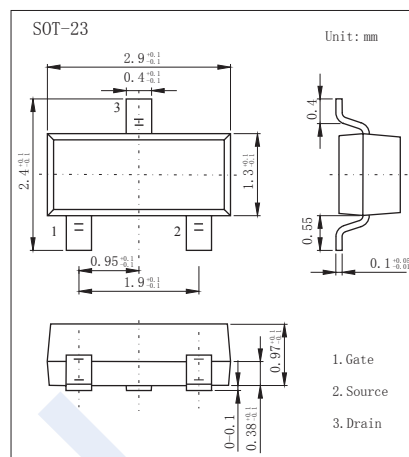
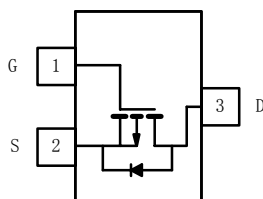


P-Channel Enhancement MOSFET

SI2319DS (KI2319DS)

■ Features

- $V_{DS}(V) = -40V$
- $I_D = -3.0A$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 82m\Omega$ ($V_{GS} = -10V$)
- $R_{DS(ON)} < 130m\Omega$ ($V_{GS} = -4.5V$)

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

Parameter	Symbol	5 sec	Steady State	Unit
Drain-Source Voltage	V _{DS}	-40		V
Gate-Source Voltage	V _{GS}	± 20		
Continuous Drain Current *1 Ta = 25℃	I _D	-3.0	-2.3	A
Ta = 70℃		-2.4	-1.85	
Pulsed Drain Current	I _{DM}	-12		
Power Dissipation *1 Ta = 25℃	P _D	1.25	0.75	W
Ta = 70℃		0.8	0.48	
Thermal Resistance.Junction- to-Ambient *1	R _{thJA}	100		℃/W
Thermal Resistance.Junction- to-Ambient *2		166		
Thermal Resistance.Junction- to-Foot	R _{thJF}	50		
Junction Temperature	T _J	150		℃
Storage Temperature Range	T _{stg}	-55 to 150		

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

*2 Surface Mounted on FR4 Board.

P-Channel Enhancement MOSFET

SI2319DS (K12319DS)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DS}	I _D =-250 μA, V _{GS} =0V	-40			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-40V, V _{GS} =0V			-1	μA
		V _{DS} =-40V, 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		-3	V
Static Drain-Source On-Resistance *1	R _{DS(on)}	V _{GS} =-10V, I _D =-3.0A		65	82	mΩ
		V _{GS} =-4.5V, I _D =-2.4A		100	130	
On state drain current *1	I _{D(on)}	V _{GS} =-10V, V _{DS} =-5V	-6			A
Forward Transconductance *1	g _{FS}	V _{DS} =-5V, I _D =-3.0A		7		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-20V, f=1MHz		470		pF
Output Capacitance	C _{oss}			85		
Reverse Transfer Capacitance	C _{rss}			65		
Total Gate Charge	Q _g	V _{GS} =-10V, V _{DS} =-20V, I _D =-3A		11.3	17	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} =-20V, R _L =20 Ω, R _{GEN} =6 Ω I _D =-1.0A		7	15	ns
Turn-On Rise Time	t _r			15	25	
Turn-Off DelayTime	t _{d(off)}			25	40	
Turn-Off Fall Time	t _f			25	40	
Maximum Body-Diode Continuous Current	I _S				-1.25	A
Diode Forward Voltage	V _{SD}	I _S =-1.25 A, V _{GS} =0V		-0.8	-1.2	V

