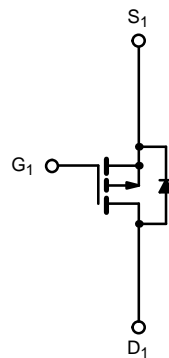
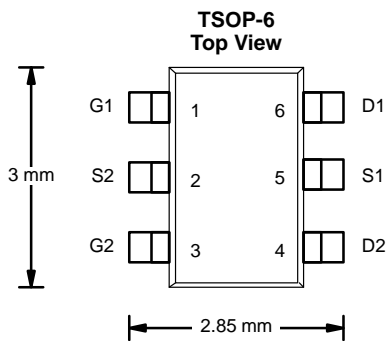




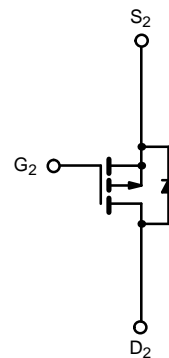
## Dual P-Channel 8-V (D-S) MOSFET

**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)
-8	0.125 @ V <sub>GS</sub> = -4.5 V	±2.5
	0.175 @ V <sub>GS</sub> = -2.5 V	±2.0
	0.265 @ V <sub>GS</sub> = -1.8 V	±1.7



P-Channel MOSFET



P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS (T <sub>A</sub> = 25°C UNLESS OTHERWISE NOTED)				
Parameter	Symbol	Limit	Unit	
Drain-Source Voltage	V <sub>DS</sub>	-8	V	
Gate-Source Voltage	V <sub>GS</sub>	±8		
Continuous Drain Current (T <sub>J</sub> = 150°C) <sup>a, b</sup>	I <sub>D</sub>	T <sub>A</sub> = 25°C	±2.5	A
		T <sub>A</sub> = 70°C	±2.0	
Pulsed Drain Current	I <sub>DM</sub>	±7		
Continuous Diode Current (Diode Conduction) <sup>a, b</sup>	I <sub>S</sub>	-1.05		
Maximum Power Dissipation <sup>a, b</sup>	P <sub>D</sub>	T <sub>A</sub> = 25°C	1.15	W
		T <sub>A</sub> = 70°C	0.73	
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>	R <sub>thJA</sub>	t ≤ 5 sec	93	110	°C/W
		Steady State	130	150	
Maximum Junction-to-Lead	R <sub>thJL</sub>	75	90		

Notes

- a. Surface Mounted on FR4 Board.
- b. t ≤ 5 sec



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> = -6.4 V, V <sub>GS</sub> = 0 V			-1	μA
		V <sub>DS</sub> = -6.4 V, V <sub>GS</sub> = 0 V, T <sub>J</sub> = 55 °C			-5	
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	-5			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> = -2.5 A		0.103	0.125	Ω
		V <sub>GS</sub> = -2.5 V, I <sub>D</sub> = -2.0 A		0.146	0.175	
		V <sub>GS</sub> = -1.8 V, I <sub>D</sub> = -1 A		0.205	0.265	
Forward Transconductance <sup>a</sup>	g <sub>fs</sub>	V <sub>DS</sub> = -4.5 V, I <sub>D</sub> = -2.5 A		5.3		S
Diode Forward Voltage <sup>a</sup>	V <sub>SD</sub>	I <sub>S</sub> = -1.05 A, V <sub>GS</sub> = 0 V		-0.79	-1.1	V
<b>Dynamic<sup>b</sup></b>						
Total Gate Charge	Q <sub>g</sub>	V <sub>DS</sub> = -5 V, V <sub>GS</sub> = -4.5 V, I <sub>D</sub> = -2.5 A		4.2	6	nC
Gate-Source Charge	Q <sub>gs</sub>			0.45		
Gate-Drain Charge	Q <sub>gd</sub>			0.90		
Turn-On Delay Time	t <sub>d(on)</sub>	V <sub>DD</sub> = -5 V, R <sub>L</sub> = 5 Ω I <sub>D</sub> ≅ -1 A, V <sub>GEN</sub> = -4.5 V, R <sub>G</sub> = 6 Ω		10	15	ns
Rise Time	t <sub>r</sub>			47	70	
Turn-Off Delay Time	t <sub>d(off)</sub>			28	45	
Fall Time	t <sub>f</sub>			34	50	
Source-Drain Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = -1.05 A, di/dt = 100 A/μs		20	40	ns

