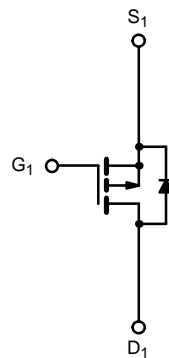
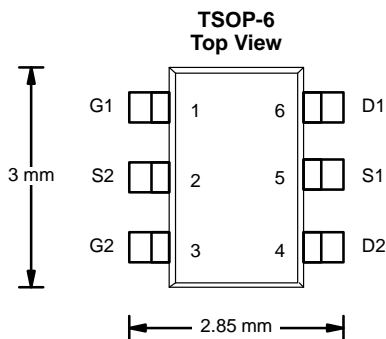




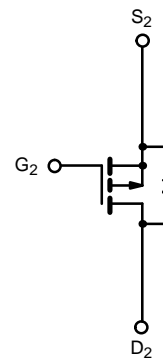
Dual P-Channel 8-V (D-S) MOSFET

TrenchFET[®]
Power MOSFETs
1.8-V Rated

PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
-8	0.125 @ $V_{GS} = -4.5$ V	± 2.5
	0.175 @ $V_{GS} = -2.5$ V	± 2.0
	0.265 @ $V_{GS} = -1.8$ V	± 1.7



P-Channel MOSFET



P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)				
Parameter	Symbol	Limit	Unit	
Drain-Source Voltage	V_{DS}	-8	V	
Gate-Source Voltage	V_{GS}	± 8		
Continuous Drain Current ($T_J = 150^\circ\text{C}$) ^{a, b}	I_D	$T_A = 25^\circ\text{C}$	± 2.5	A
		$T_A = 70^\circ\text{C}$	± 2.0	
Pulsed Drain Current	I_{DM}	± 7		
Continuous Diode Current (Diode Conduction) ^{a, b}	I_S	-1.05		
Maximum Power Dissipation ^{a, b}	P_D	$T_A = 25^\circ\text{C}$	1.15	W
		$T_A = 70^\circ\text{C}$	0.73	
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	R_{thJA}	$t \leq 5$ sec	93	110	$^\circ\text{C/W}$
		Steady State	130	150	
Maximum Junction-to-Lead	R_{thJL}	75	90		

Notes

- a. Surface Mounted on FR4 Board.
- b. $t \leq 5$ 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	-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} = -6.4 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -6.4 V, V _{GS} = 0 V, T _J = 55 °C			-5	
On-State Drain Current ^a	I _{D(on)}	V _{DS} = ≤ -5 V, V _{GS} = -4.5 V	-5			A
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = -4.5 V, I _D = -2.5 A		0.103	0.125	Ω
		V _{GS} = -2.5 V, I _D = -2.0 A		0.146	0.175	
		V _{GS} = -1.8 V, I _D = -1 A		0.205	0.265	
Forward Transconductance ^a	g _{fs}	V _{DS} = -4.5 V, I _D = -2.5 A		5.3		S
Diode Forward Voltage ^a	V _{SD}	I _S = -1.05 A, V _{GS} = 0 V		-0.79	-1.1	V
Dynamic^b						
Total Gate Charge	Q _g	V _{DS} = -5 V, V _{GS} = -4.5 V, I _D = -2.5 A		4.2	6	nC
Gate-Source Charge	Q _{gs}			0.45		
Gate-Drain Charge	Q _{gd}			0.90		
Turn-On Delay Time	t _{d(on)}	V _{DD} = -5 V, R _L = 5 Ω I _D ≅ -1 A, V _{GEN} = -4.5 V, R _G = 6 Ω		10	15	ns
Rise Time	t _r			47	70	
Turn-Off Delay Time	t _{d(off)}			28	45	
Fall Time	t _f			34	50	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = -1.05 A, di/dt = 100 A/μs		20	40	ns

