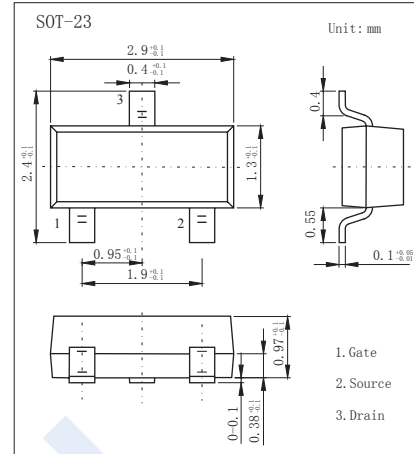
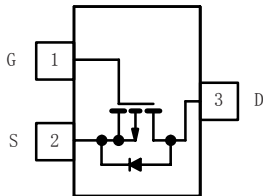


P-Channel MOSFET

SI2315BDS-HF (KI2315BDS-HF)

■ Features

- V_{DS} (V) = -12V
- I_D = -3.85A (V_{GS} = -4.5V)
- $R_{DS(ON)}$ < 50m Ω (V_{GS} = -4.5V)
- $R_{DS(ON)}$ < 65m Ω (V_{GS} = -2.5V)
- $R_{DS(ON)}$ < 100m Ω (V_{GS} = -1.8V)
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



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

Parameter	Symbol	5 sec	Steady State	Unit
Drain-Source Voltage	V_{DS}	-12		V
Gate-Source Voltage	V_{GS}	± 8		
Continuous Drain Current *1 $T_a = 25^\circ\text{C}$ $T_a = 70^\circ\text{C}$	I_D	-3.85	-3.0	A
		-3.0	-2.45	
Pulsed Drain Current *1	I_{DM}	-12		
Power Dissipation *1 $T_a = 25^\circ\text{C}$ $T_a = 70^\circ\text{C}$	P_D	1.19	0.75	W
		0.76	0.48	
Thermal Resistance.Junction- to-Ambient $t \leq 5$ sec Steady State	R_{thJA} *1	105		$^\circ\text{C}/\text{W}$
		166		
Thermal Resistance.Junction- to-Foot	R_{thJF}	75		
Junction Temperature	T_J	150		$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150		

*1Surface Mounted on FR4 board.

P-Channel MOSFET

SI2315BDS-HF (KI2315BDS-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	-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			50	mΩ
		V _{GS} = -2.5V, I _D = -3.4A			65	
		V _{GS} = -1.8V, I _D = -2.7A			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					
Diode Forward Voltage	V _{SD}	I _S = -1.6A, V _{GS} = 0V			-1.2	V