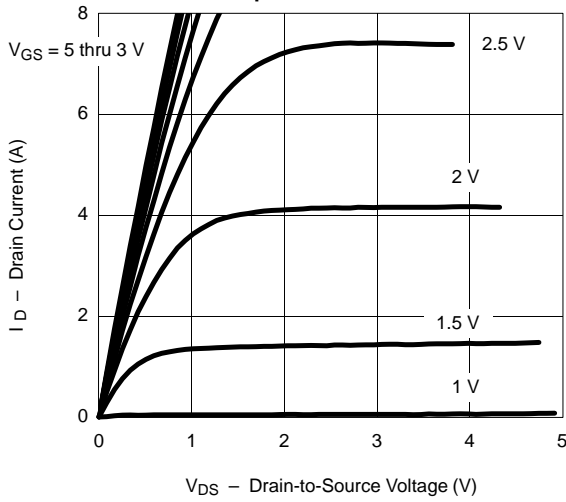
## Notes

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

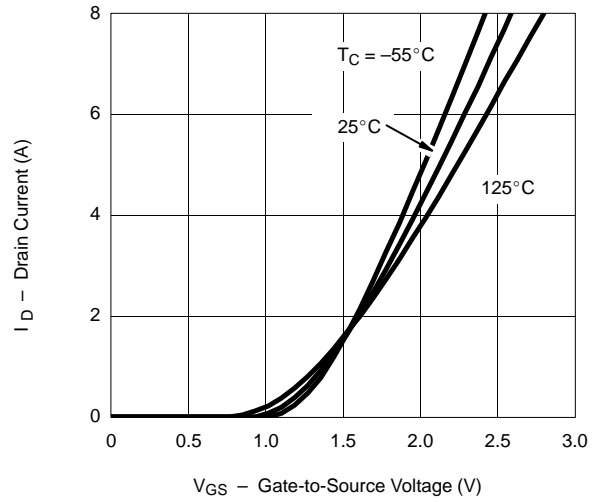


**TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)**

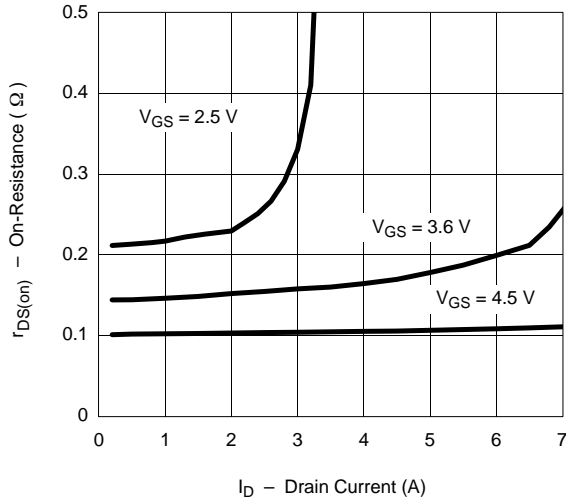
Output Characteristics



