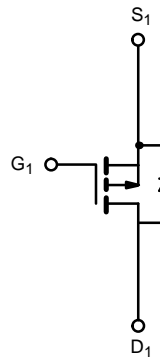
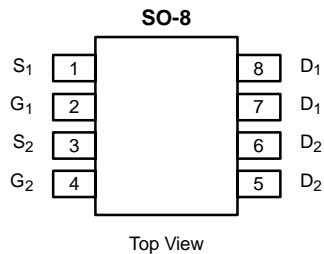


Dual P-Channel 30-V (D-S) MOSFET

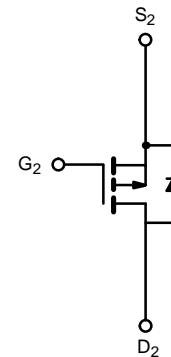
PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
-30	0.032 @ $V_{GS} = -10$ V	-6.3
	0.045 @ $V_{GS} = -4.5$ V	-5.3

FEATURES

- TrenchFET® Power MOSFET



P-Channel MOSFET



P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)					
Parameter	Symbol	10 secs	Steady State	Unit	
Drain-Source Voltage	V_{DS}	-30		V	
Gate-Source Voltage	V_{GS}	± 20			
Continuous Drain Current ($T_J = 150^\circ\text{C}$) ^a	I_D	$T_A = 25^\circ\text{C}$	-6.3	-4.7	A
		$T_A = 70^\circ\text{C}$	-5.0	-3.7	
Pulsed Drain Current	I_{DM}	-40			
Continuous Source Current (Diode Conduction) ^a	I_S	-1.7	-0.9		
Maximum Power Dissipation ^a	P_D	$T_A = 25^\circ\text{C}$	2	1.1	W
		$T_A = 70^\circ\text{C}$	1.3	0.70	
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 to 150		$^\circ\text{C}$	

THERMAL RESISTANCE RATINGS					
Parameter	Symbol	Typ	Max	Unit	
Maximum Junction-to-Ambient ^a	R_{thJA}	$t \leq 10$ sec	45	62.5	$^\circ\text{C/W}$
		Steady-State	85	110	
Maximum Junction-to-Foot (Drain)	R_{thJF}	28	35		

Notes

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

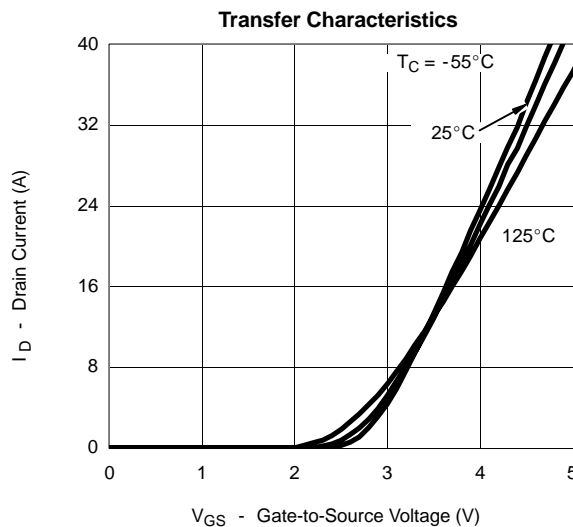
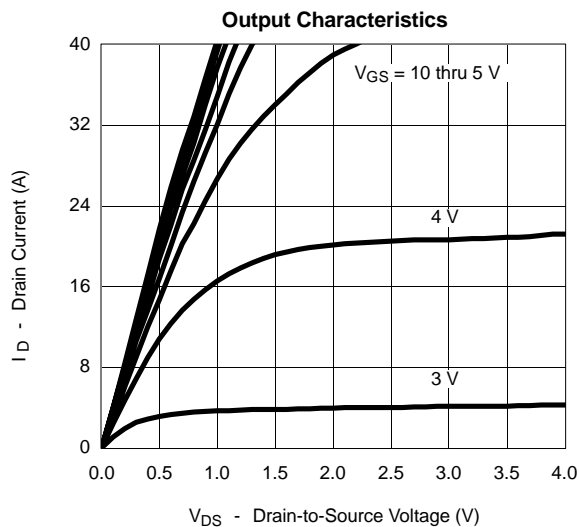


