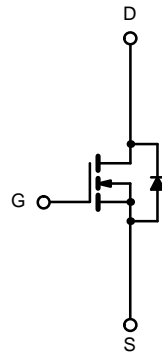
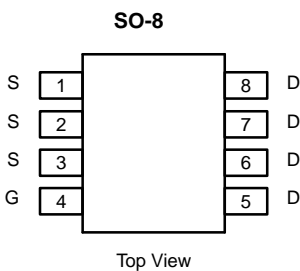




N-Channel 100-V (D-S) MOSFET

PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
100	0.060 @ $V_{GS} = 10$ V	± 4.6
	0.080 @ $V_{GS} = 6$ V	± 4.0

TrenchFET[®]
Power MOSFETs



N-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)			
Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current ($T_J = 150^\circ\text{C}$) ^a	I_D	$T_A = 25^\circ\text{C}$	± 4.6
		$T_A = 70^\circ\text{C}$	± 3.7
Pulsed Drain Current	I_{DM}	± 40	A
Continuous Source Current (Diode Conduction) ^a	I_S	2.1	
Maximum Power Dissipation ^a	P_D	$T_A = 25^\circ\text{C}$	2.5
		$T_A = 70^\circ\text{C}$	1.6
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}	50	$^\circ\text{C/W}$

Notes

a. Surface Mounted on FR4 Board, $t \leq 10$ sec.



