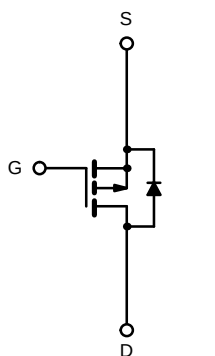
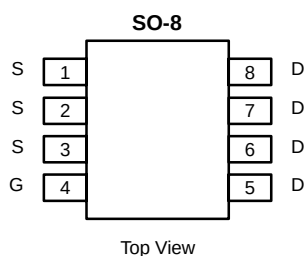




P-Channel 2.5-V (G-S) MOSFET

PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ (Ω)	I_D (A)
-20	0.025 @ $V_{GS} = -4.5$ V	± 7.7
	0.033 @ $V_{GS} = -2.5$ V	± 6.6

2.5-V Rated



P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)			
PARAMETER	SYMBOL	LIMIT	UNIT
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	± 9	
Continuous Drain Current ($T_J = 150^\circ\text{C}$) ^A	$T_A = 25^\circ\text{C}$	± 7.7	A
	$T_A = 70^\circ\text{C}$	± 6.2	
Pulsed Drain Current	I_{DM}	± 30	
Continuous Source Current (Diode Conduction) ^A	I_S	-2.3	
Maximum Power Dissipation ^A	$T_A = 25^\circ\text{C}$	2.5	W
	$T_A = 70^\circ\text{C}$	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.

Updates to this data sheet may be obtained via facsimile by calling Siliconix FaxBack, 1-408-970-5600. Please request FaxBack document #70164.

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	-0.6			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} = -16 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -16 V, V _{GS} = 0 V, T _J = 55°C			-5	
On-State Drain Current ^B	I _{D(on)}	V _{DS} ≤ -5 V, V _{GS} = -4.5 V	-30			A
Drain-Source On-State Resistance ^B	r _{DS(on)}	V _{GS} = -4.5 V, I _D = -7.7 A		0.019	0.025	Ω
		V _{GS} = -2.5 V, I _D = -6.6 A		0.024	0.033	
Forward Transconductance ^B	g _{fs}	V _{DS} = -10 V, I _D = -7.7 A		25		S
Diode Forward Voltage ^B	V _{SD}	I _S = -2.3 A, V _{GS} = 0 V		-0.72	-1.2	V
DYNAMIC^A						
Total Gate Charge	Q _g	V _{DS} = -6 V, V _{GS} = -4.5 V, I _D = -7.7 A		46	80	nC
Gate-Source Charge	Q _{gs}			6		
Gate-Drain Charge	Q _{gd}			13		
Turn-On Delay Time	t _{d(on)}	V _{DD} = -6 V, R _L = 6 Ω I _D ≅ -1 A, V _{GEN} = -4.5 V, R _G = 6 Ω		40	80	ns
Rise Time	t _r			65	130	
Turn-Off Delay Time	t _{d(off)}			240	400	
Fall Time	t _f			140	250	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = -2.3 A, di/dt = 100 A/μs		70	120	