SPECIFICATIONS (T_J = 25 °C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min	Typ ^a	Max	Unit
Static						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-1			V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±20 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -30 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -30 V, V _{GS} = 0 V, T _J = 55 °C			-25	
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 = -6.3 A		0.024	0.032	Ω
		V _{GS} = -4.5 V, I _D = -5.3 A		0.036	0.045	
Forward Transconductance ^b	g _{fs}	V _{DS} = -15 V, I _D = -6.3 A		14		S
Diode Forward Voltage ^b	V _{SD}	I _S = -1.7 A, V _{GS} = 0 V		-0.8	-1.2	V
Dynamic^a						
Total Gate Charge	Q _g	V _{DS} = -15 V, V _{GS} = -10 V, I _D = -6.3 A		27	50	nC
Gate-Source Charge	Q _{gs}		6			
Gate-Drain Charge	Q _{gd}		4.5			
Turn-On Delay Time	t _{d(on)}	V _{DD} = -15 V, R _L = 15 Ω I _D ≅ -1 A, V _{GEN} = -10 V, R _G = 6 Ω		16	20	ns
Rise Time	t _r		10	20		
Turn-Off Delay Time	t _{d(off)}		55	80		
Fall Time	t _f		20	40		
Source-Drain Reverse Recovery Time	t _{rr}		I _F = -1.7 A, di/dt = 100 A/μs		40	