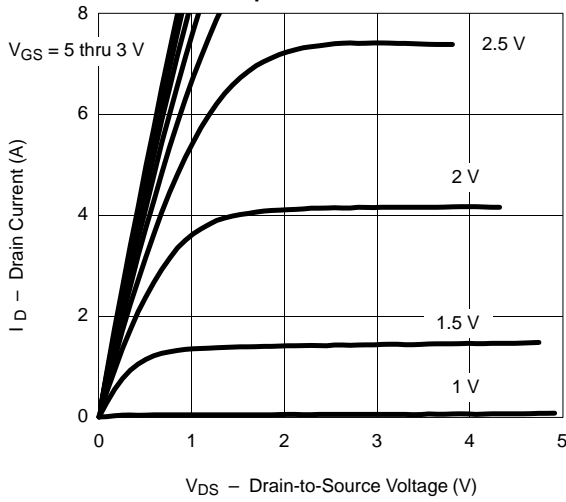
Notes

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

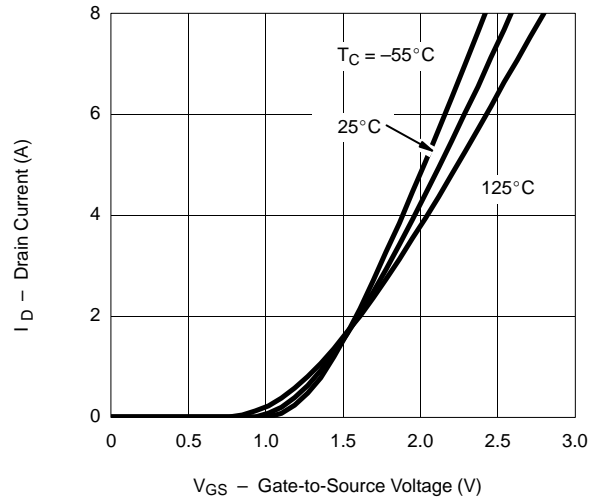


TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

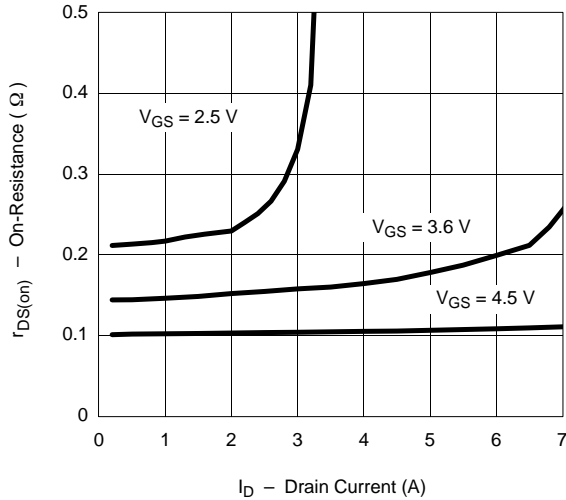
Output Characteristics



