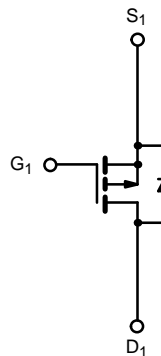
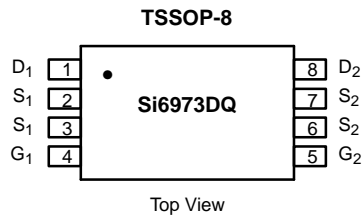




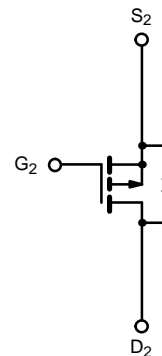
## Dual P-Channel 1.8-V (G-S) MOSFET

**TrenchFET<sup>®</sup>**  
Power MOSFETs  
1.8-V Rated

PRODUCT SUMMARY		
V <sub>DS</sub> (V)	r <sub>DS(on)</sub> (Ω)	I <sub>D</sub> (A)
-20	0.030 @ V <sub>GS</sub> = -4.5 V	-4.8
	0.039 @ V <sub>GS</sub> = -2.5 V	-4.2
	0.055 @ V <sub>GS</sub> = -1.8 V	-3.5



P-Channel MOSFET



P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS (T <sub>A</sub> = 25°C UNLESS OTHERWISE NOTED)					
Parameter		Symbol	10 secs	Steady State	Unit
Drain-Source Voltage		V <sub>DS</sub>	-20		V
Gate-Source Voltage		V <sub>GS</sub>	±8		
Continuous Drain Current (T <sub>J</sub> = 150°C) <sup>a</sup>	T <sub>A</sub> = 25°C	I <sub>D</sub>	-4.8	-4.1	A
	T <sub>A</sub> = 70°C		-3.9	-3.2	
Pulsed Drain Current (10 μs Pulse Width)		I <sub>DM</sub>	-30		
Continuous Source Current (Diode Conduction) <sup>a</sup>		I <sub>S</sub>	-1.0	-0.7	W
Maximum Power Dissipation <sup>a</sup>	T <sub>A</sub> = 25°C	P <sub>D</sub>	1.14	0.83	
	T <sub>A</sub> = 70°C		0.73	0.53	
Operating Junction and Storage Temperature Range		T <sub>J</sub> , T <sub>stg</sub>	-55 to 150		°C

THERMAL RESISTANCE RATINGS					
Parameter		Symbol	Typical	Maximum	Unit
Maximum Junction-to-Ambient <sup>a</sup>	t ≤ 10 sec	R <sub>thJA</sub>	86	110	°C/W
	Steady State		124	150	
Maximum Junction-to-Foot (Drain)	Steady State	R <sub>thJF</sub>	52	65	

Notes

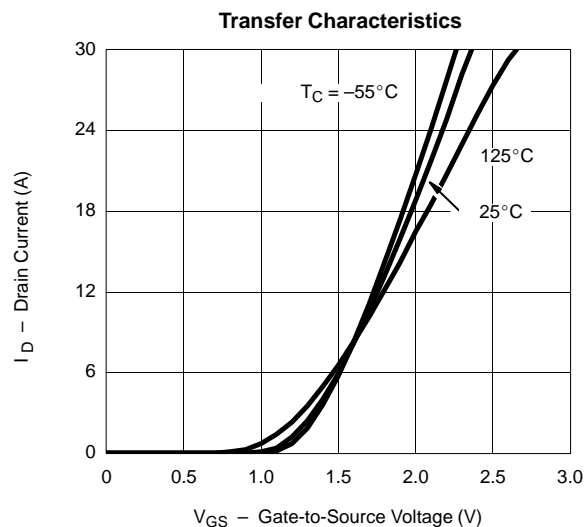
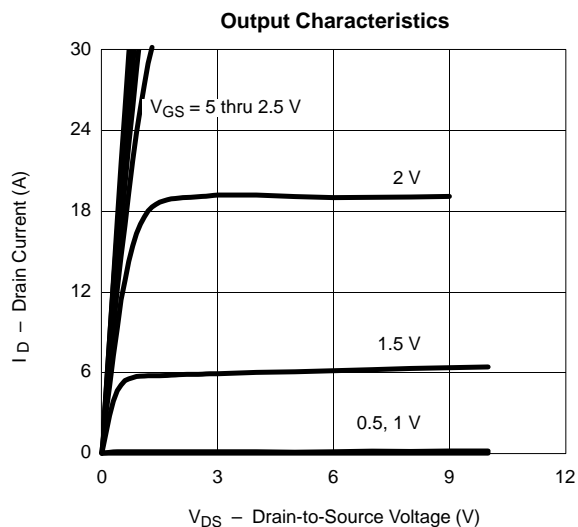
a. Surface Mounted on 1" x 1" FR4 Board.