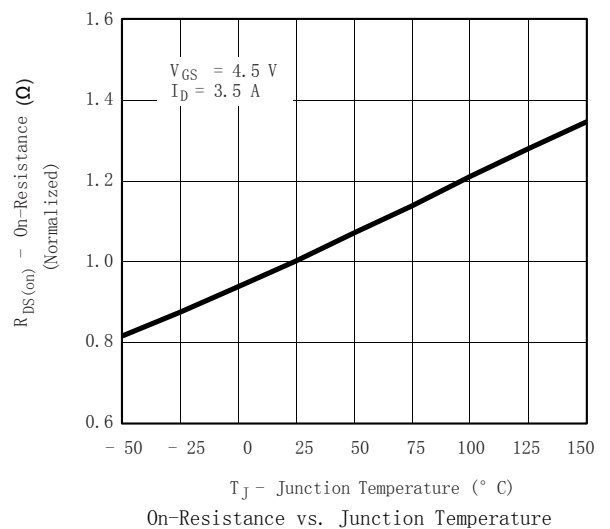
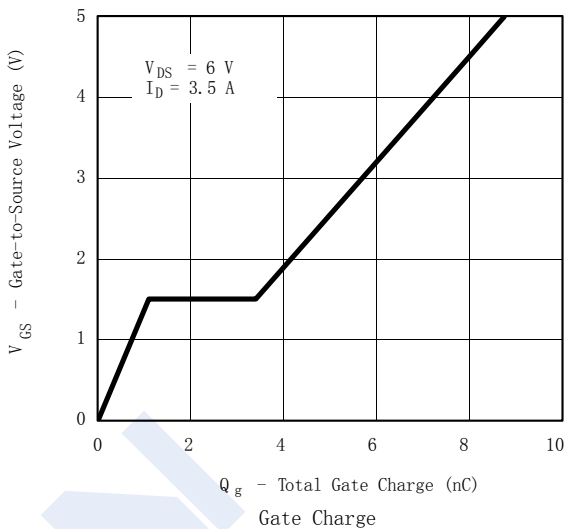
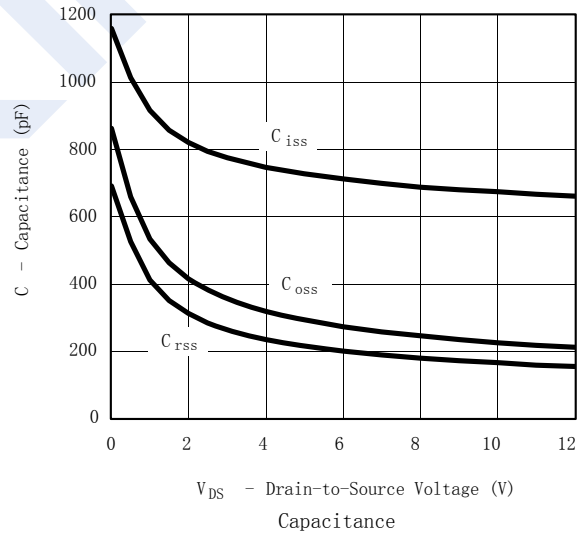
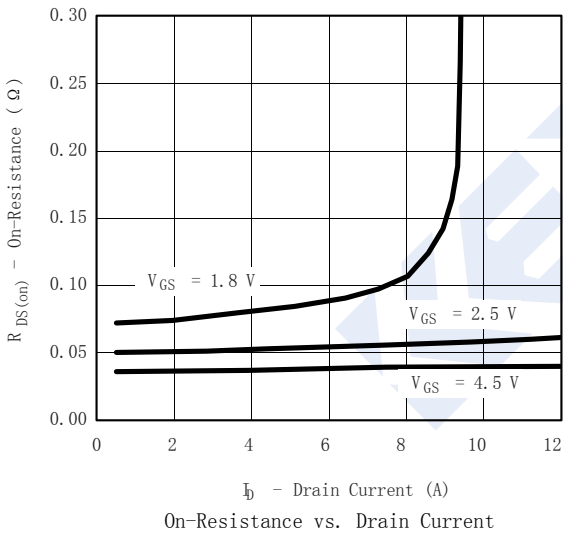
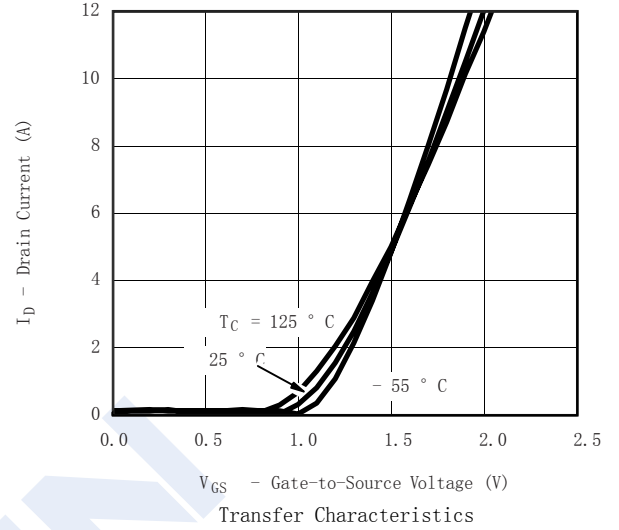
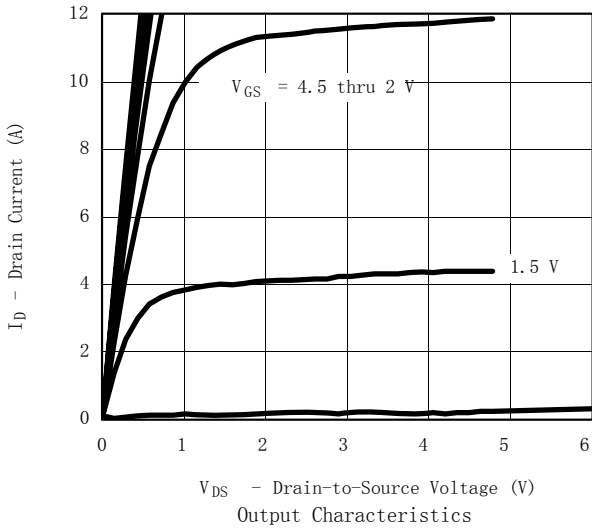
*1 Pulse test: PW ≤ 300 μs duty cycle ≤ 2%.