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

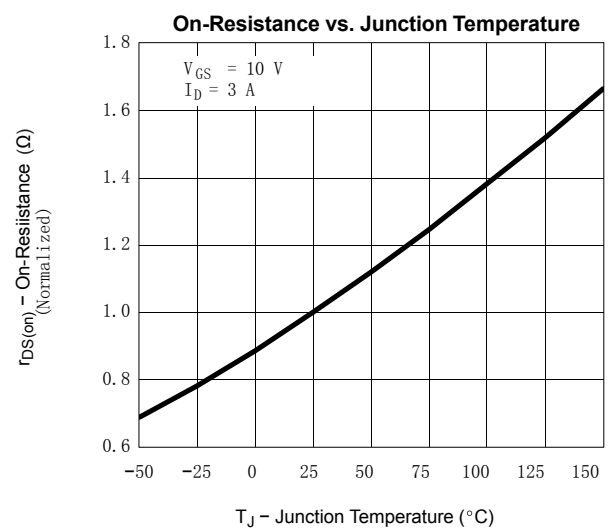
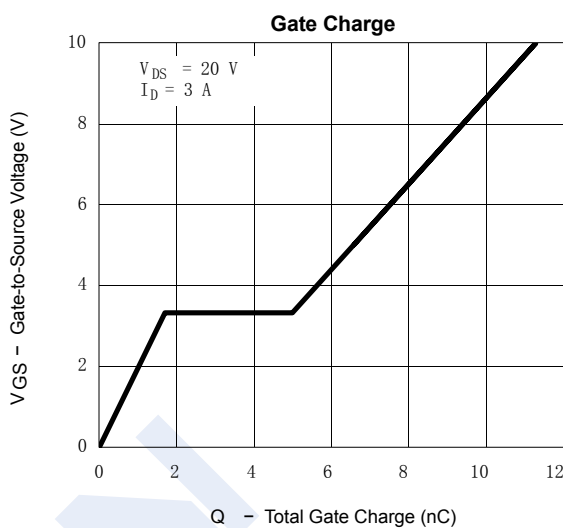
