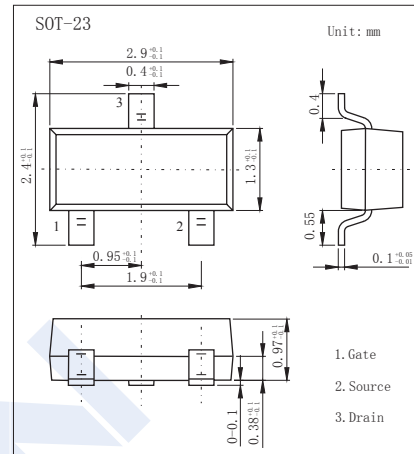
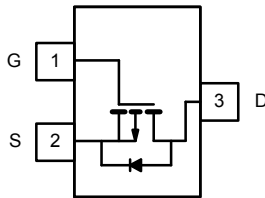


P-Channel MOSFET

SI2303DS-HF (KI2303DS-HF)

■ Features

- $V_{DS} (V) = -30V$
- $R_{DS(ON)} < 200m\Omega$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 380m\Omega$ ($V_{GS} = -4.5V$)
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	$T_a = 25^\circ C$	A
		$T_a = 70^\circ C$	
Pulsed Drain Current	I_{DM}	-10	
Power Dissipation	P_D	$T_a = 25^\circ C$	W
		$T_a = 70^\circ C$	
Thermal Resistance..Junction- to-Ambient (surface mounted on FR4 board)	R_{thJA}	100	$^\circ C/W$
		166	
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

P-Channel MOSFET

SI2303DS-HF (KI2303DS-HF)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =-250 μA, V _{GS} =0V	-30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-30V, V _{GS} =0V			-1	μA
		V _{DS} =-30V, V _{GS} =0V, T _J =55°C			-10	
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =-250 μA	-1.0		-3.0	V
Static Drain-Source On-Resistance *1	R _{DS(on)}	V _{GS} =-10V, I _D =-1.7A			200	mΩ
		V _{GS} =-4.5V, I _D =-1.3A			380	
On state drain current *1	I _{D(ON)}	V _{GS} =-10V, V _{DS} ≥-5V	-6			A
Forward Transconductance *1	g _{FS}	V _{DS} =-10V, I _D =-1.7A		2.4		S
Input Capacitance *2	C _{iss}	V _{GS} =0V, V _{DS} =-15V, f=1MHz		226		pF
Output Capacitance *2	C _{oss}			87		
Reverse Transfer Capacitance *2	C _{rss}			19		
Total Gate Charge *2	Q _g	V _{GS} =-10V, V _{DS} =-4.5V, I _D =-1.7A		5.8	10	nC
Gate Source Charge *2	Q _{gs}			0.8		
Gate Drain Charge *2	Q _{gd}			1.5		
Turn-On DelayTime *3	t _{d(on)}	V _{GS} =-10V, V _{DS} =-15V, R _L =15Ω, R _{GEN} =6Ω I _D =-1.0A		9.0	20	ns
Turn-On Rise Time *3	t _r			9.0	20	
Turn-Off DelayTime *3	t _{d(off)}			18	35	
Turn-Off Fall Time *3	t _f			6.0	20	
Maximum Body-Diode Continuous Current	I _S				-1.25	A
Diode Forward Voltage	V _{SD}	I _S =-1.25A, V _{GS} =0V		-0.8	-1.2	V

*1 Pulse test: PW ≤ 300us duty cycle ≤ 2%.

*2 For DESIGN AID ONLY, not subject to production testing.

