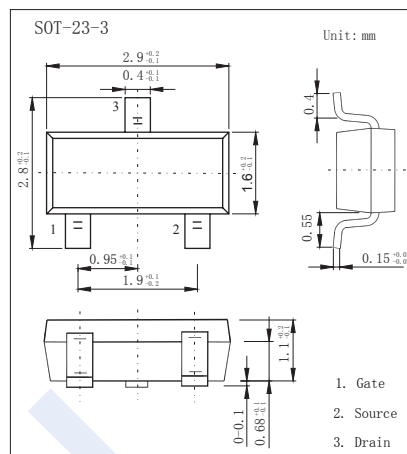
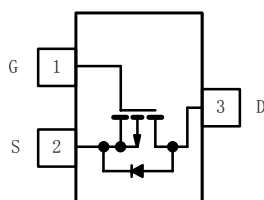


P-Channel Enhancement MOSFET

SI2315BDS (KI2315BDS)

■ Features

- $V_{DS} (V) = -12V$
- $I_D = -3.85A$ ($V_{GS} = -4.5V$)
- $R_{DS(ON)} < 50m\Omega$ ($V_{GS} = -4.5V$)
- $R_{DS(ON)} < 65m\Omega$ ($V_{GS} = -2.5V$)
- $R_{DS(ON)} < 100m\Omega$ ($V_{GS} = -1.8V$)

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

Parameter	Symbol	5 sec	Steady State	Unit
Drain-Source Voltage	V _{DS}	-12		V
Gate-Source Voltage	V _{GS}	± 8		
Continuous Drain Current (T _J =150°C) *1	I _D	-3.85	-3.0	A
		-3.0	-2.45	
Pulsed Drain Current *1	I _{DM}	-12		
Power Dissipation *1	P _D	1.19	0.75	W
		0.76	0.48	
Thermal Resistance.Junction- to-Ambient t≤5 sec	R _{thJA} *1	105		°C/W
Steady State		166		
Thermal Resistance.Junction- to-Foot	R _{thJF}	75		
Junction Temperature	T _J	150		°C
Storage Temperature Range	T _{stg}	-55 to 150		

*1Surface Mounted on FR4 board, $t \leq 5$ sec.

P-Channel Enhancement MOSFET

SI2315BDS (KI2315BDS)

■ 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	-12			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-12V, V _{GS} =0V			-1	μA
		V _{DS} =-12V, V _{GS} =0V, T _J =55°C			-10	
Gate-Body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} =±8V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =-250 μA	-0.45		-0.9	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =-4.5V, I _D =-3.85A		40	50	mΩ
		V _{GS} =-2.5V, I _D =-3.4A		50	65	
		V _{GS} =-1.8V, I _D =-2.7A		71	100	
On state drain current	I _{D(ON)}	V _{GS} =-4.5V, V _{DS} =-5V	-6			A
		V _{GS} =-2.5V, V _{DS} =-5V	-3			
Forward Transconductance	g _{FS}	V _{DS} =-5V, I _D =-3.85A		7		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-6V, f=1MHz *1		715		pF
Output Capacitance	C _{oss}			275		
Reverse Transfer Capacitance	C _{rss}			200		
Total Gate Charge	Q _g	V _{GS} =-4.5V, V _{DS} =-6V, I _D =-3.85A *1		8	15	nC
Gate Source Charge	Q _{gs}			1.1		
Gate Drain Charge	Q _{gd}			2.3		
Turn-On DelayTime	t _{d(on)}	V _{GS} =-4.5V, V _{DS} =-6V, R _L =6Ω, R _{GEN} =6Ω I _D =1.0A *1		15	20	ns
Turn-On Rise Time	t _r			35	50	
Turn-Off DelayTime	t _{d(off)}			50	70	
Turn-Off Fall Time	t _f			50	75	
Maximum Body-Diode Continuous Current	I _S				-1.6	A
Diode Forward Voltage	V _{SD}	I _S =-1.6A, V _{GS} =0V			-1.2	V