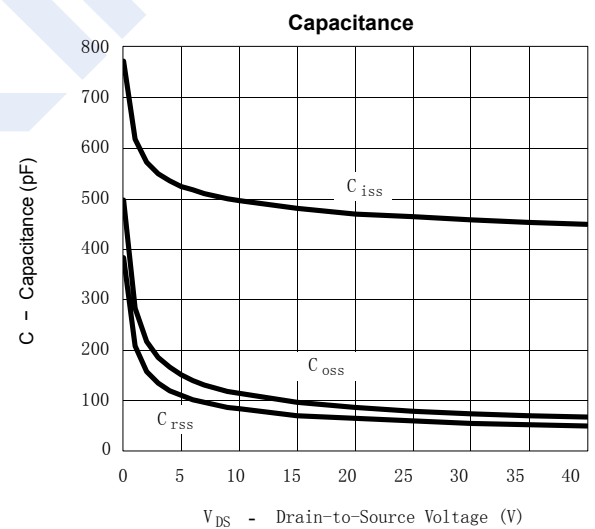
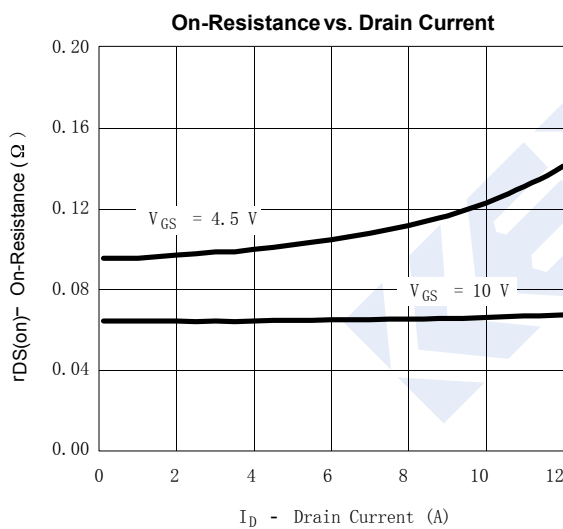
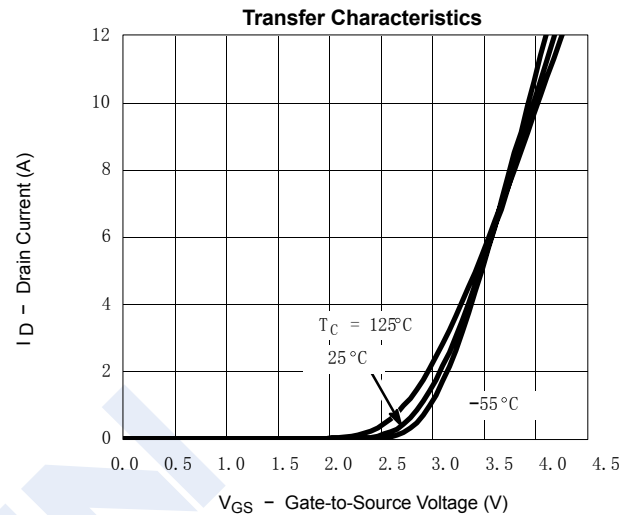
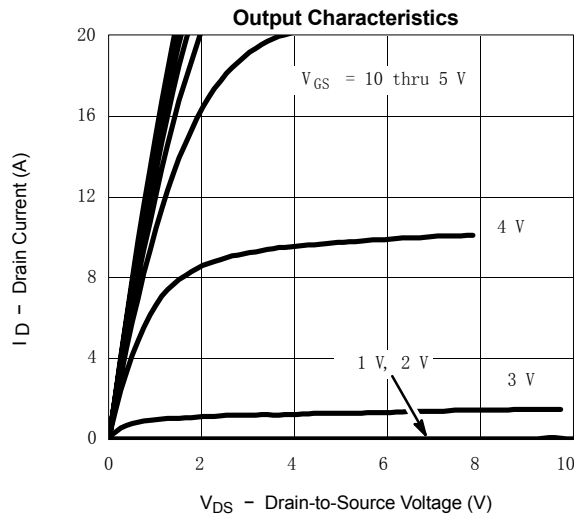
■ Marking