**SPECIFICATIONS (T<sub>J</sub> = 25 °C UNLESS OTHERWISE NOTED)**

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
<b>Static</b>						
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = -250 μA	-0.45			V
Gate-Body Leakage	I <sub>GSS</sub>	V <sub>DS</sub> = 0 V, V <sub>GS</sub> = ±8 V			±100	nA
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = -16 V, V <sub>GS</sub> = 0 V			-1	μA
		V <sub>DS</sub> = -16 V, V <sub>GS</sub> = 0 V, T <sub>J</sub> = 70 °C			-25	
On-State Drain Current <sup>a</sup>	I <sub>D(on)</sub>	V <sub>DS</sub> = -5 V, V <sub>GS</sub> = -4.5 V	-20			A
Drain-Source On-State Resistance <sup>a</sup>	r <sub>DS(on)</sub>	V <sub>GS</sub> = -4.5 V, I <sub>D</sub> = -4.8 A		0.025	0.030	Ω
		V <sub>GS</sub> = -2.5 V, I <sub>D</sub> = -4.2 A		0.033	0.039	
		V <sub>GS</sub> = -1.8 V, I <sub>D</sub> = -3.5 A		0.046	0.055	
Forward Transconductance <sup>a</sup>	g <sub>fs</sub>	V <sub>DS</sub> = -5 V, I <sub>D</sub> = -4.8 A		21		S
Diode Forward Voltage <sup>a</sup>	V <sub>SD</sub>	I <sub>S</sub> = -1.0 A, V <sub>GS</sub> = 0 V		-0.65	-1.1	V
<b>Dynamic<sup>b</sup></b>						
Total Gate Charge	Q <sub>g</sub>	V <sub>DS</sub> = -10 V, V <sub>GS</sub> = -4.5 V, I <sub>D</sub> = -4.8 A		21	30	nC
Gate-Source Charge	Q <sub>gs</sub>		4.4			
Gate-Drain Charge	Q <sub>gd</sub>		3.3			
Turn-On Delay Time	t <sub>d(on)</sub>	V <sub>DD</sub> = -10 V, R <sub>L</sub> = 10 Ω I <sub>D</sub> ≅ -1 A, V <sub>GEN</sub> = -4.5 V, R <sub>G</sub> = 6 Ω		27	40	ns
Rise Time	t <sub>r</sub>		27	40		
Turn-Off Delay Time	t <sub>d(off)</sub>		93	140		
Fall Time	t <sub>f</sub>		43	65		
Source-Drain Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = -1.0 A, di/dt = 100 A/μs		30	50	

