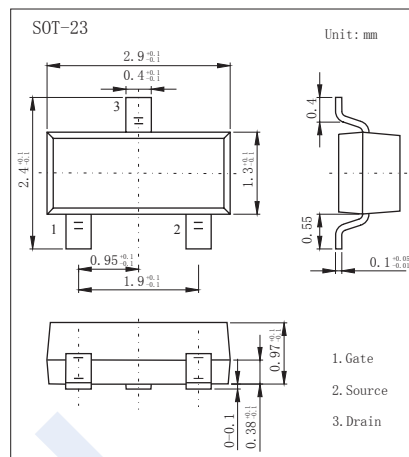
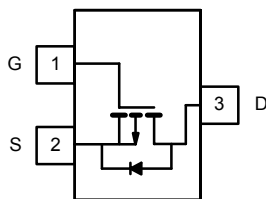


P-Channel Enhancement MOSFET

SI2323DS (K12323DS)

■ Features

- $V_{DS} (V) = -20V$
- $I_D = -4.7A$ ($V_{GS} = -4.5V$)
- $R_{DS(ON)} < 39m\Omega$ ($V_{GS} = -4.5V$)
- $R_{DS(ON)} < 52m\Omega$ ($V_{GS} = -2.5V$)
- $R_{DS(ON)} < 68m\Omega$ ($V_{GS} = -1.8V$)



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

Parameter	Symbol	5 sec	Steady State	Unit
Drain-Source Voltage	V _{DS}	-20		V
Gate-Source Voltage	V _{GS}	± 8		
Continuous Drain Current Ta = 25°C Ta = 70°C	I _D	-4.7	-3.7	A
		-3.8	-2.9	
Pulsed Drain Current	I _{DM}	-20		
Power Dissipation Ta = 25°C Ta = 70°C	P _D	1.25	0.75	W
		0.8	0.48	
Thermal Resistance.Junction- to-Ambient t≤5 sec Steady State	R _{thJA}	100		°C/W
		166		
Thermal Resistance.Junction- to-Foot	R _{thJF}	50		
Junction Temperature	T _J	150		°C
Storage Temperature Range	T _{stg}	-55 to 150		

P-Channel Enhancement MOSFET

SI2323DS (KI2323DS)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =-250 μ A, V _{GS} =0V	-20			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-16V, V _{GS} =0V			-1	μ A
		V _{DS} =-16V, V _{GS} =0V, T _J =55°C			-10	
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} = $\pm$ 8V			$\pm$ 100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =-250 μ A	-0.4		-1.0	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-4.5V, I _D =-4.7A		31	39	m Ω
		V _{GS} =-2.5V, I _D =-4.1A		41	52	
		V _{GS} =-1.8V, I _D =-2A		54	68	
On state drain current	I _{D(ON)}	V _{GS} =-4.5V, V _{DS} =-5V	-20			A
Forward Transconductance	g _{FS}	V _{DS} =-5V, I _D =-4.7A		16		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-10V, f=1MHz *1		1020		pF
Output Capacitance	C _{oss}			191		
Reverse Transfer Capacitance	C _{rss}			140		
Total Gate Charge	Q _g	V _{GS} =-4.5V, V _{DS} =-10V, I _D =-4.7A *1		12.5	19	nC
Gate Source Charge	Q _{gs}			1.7		
Gate Drain Charge	Q _{gd}			3.3		
Turn-On DelayTime	t _{d(on)}	V _{GS} =-4.5V, V _{DS} =-10V, R _L =10 Ω , R _{GEN} =6 Ω I _D =-1.0A *1		25	40	ns
Turn-On Rise Time	t _r			43	65	
Turn-Off DelayTime	t _{d(off)}			71	110	
Turn-Off Fall Time	t _f			48	75	
Maximum Body-Diode Continuous Current	I _S	5 sec			-1.0	A
		Steady State			-0.6	
Diode Forward Voltage	V _{SD}	I _S =-1.0A, V _{GS} =0V		-0.7	-1.2	V

*1Pulse test: PW $\leq$ 300 μ s duty cycle $\leq$ 2%.

