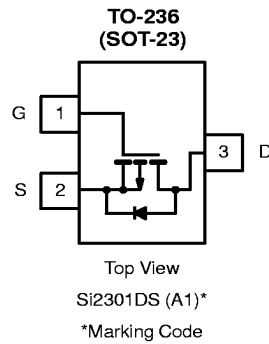




P-Channel 1.25-W, 2.5-V MOSFET

PRODUCT SUMMARY		
V_{DS} (V)	R_{DS(ON)} (Ω)	I_D (A)
-20	0.130 @ V _{GS} = -4.5 V	-2.3
	0.190 @ V _{GS} = -2.5 V	-1.9



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C UNLESS OTHERWISE NOTED)			
PARAMETER	SYMBOL	LIMIT	UNIT
Drain-Source Voltage	V _{DS}	-20	V
Gate-Source Voltage	V _{GS}	±8	
Continuous Drain Current (T _J = 150°C) ^{NO TAG}	I _D	T _A = 25°C	-2.3
		T _A = 70°C	-1.5
Pulsed Drain Current ^{NO TAG}	I _{DM}	-10	A
Continuous Source Current (Diode Conduction) ^{NO TAG}	I _S	-1.6	
Power Dissipation ^{NO TAG}	P _D	T _A = 25°C	1.25
		T _A = 70°C	0.8
Operating Junction and Storage Temperature Range	T _J , T _{stg}	-55 to 150	°C

THERMAL RESISTANCE RATINGS			
PARAMETER	SYMBOL	LIMIT	UNIT
Maximum Junction-to-Ambient ^{NO TAG}	R _{thJA}	100	°C/W
Maximum Junction-to-Ambient ^{NO TAG}		166	

- Notes
A. Pulse width limited by maximum junction temperature.
B. Surface Mounted on FR4 Board, t ≤ 5 sec.
C. Surface Mounted on FR4 Board.

Updates to this data sheet may be obtained via facsimile by calling Siliconix FaxBack, 1-408-970-5600. Please request FaxBack document #70627.


SPECIFICATIONS (T_J = 25°C UNLESS OTHERWISE NOTED)