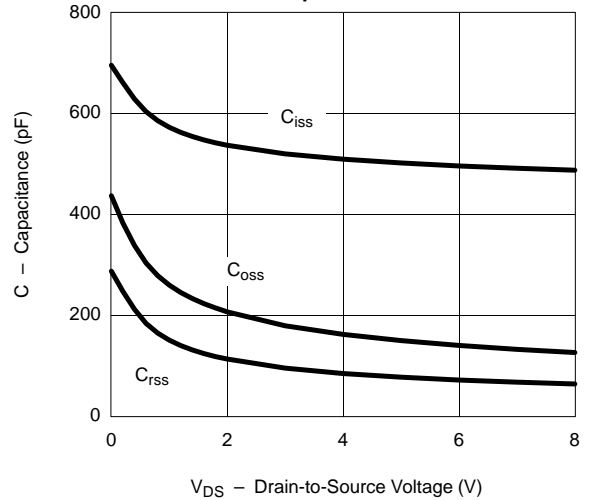
Transfer Characteristics



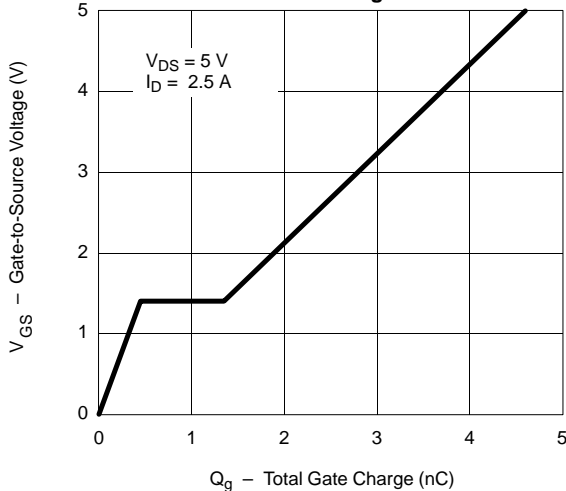
On-Resistance vs. Drain Current



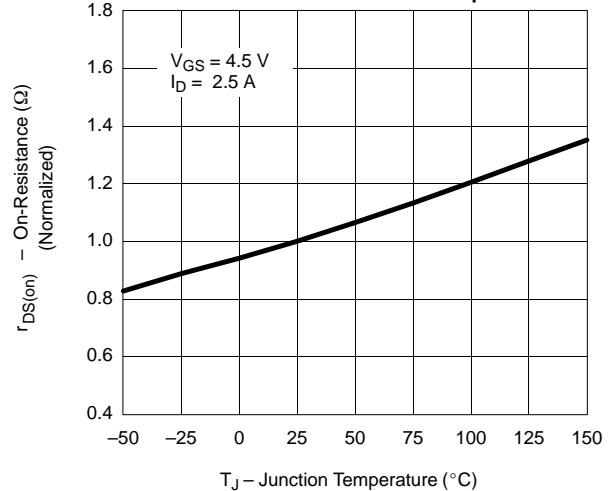
Capacitance



Gate Charge

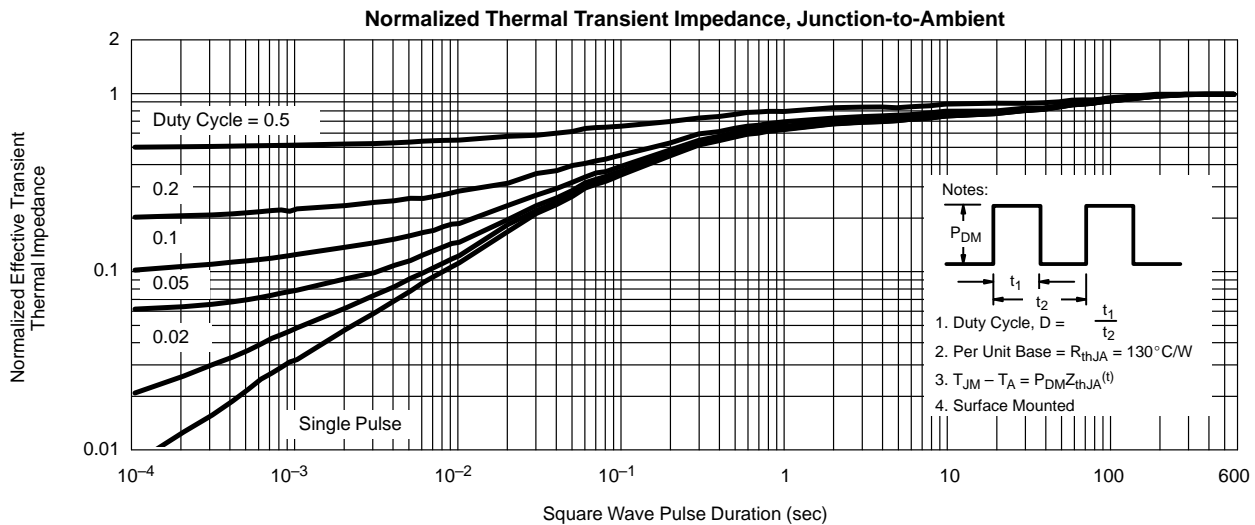
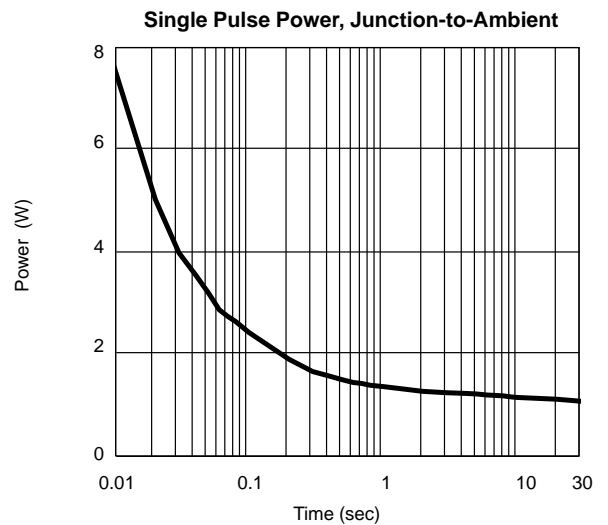