■ Marking

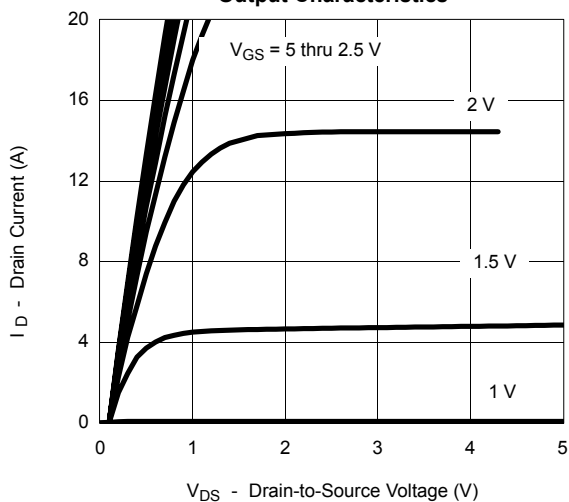
Marking	D3*
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P-Channel Enhancement MOSFET

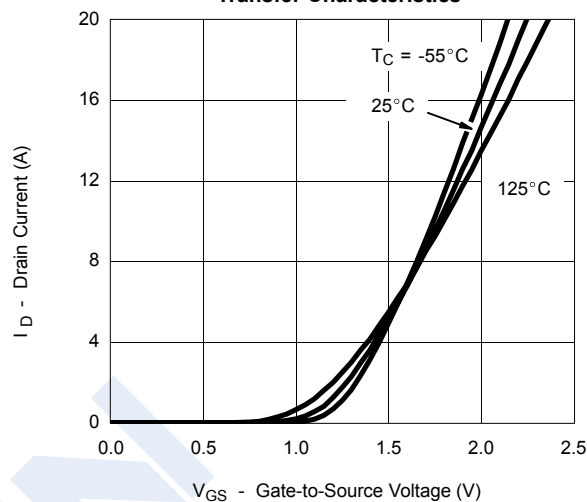
SI2323DS (KI2323DS)

