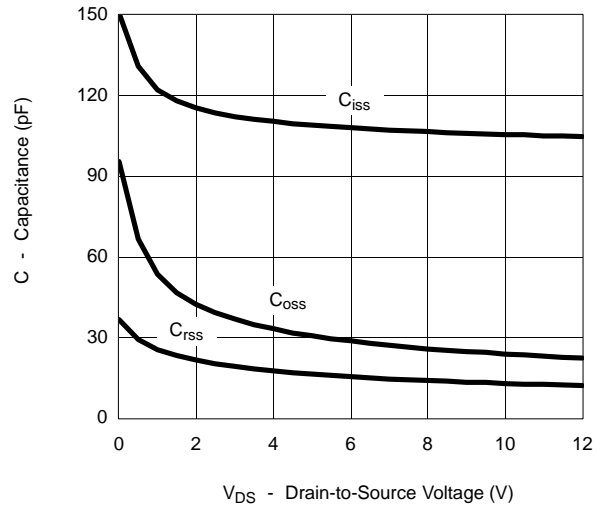
TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)


TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

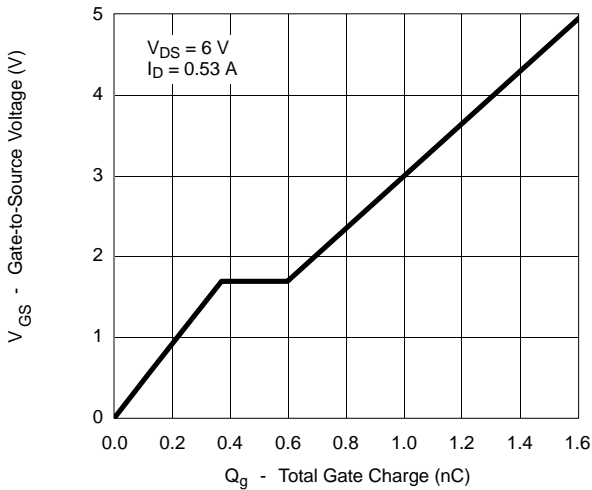
On-Resistance vs. Drain Current



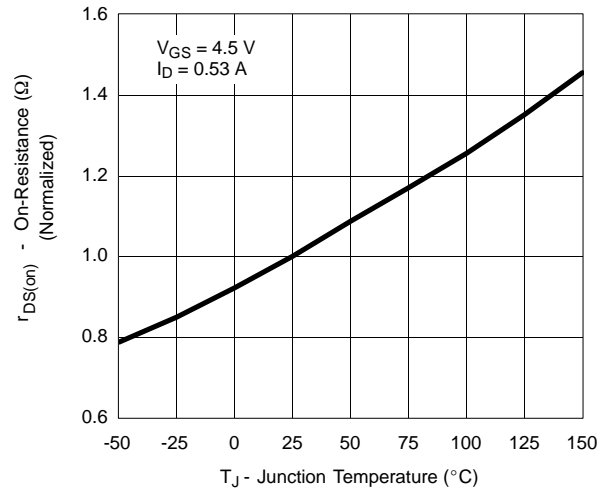