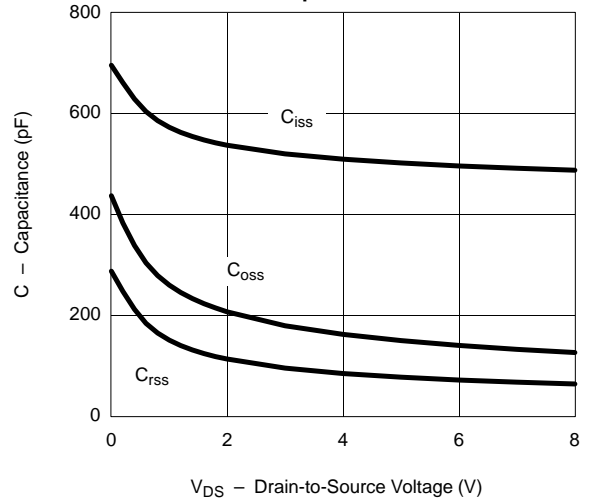
Transfer Characteristics



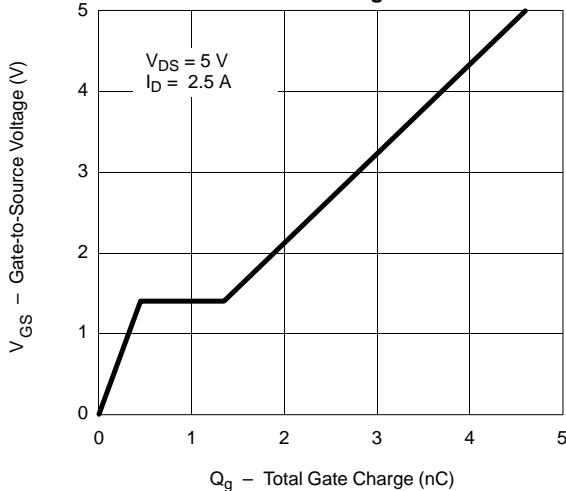
On-Resistance vs. Drain Current



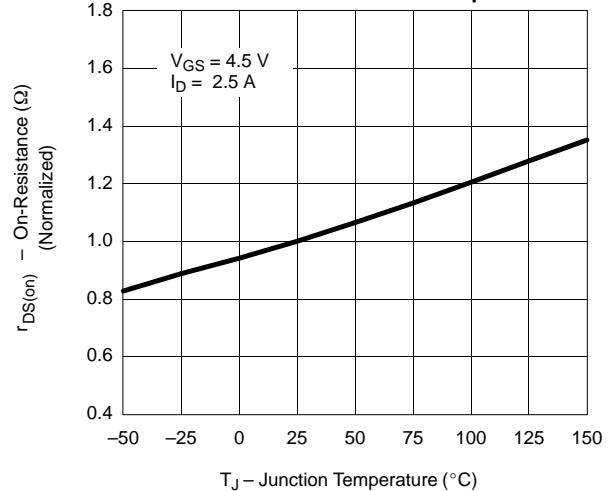
Capacitance



Gate Charge

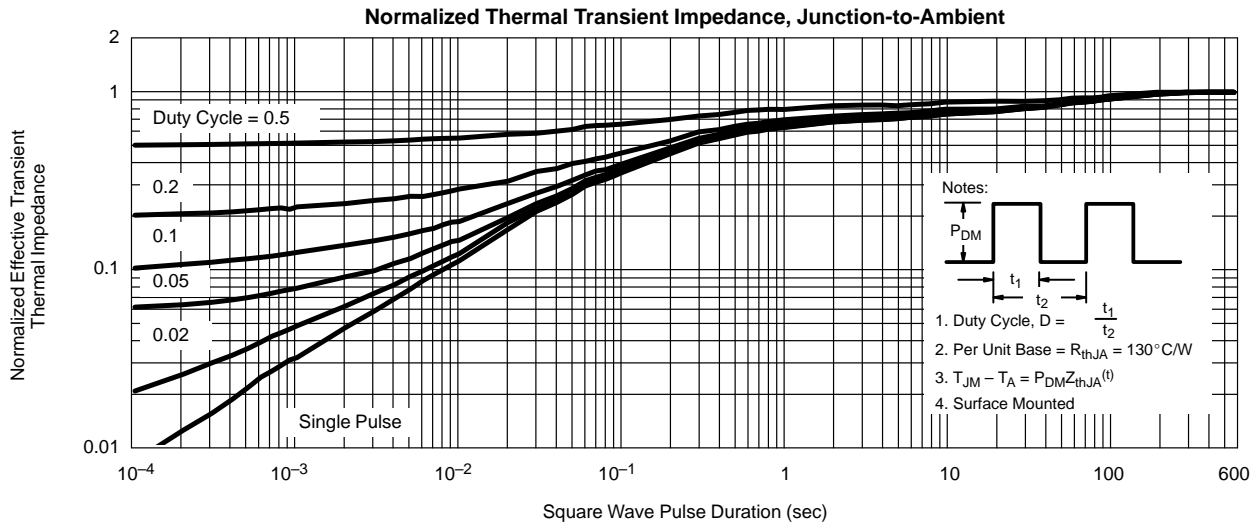
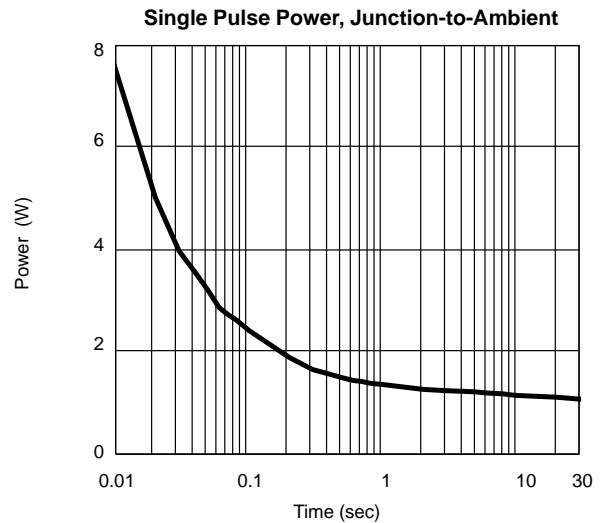