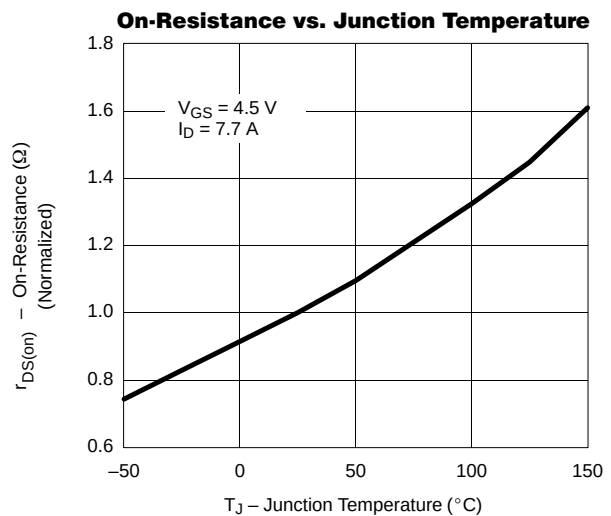
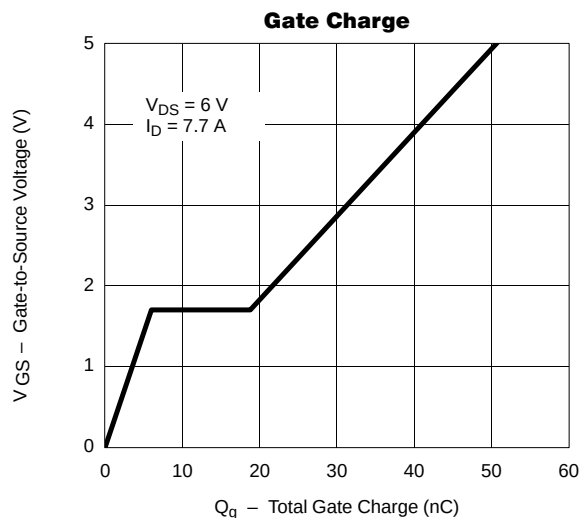
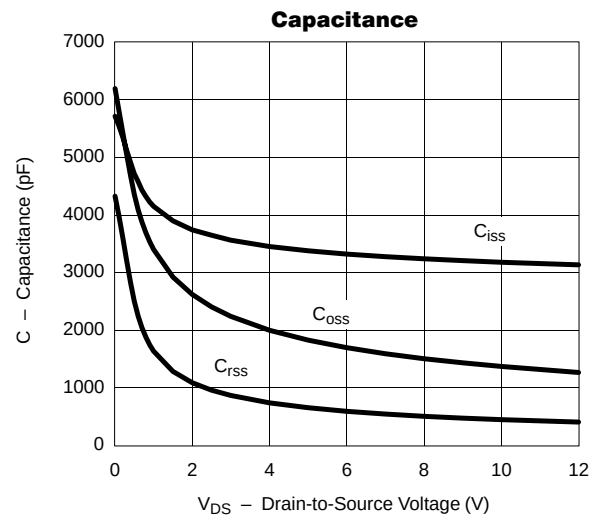
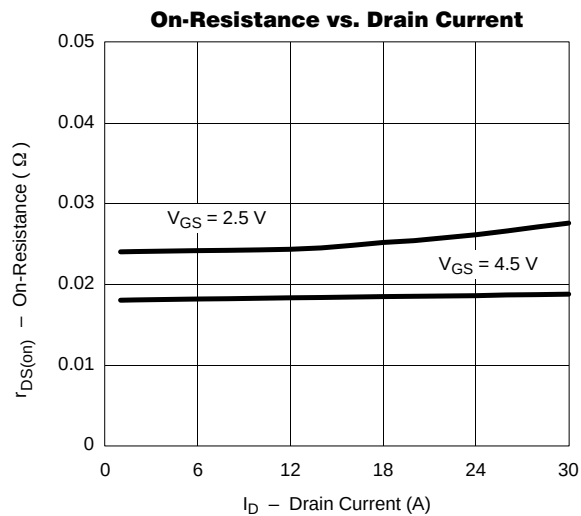
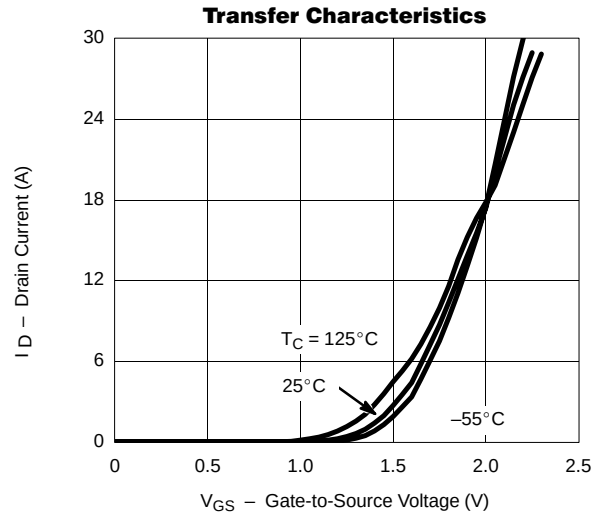
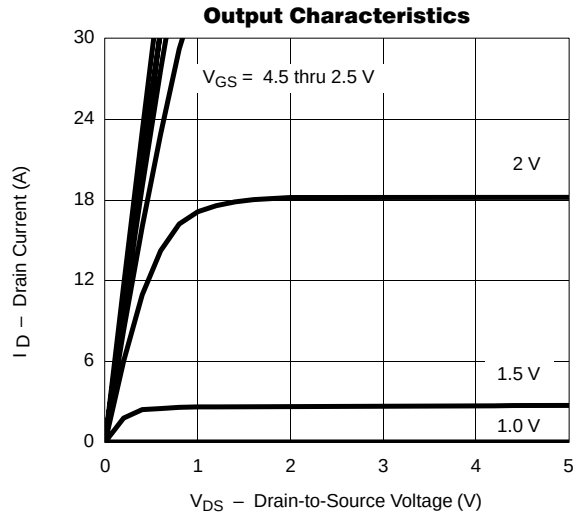
Notes

A. Guaranteed by design, not subject to production testing.

B. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.



TYPICAL CHARACTERISTICS (25°C UNLESS OTHERWISE NOTED)



TYPICAL CHARACTERISTICS (25°C UNLESS OTHERWISE NOTED)