■ Typical Characteristics

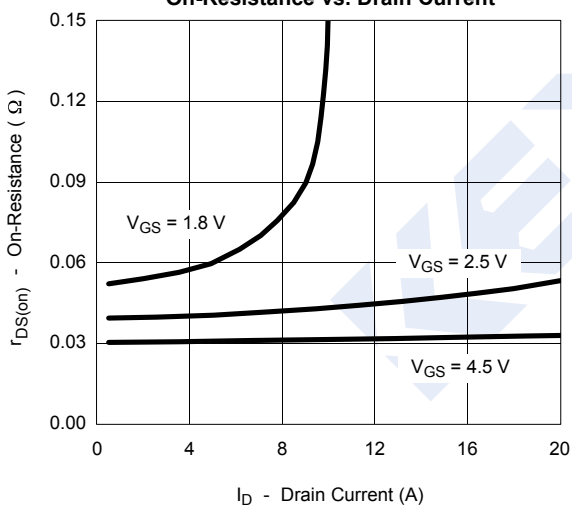
Output Characteristics



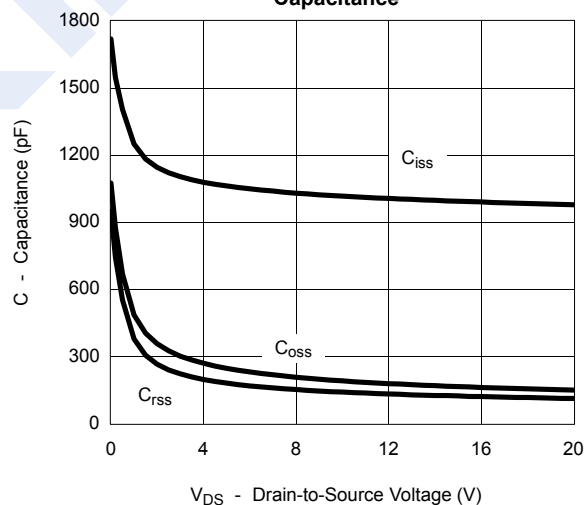
Transfer Characteristics



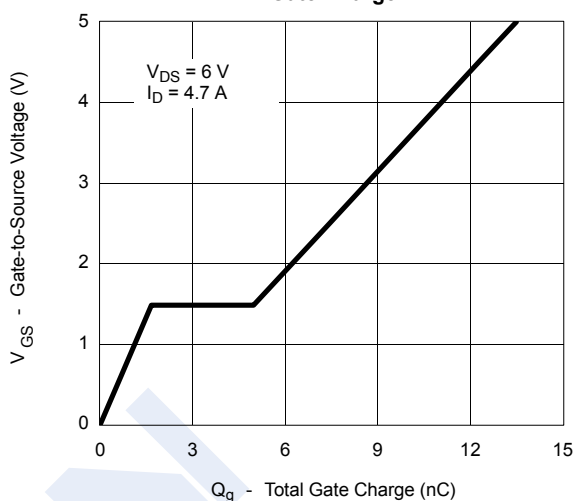
On-Resistance vs. Drain Current



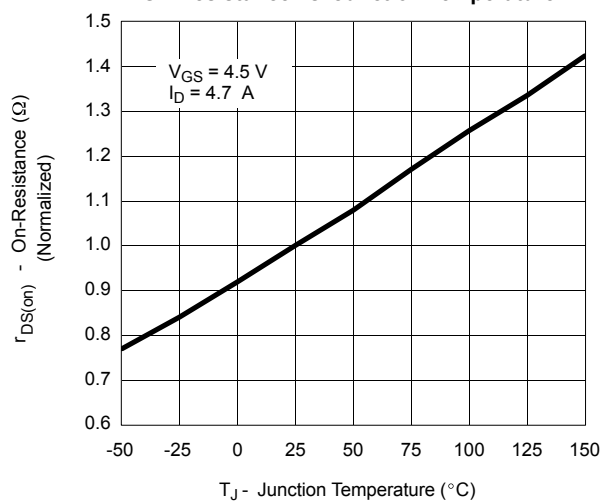
Capacitance



Gate Charge



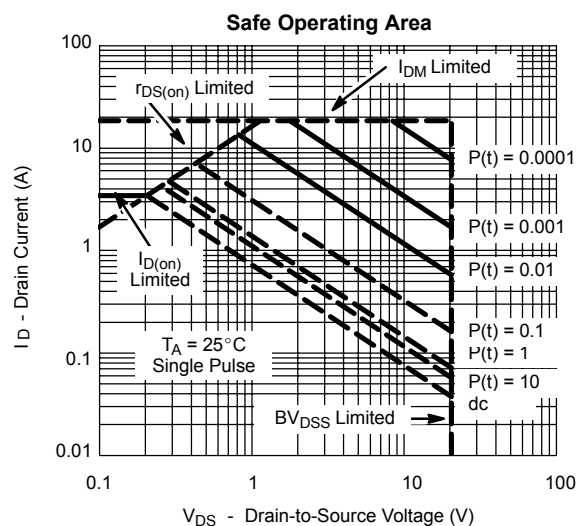