Notes

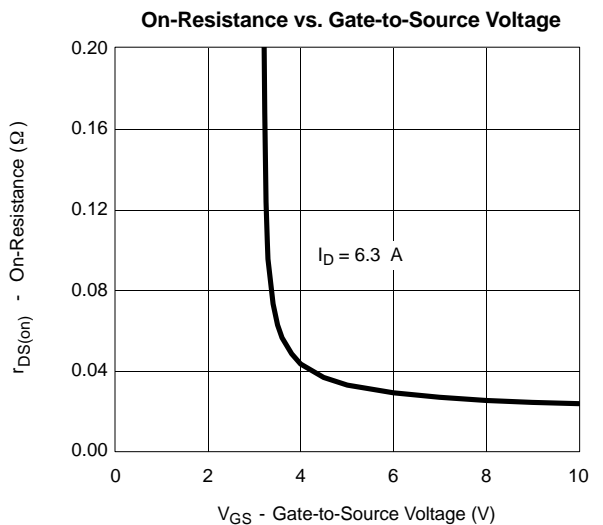
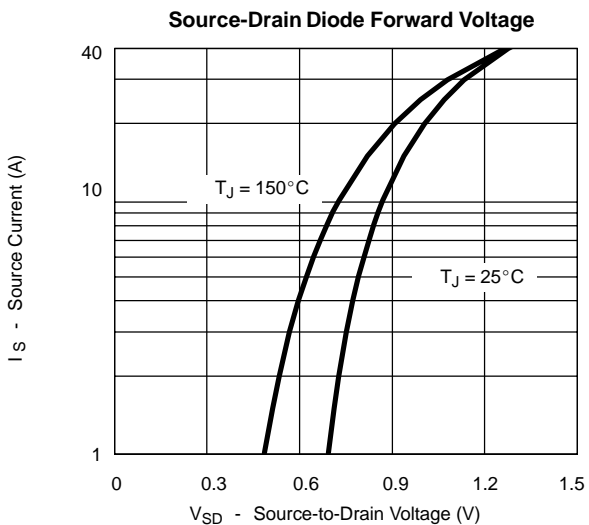
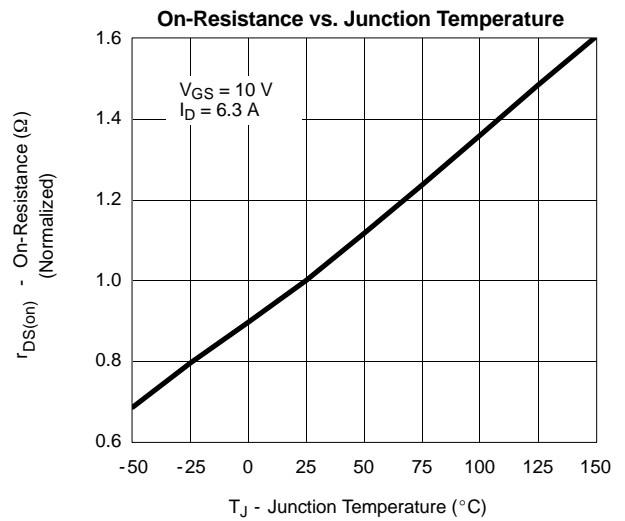
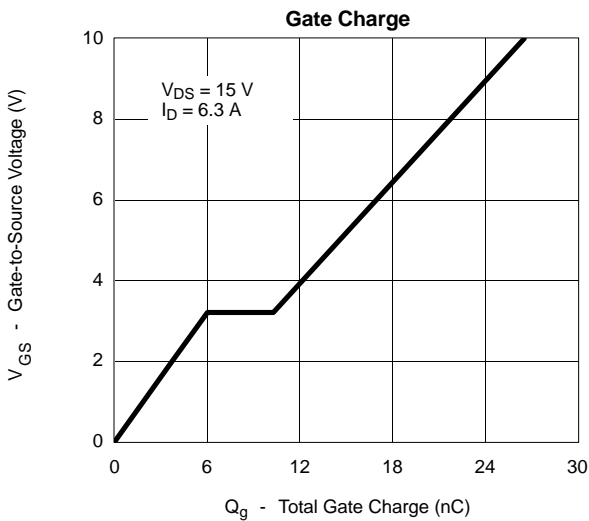
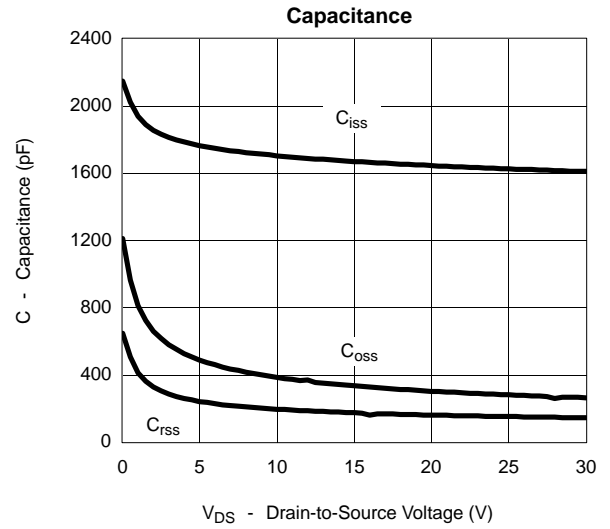
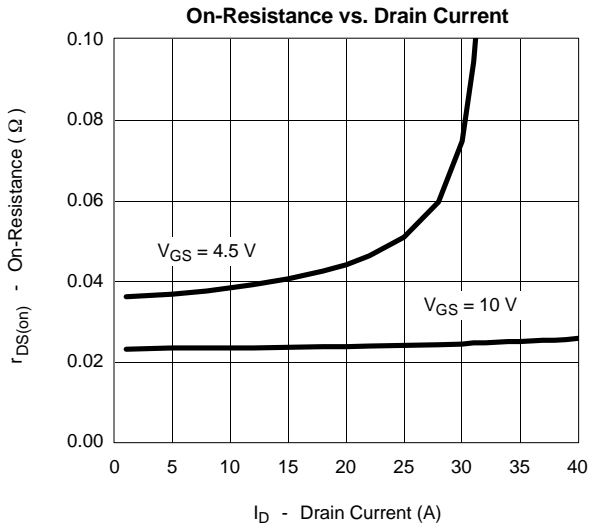
- a. For design aid only; not subject to production testing.
- b. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.

TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)





TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)



TYPICAL CHARACTERISTICS (25 °C UNLESS NOTED)