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

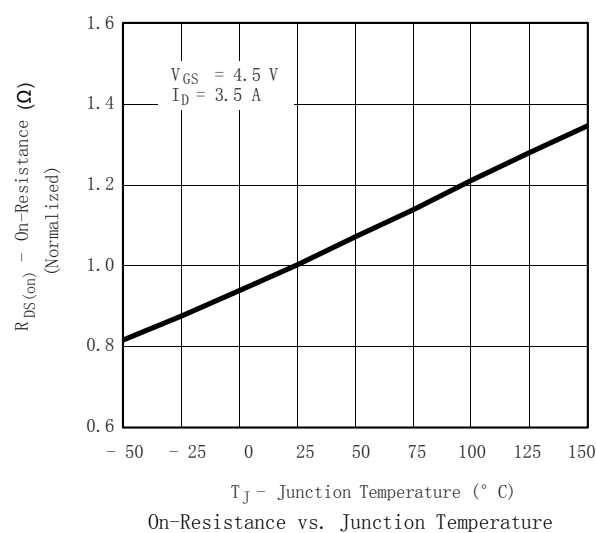
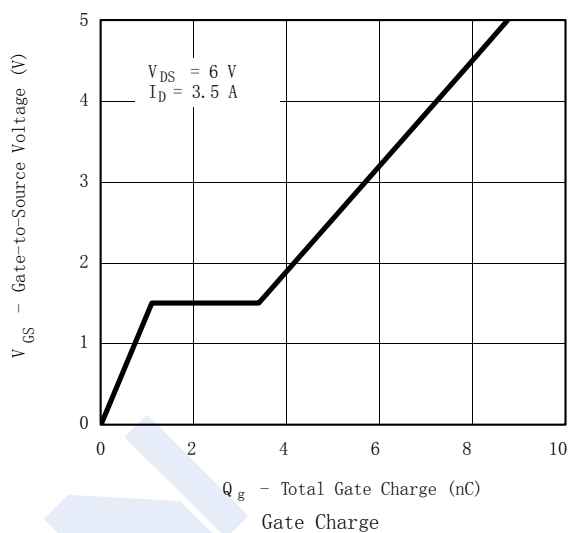