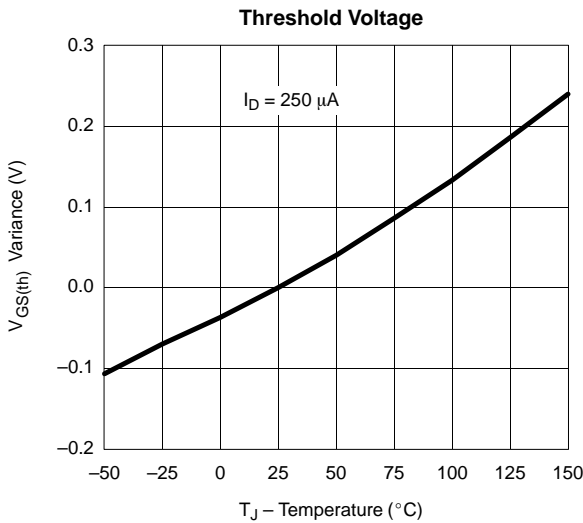
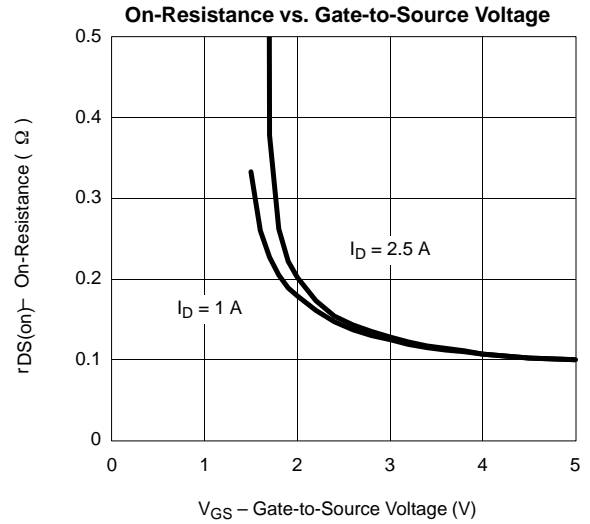
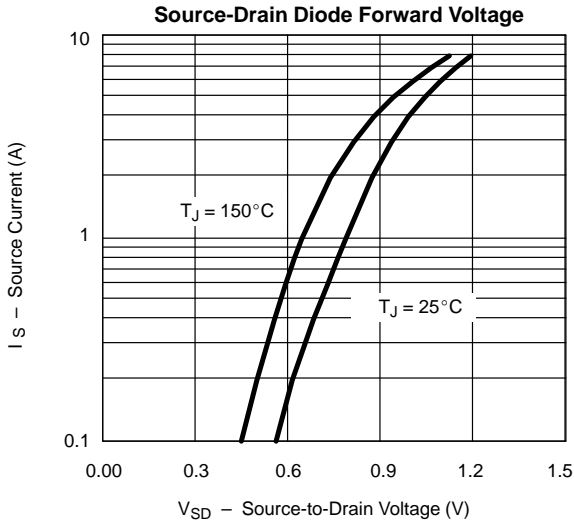


On-Resistance vs. Junction Temperature





**TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)**





**TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)**