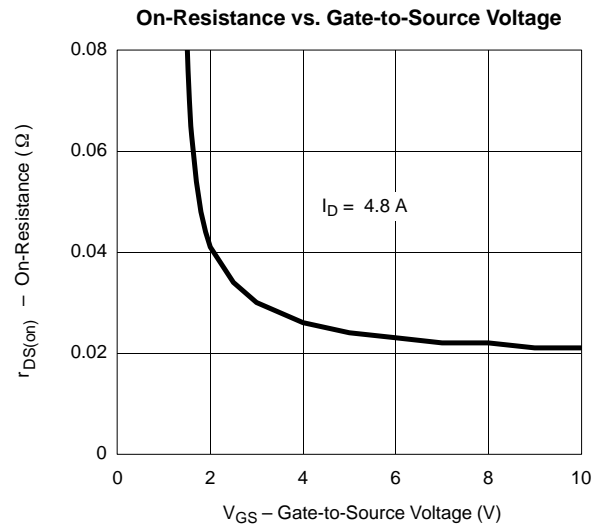
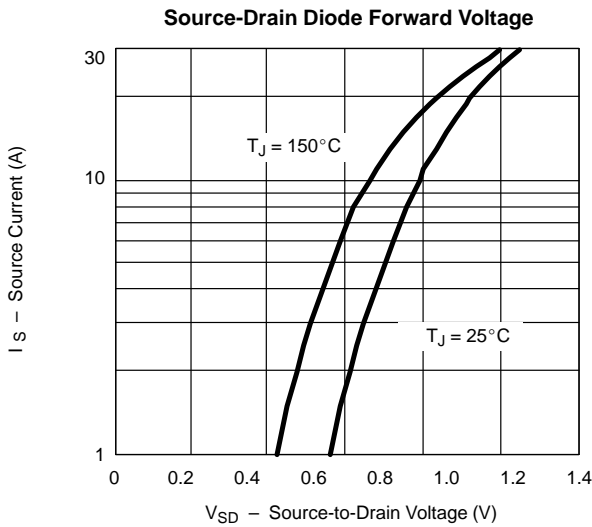
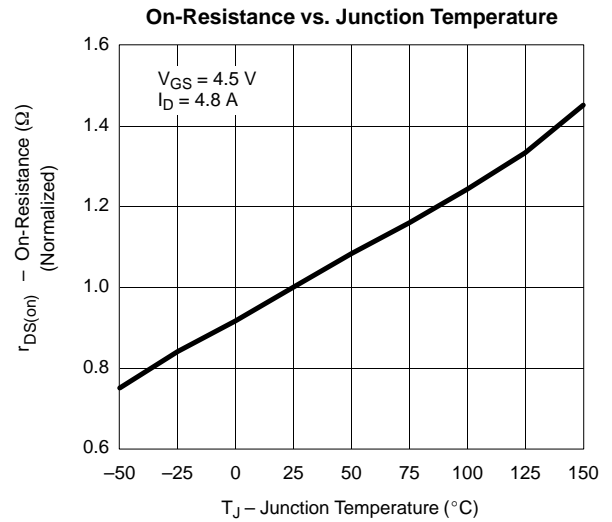
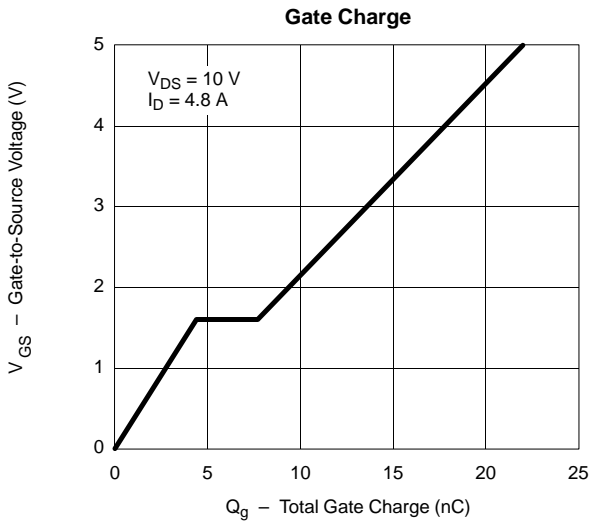
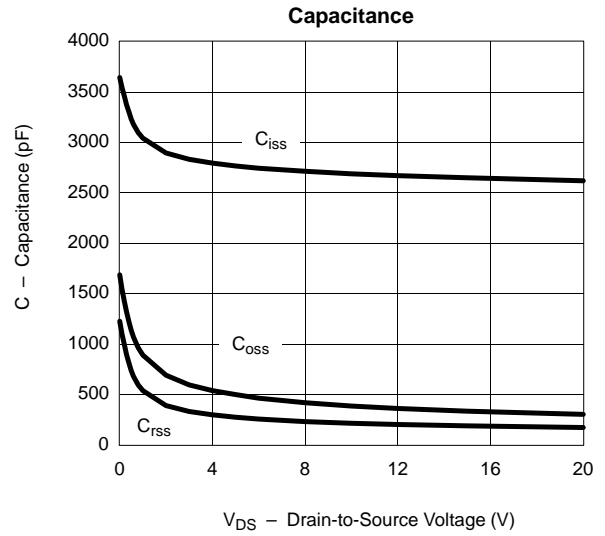
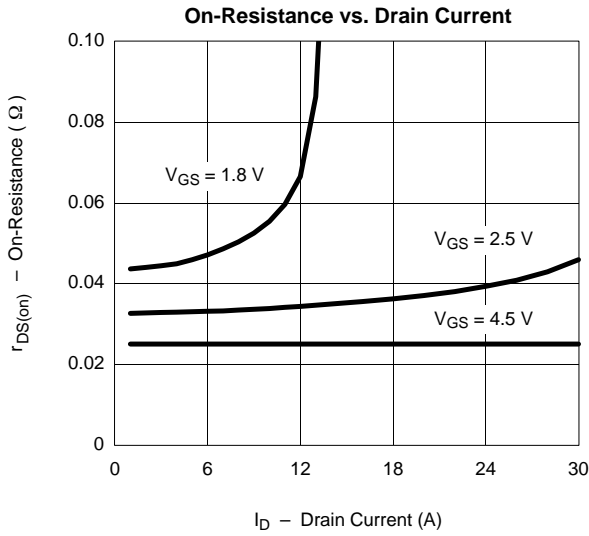
## Notes

- 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)**