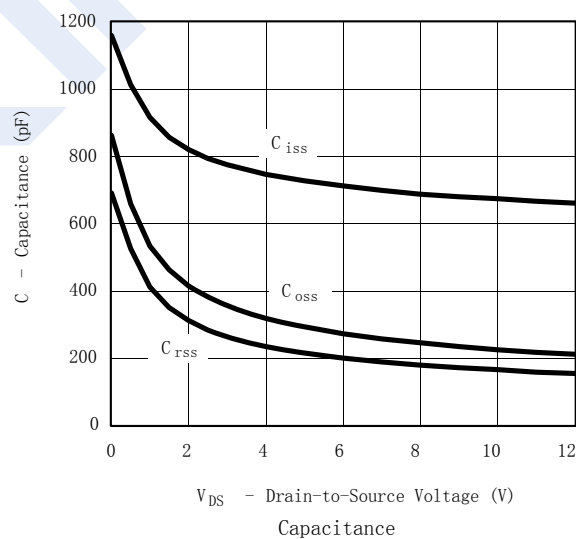
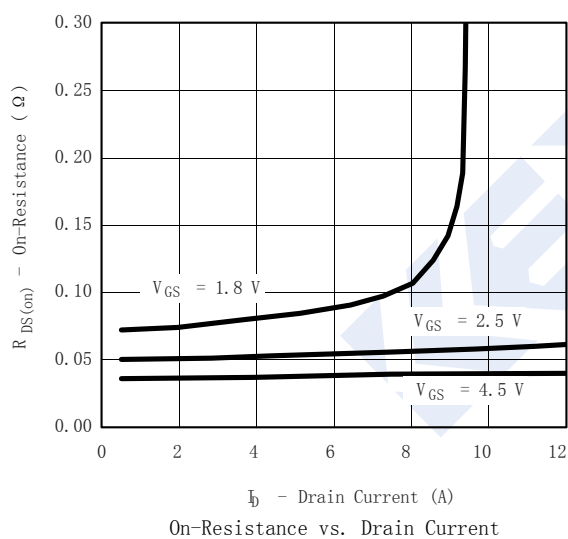
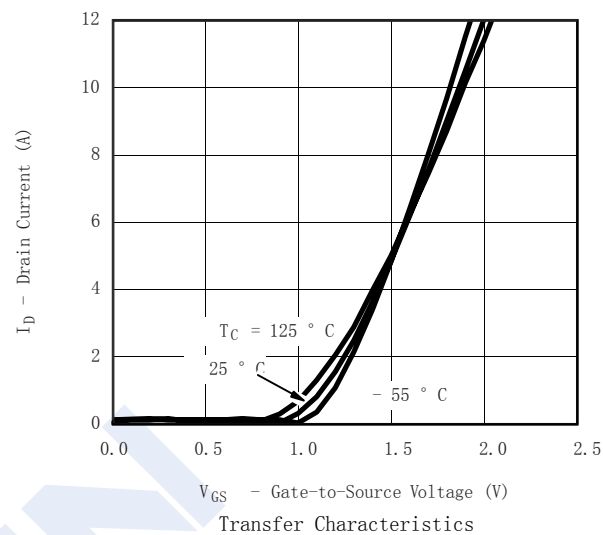
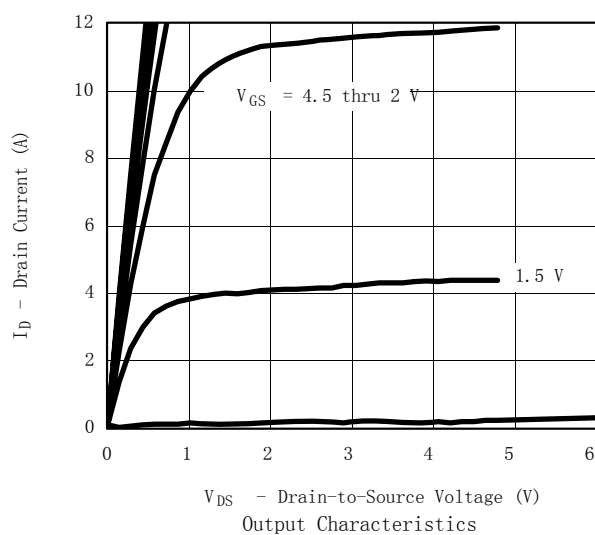
■ Marking