■ Marking

Marking	M5* _F
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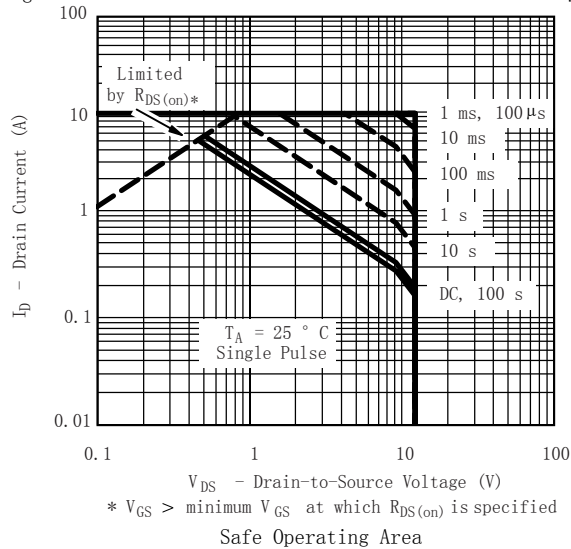
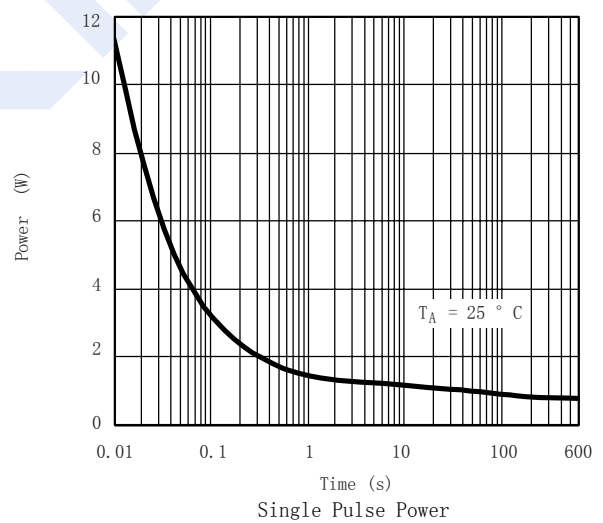
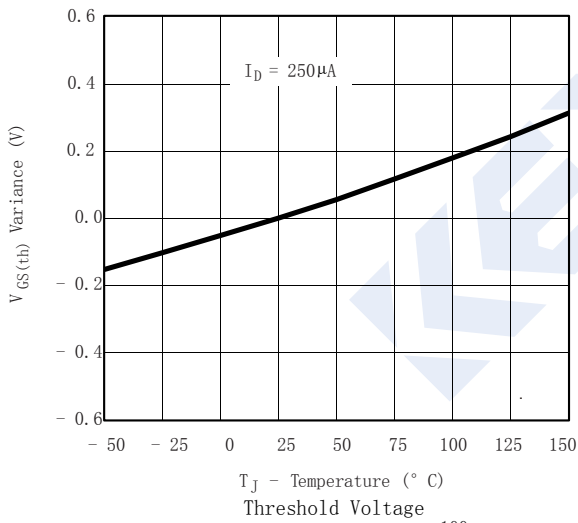
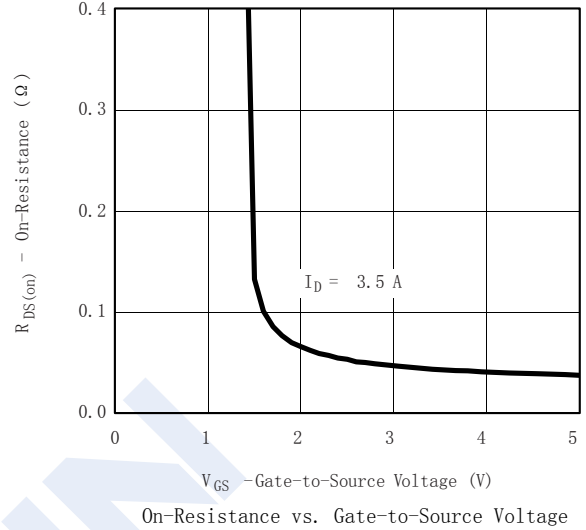
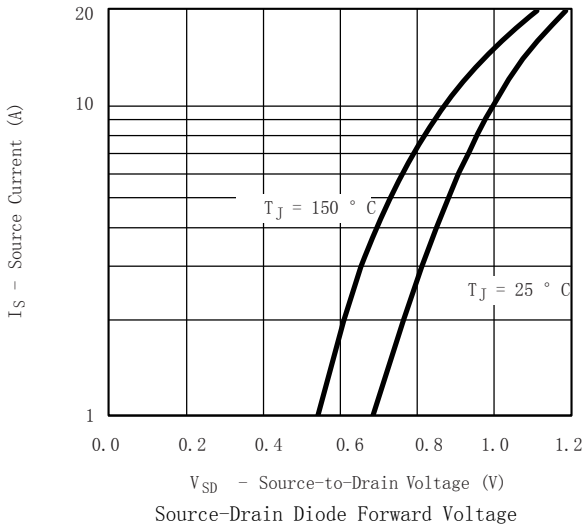
P-Channel MOSFET SI2315BDS-HF (KI2315BDS-HF)

■ Typical Characteristics



P-Channel MOSFET SI2315BDS-HF (KI2315BDS-HF)

■ Typical Characteristics



P-Channel MOSFET SI2315BDS-HF (KI2315BDS-HF)

■ Typical Characteristics