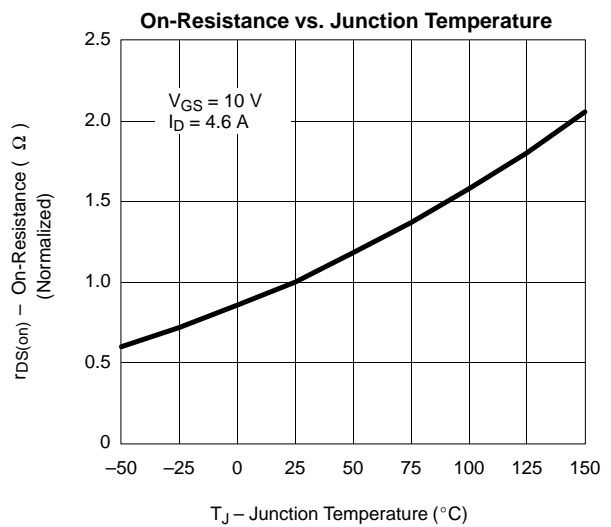
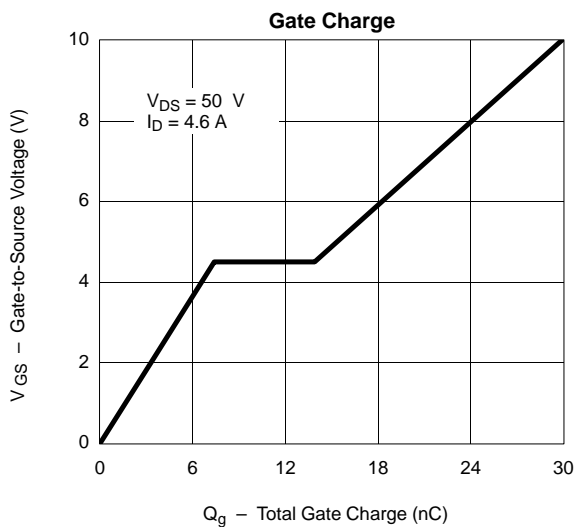
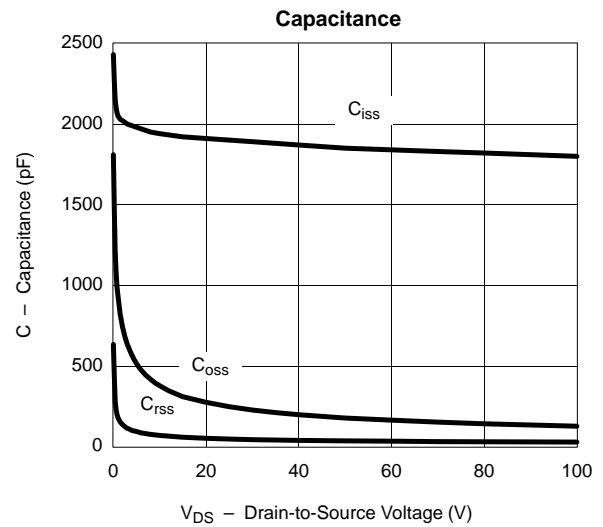
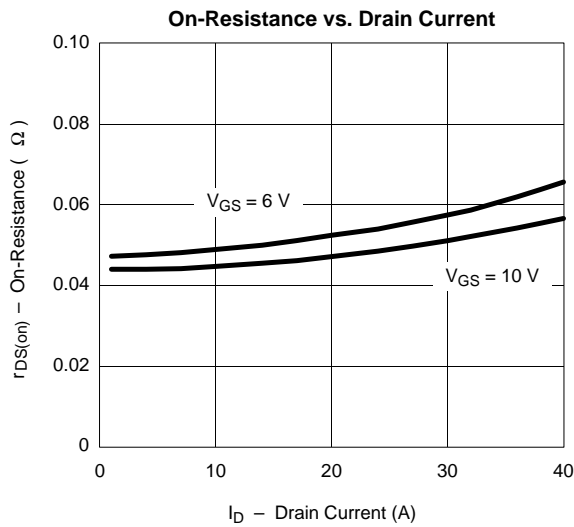
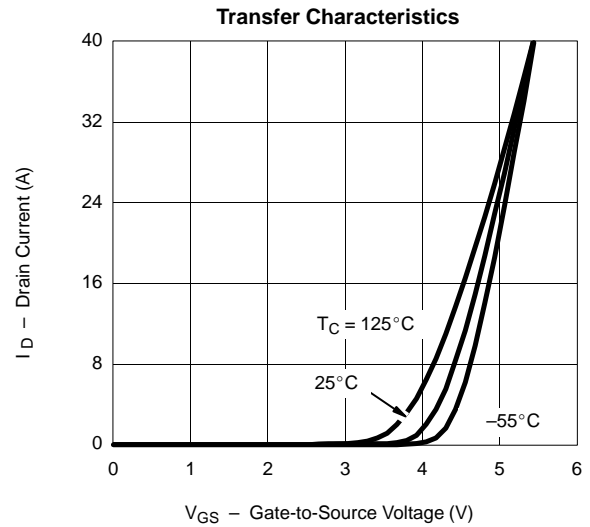
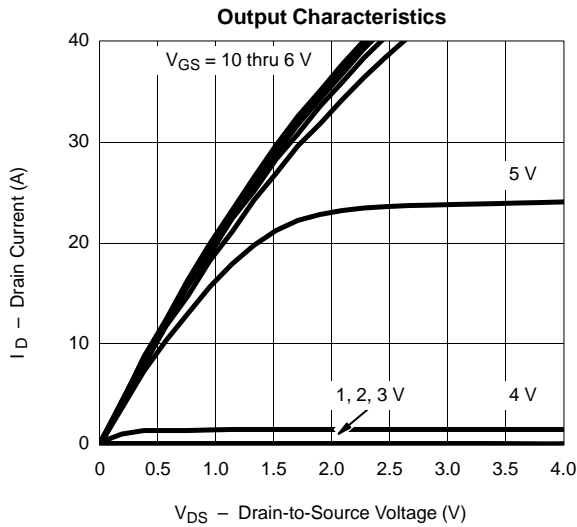
SPECIFICATIONS (T_J = 25 °C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min	Typ ^a	Max	Unit
Static						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250 μA	2			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ± 20 V			± 100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 100 V, V _{GS} = 0 V			1	μA
		V _{DS} = 100 V, V _{GS} = 0 V, T _J = 55 °C			20	
On-State Drain Current ^b	I _{D(on)}	V _{DS} = 5 V, V _{GS} = 10 V	20			A
Drain-Source On-State Resistance ^b	r _{DS(on)}	V _{GS} = 10 V, I _D = 4.6 A		0.045	0.060	Ω
		V _{GS} = 6 V, I _D = 4.0 A		0.050	0.080	
Forward Transconductance ^b	g _{fs}	V _{DS} = 15 V, I _D = 4.6 A		20		S
Diode Forward Voltage ^b	V _{SD}	I _S = 2.1 A, V _{GS} = 0 V			1.2	V
Dynamic^a						
Total Gate Charge	Q _g	V _{DS} = 50 V, V _{GS} = 10 V, I _D = 4.6 A		30	50	nC
Gate-Source Charge	Q _{gs}			7.5		
Gate-Drain Charge	Q _{gd}			7		
Turn-On Delay Time	t _{d(on)}	V _{DD} = 50 V, R _L = 50 Ω I _D ≅ 1 A, V _{GEN} = 10 V, R _G = 6 Ω		13	25	ns
Rise Time	t _r			12	25	
Turn-Off Delay Time	t _{d(off)}			60	90	
Fall Time	t _f			25	40	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = 2.1 A, di/dt = 100 A/μs		50	80	

Notes

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



TYPICAL CHARACTERISTICS (25°C UNLESS NOTED)





TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)