Capacitance



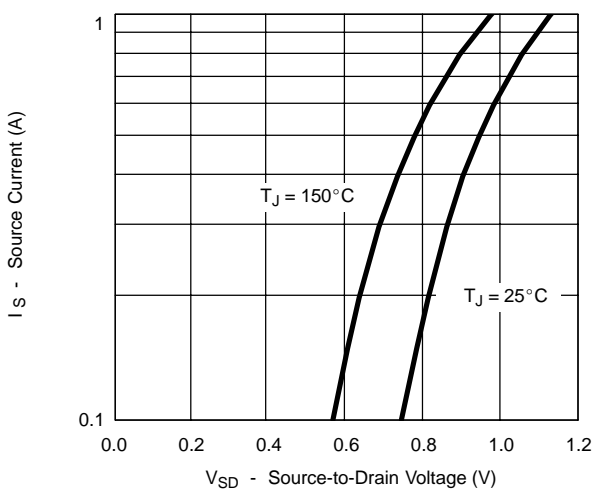
Gate Charge



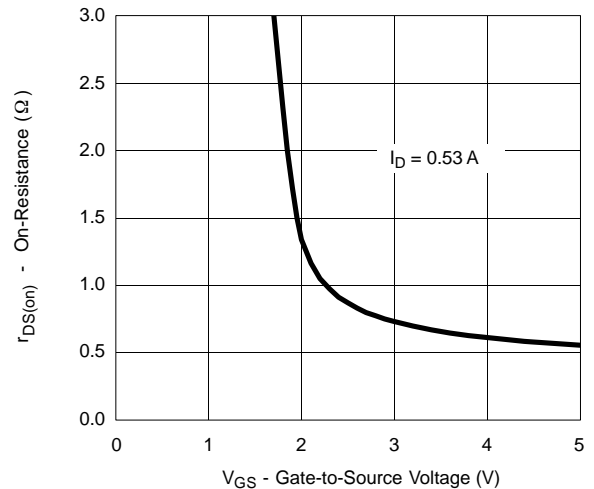
On-Resistance vs. Junction Temperature



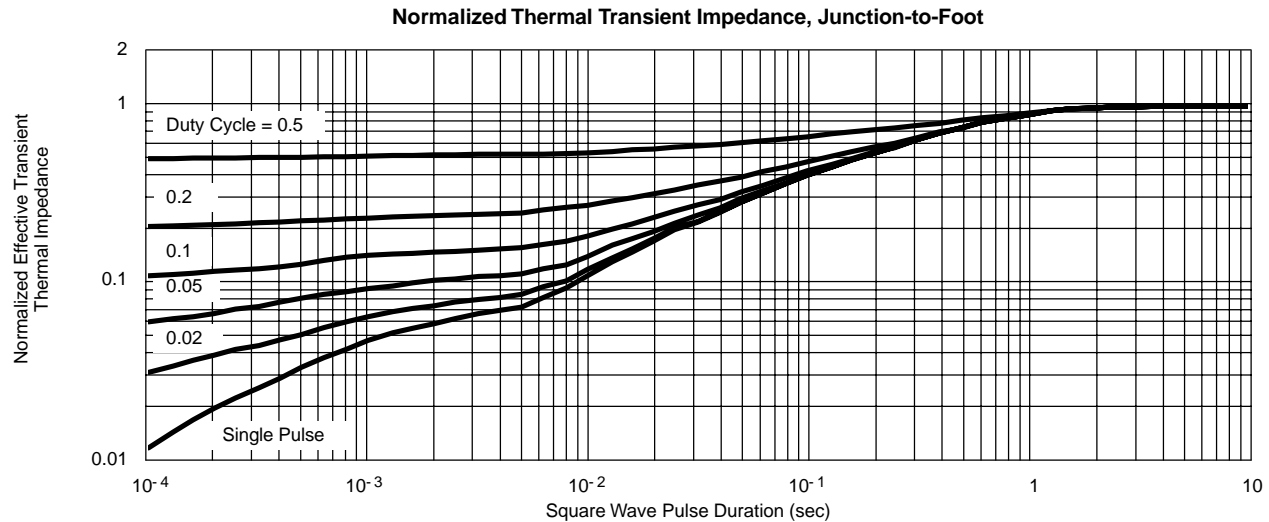
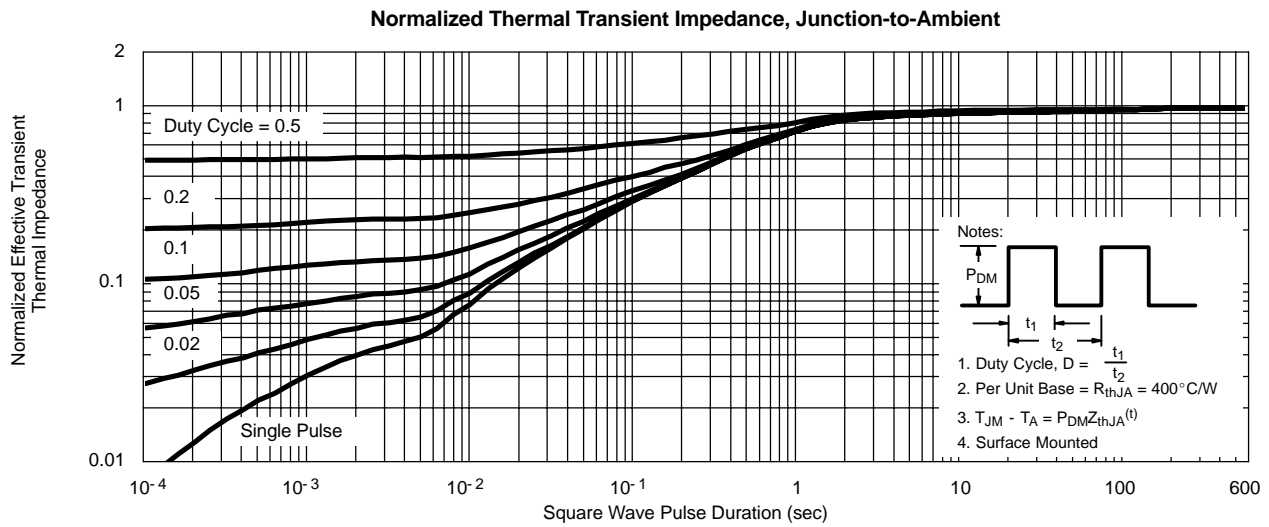