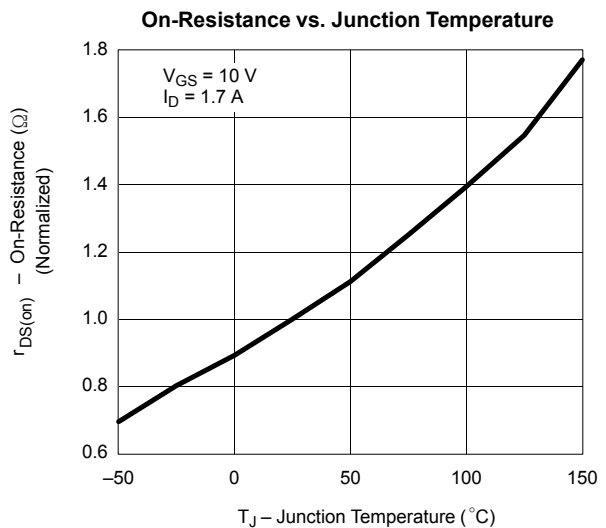
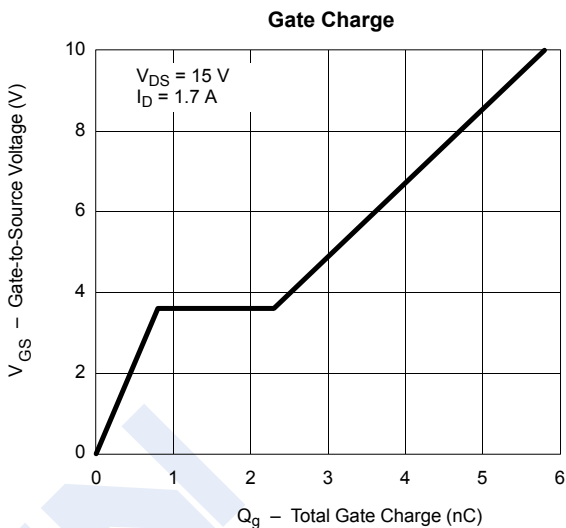
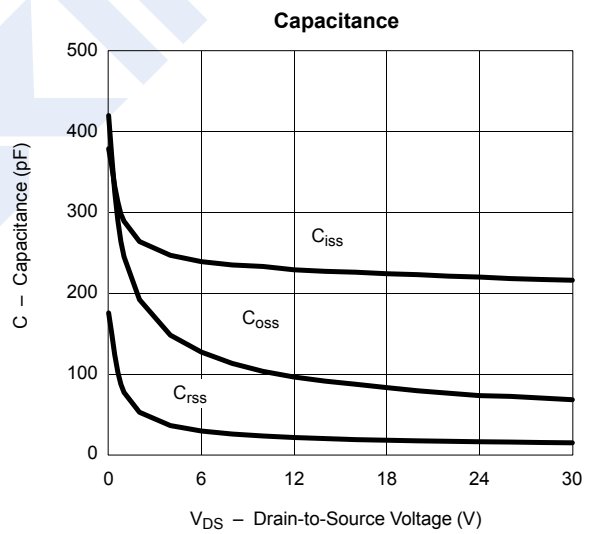
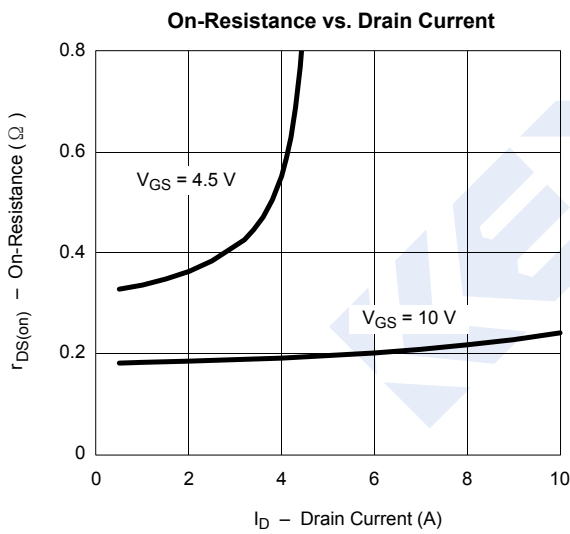
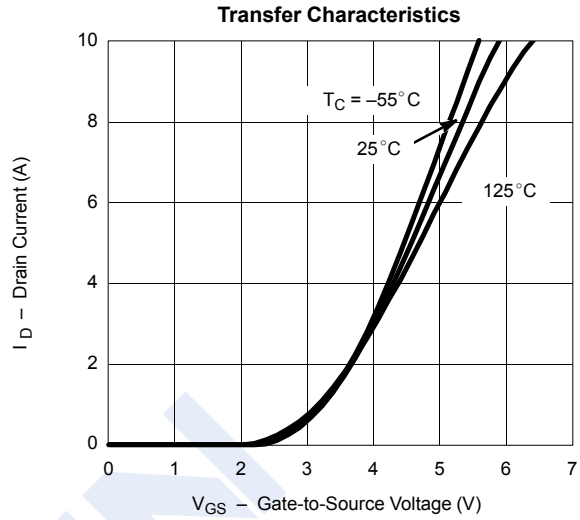
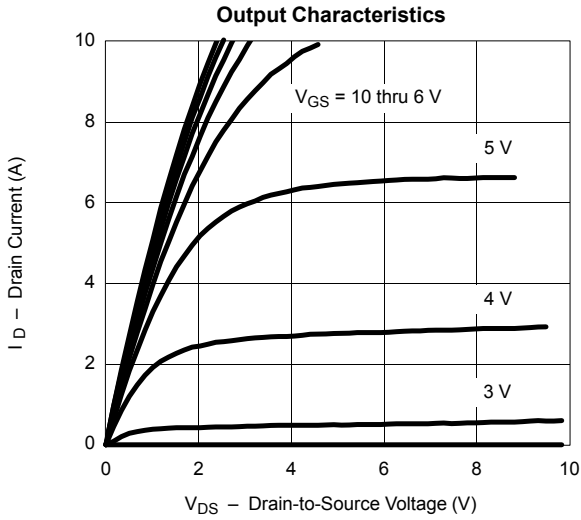
*3 Switching time is essentially independent of operating temperature.

■ Marking

Marking	A3* F
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P-Channel MOSFET SI2303DS-HF (K12303DS-HF)

■ Typical Characteristics



P-Channel MOSFET SI2303DS-HF (KI2303DS-HF)

■ Typical Characteristics