Marking	M5*
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P-Channel Enhancement MOSFET

SI2315BDS (KI2315BDS)

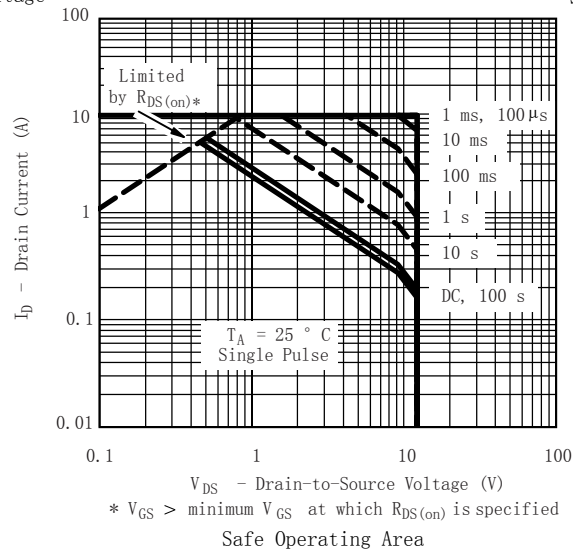
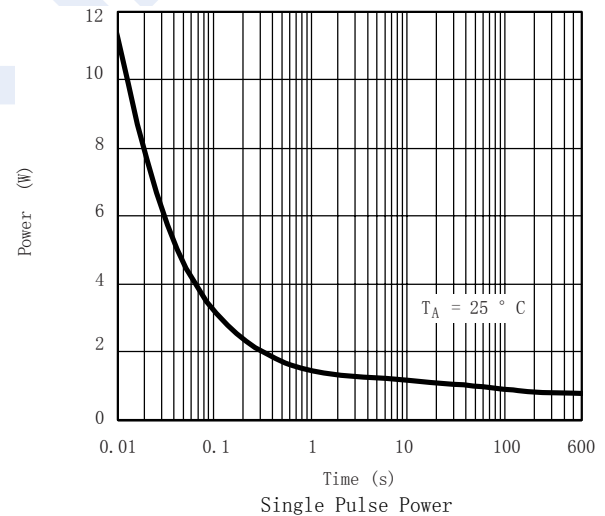
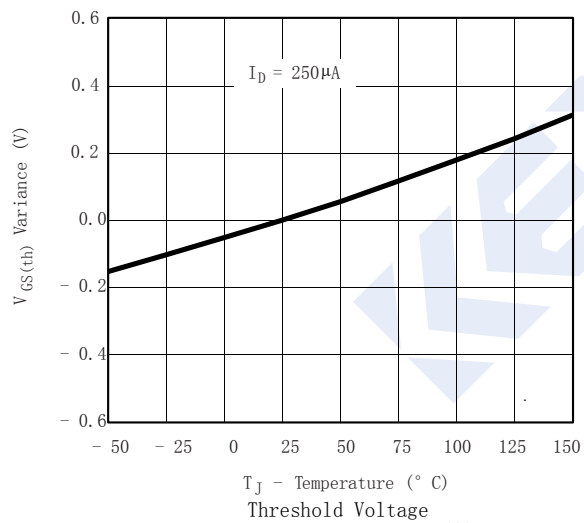
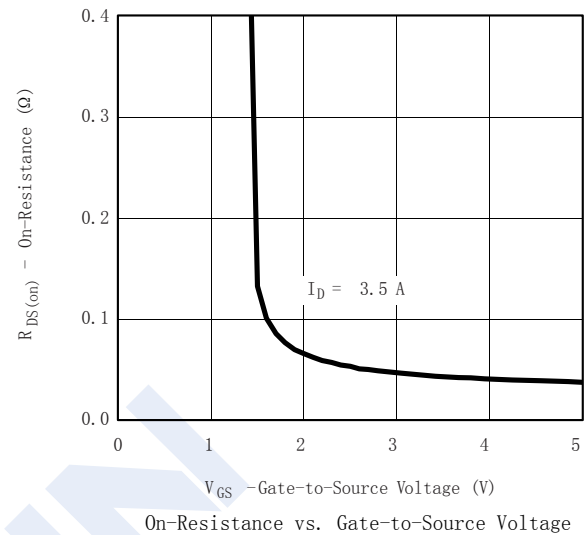
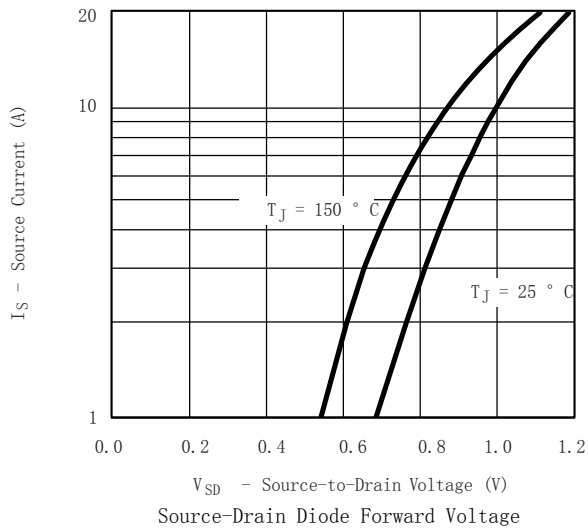
■ Typical Characteristics



P-Channel Enhancement MOSFET

SI2315BDS (KI2315BDS)

■ Typical Characteristics



* $V_{GS} >$ minimum V_{GS} at which $R_{DS(on)}$ is specified

Safe Operating Area

P-Channel Enhancement MOSFET

SI2315BDS (KI2315BDS)

■ Typical Characteristics