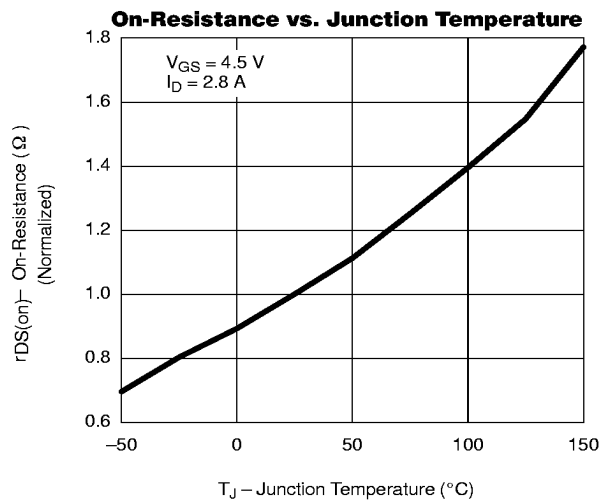
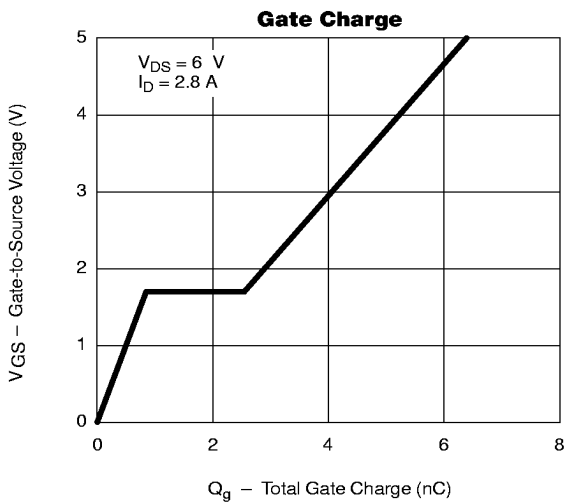
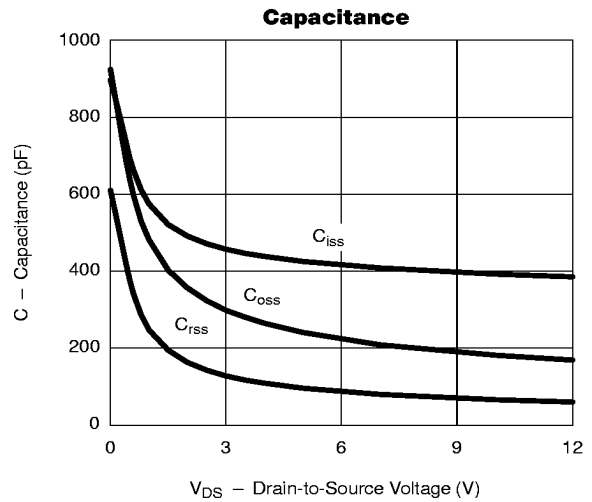
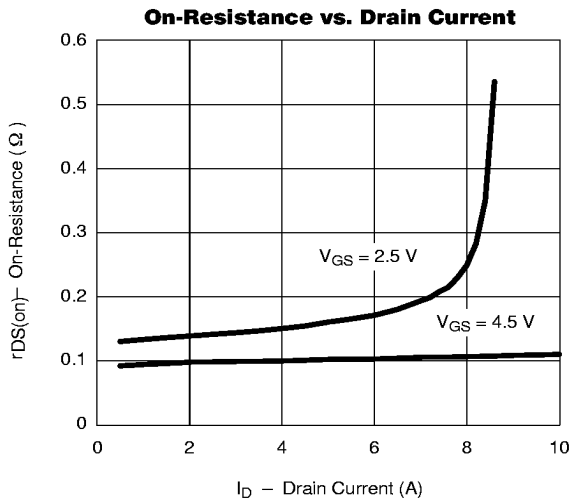
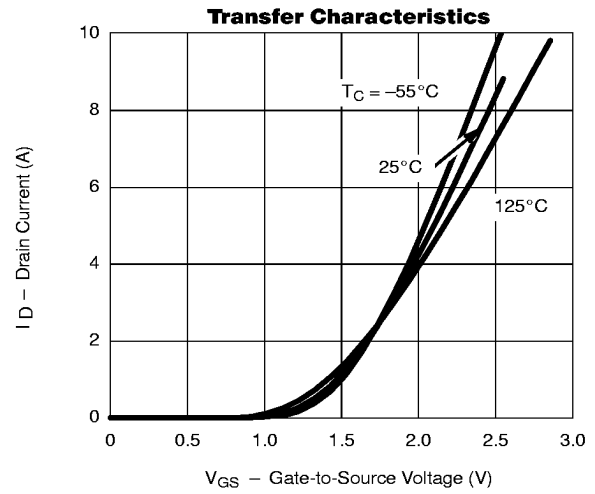
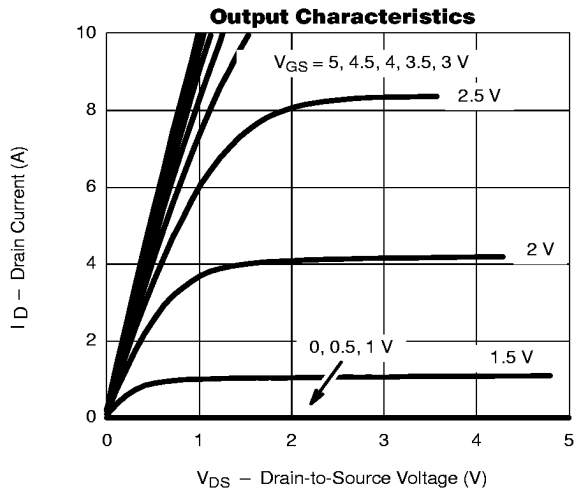
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0 V, I _D = -250 μA	-20			V
Gate-Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-0.45			
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±8 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -16 V, V _{GS} = 0 V T _J = 55°C			-1	μA
					-10	
On-State Drain Current ^{NO TAG}	I _{D(on)}	V _{DS} ≤ -5 V, V _{GS} = -4.5 V	-6			A
		V _{DS} ≤ -5 V, V _{GS} = -2.5 V	-3			
Drain-Source On-Resistance ^{NO TAG}	r _{DS(on)}	V _{GS} = -4.5 V, I _D = -2.8 A		0.105	0.130	Ω
		V _{GS} = -2.5 V, I _D = -2.0 A		0.145	0.190	
Forward Transconductance ^{NO TAG}	g _{fs}	V _{DS} = -5 V, I _D = -2.8 A		6.5		S
Diode Forward Voltage	V _{SD}	I _S = -1.6 A, V _{GS} = 0 V		0.80	-1.2	V
DYNAMIC^{NO TAG}						
Total Gate Charge	Q _g	V _{DS} = -6 V, V _{GS} = -4.5 V I _D ≅ -2.8 A		5.8	10	nC
Gate-Source Charge	Q _{gs}			0.85		
Gate-Drain Charge	Q _{gd}			1.70		
Input Capacitance	C _{iss}	V _{DS} = -6 V, V _{GS} = 0, f = 1 MHz		415		pF
Output Capacitance	C _{oss}			223		
Reverse Transfer Capacitance	C _{rss}			87		
SWITCHING^{NO TAG}						
Turn-On Time	t _{d(on)}	V _{DD} = -6 V, R _L = 6 Ω I _D ≅ -1.0 A, V _{GEN} = -4.5 V R _G = 6 Ω		13.0	25	ns
	t _r			36.0	60	
Turn-Off Time	t _{d(off)}			42	70	
	t _f			34	60	

Notes

- A. For DESIGN AID ONLY, not subject to production testing.
 B. Pulse test: PW ≤ 300 μs duty cycle ≤ 2%.
 C. Switching time is essentially independent of operating temperature.



TYPICAL CHARACTERISTICS (25°C UNLESS OTHERWISE NOTED)





TYPICAL CHARACTERISTICS (25°C UNLESS OTHERWISE NOTED)