Marking	C9*
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P-Channel Enhancement MOSFET

SI2319DS (KI2319DS)

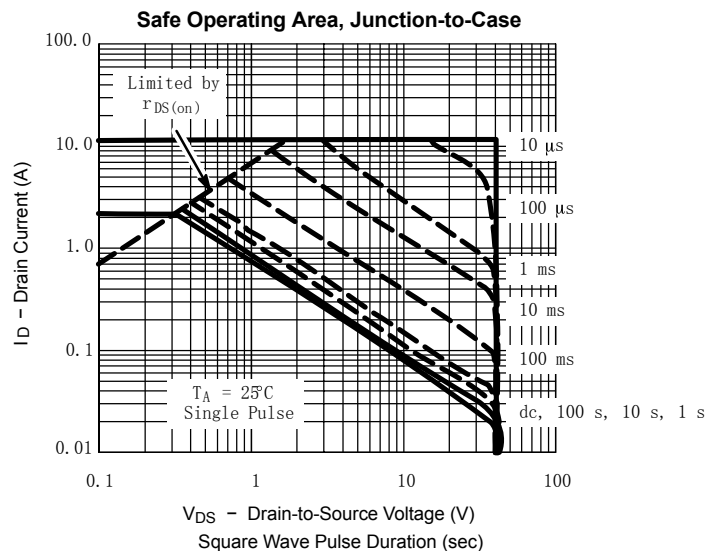
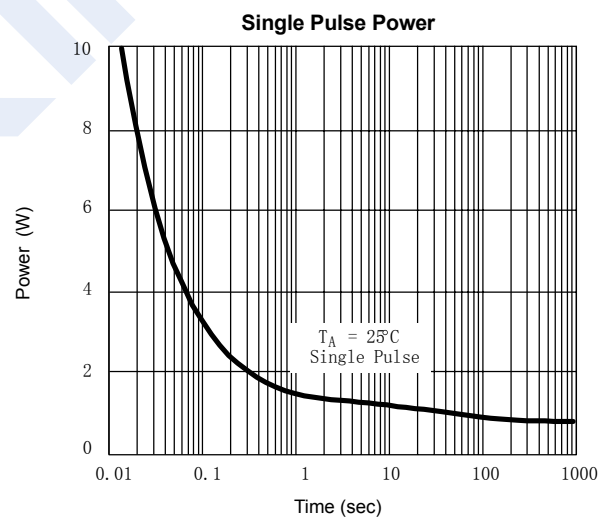
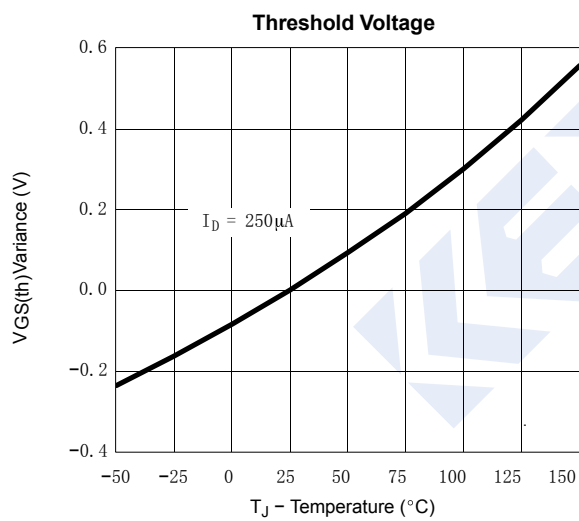
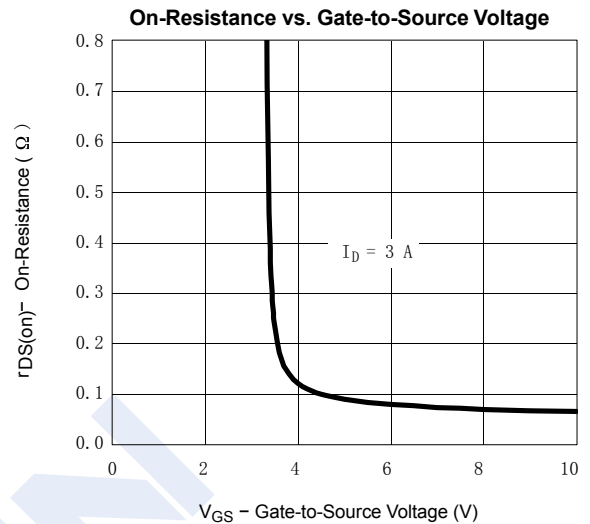
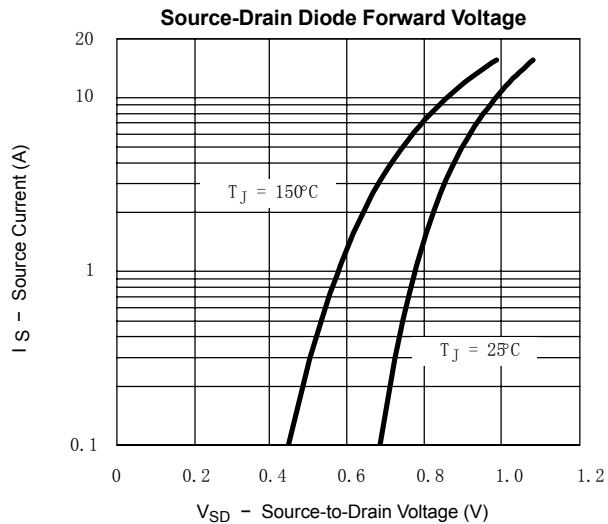
■ Typical Characteristics



P-Channel Enhancement MOSFET

SI2319DS (KI2319DS)

■ Typical Characteristics



P-Channel Enhancement MOSFET

SI2319DS (KI2319DS)

■ Typical Characteristics