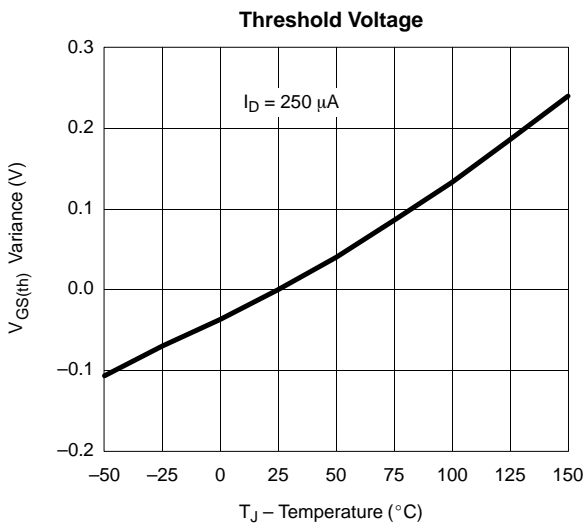
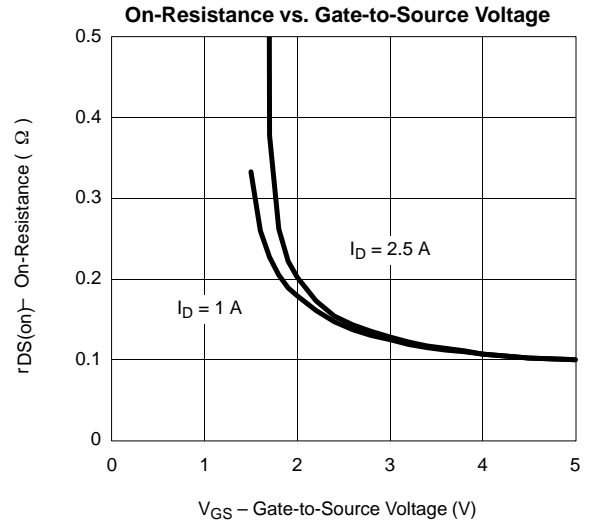
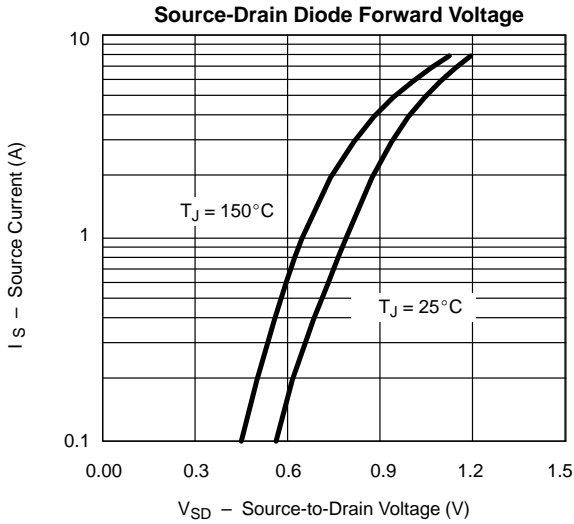


On-Resistance vs. Junction Temperature





TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)





TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)