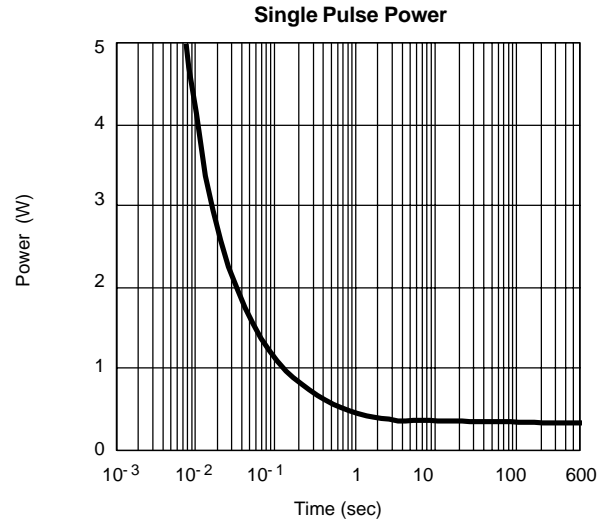
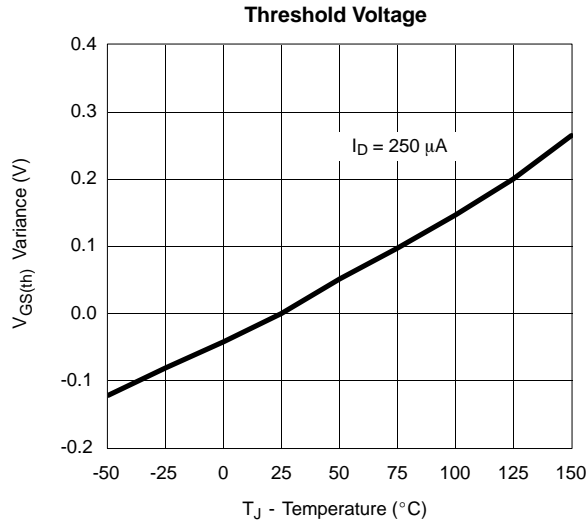
Source-Drain Diode Forward Voltage



On-Resistance vs. Gate-to-Source Voltage



TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)





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