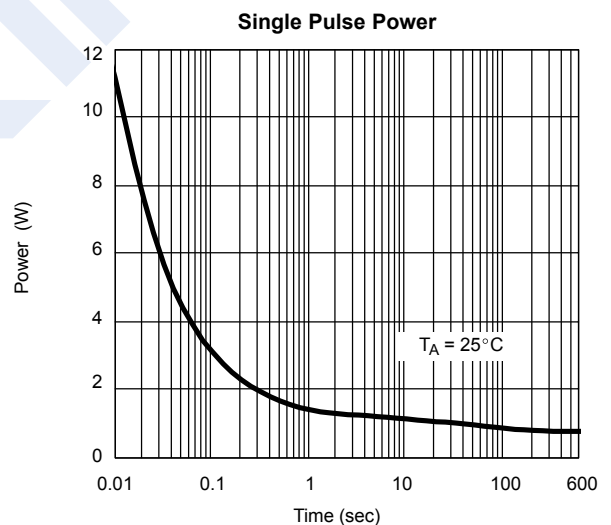
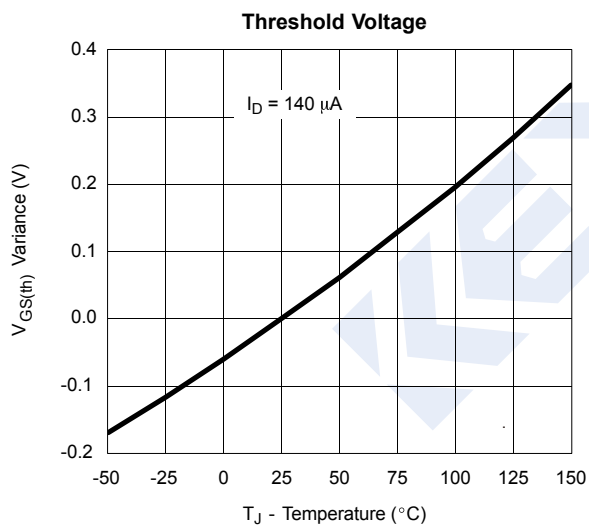
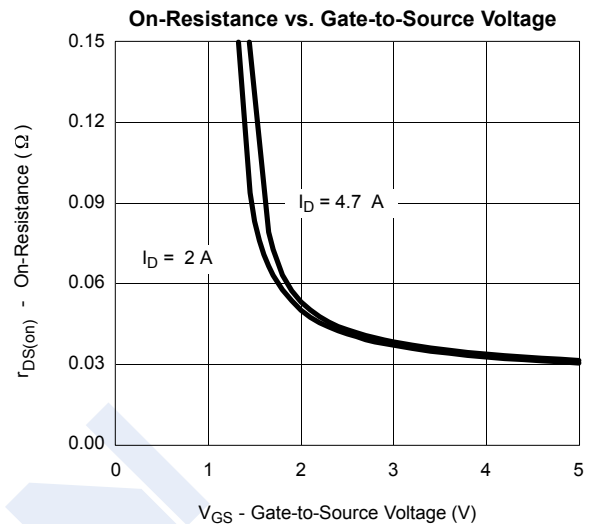
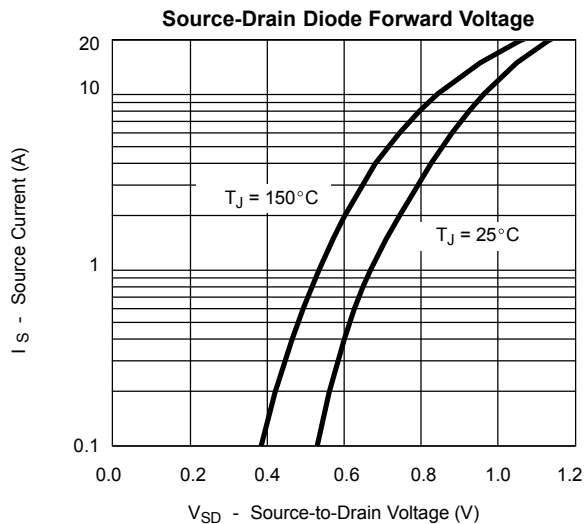
On-Resistance vs. Junction Temperature



P-Channel Enhancement MOSFET

SI2323DS (K12323DS)

■ Typical Characteristics



P-Channel Enhancement MOSFET

SI2323DS (KI2323DS)

■ Typical Characteristics

