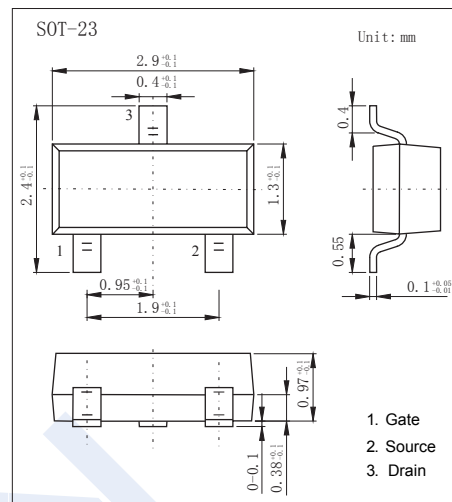
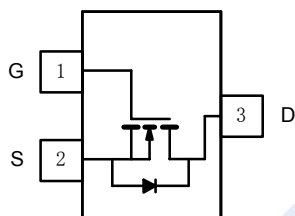


N-Channel MOSFET

SI2318DS (K12318DS)

■ Features

- $V_{DS} (V) = 40V$
- $I_D = 3.9 A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 45m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 58m\Omega$ ($V_{GS} = 4.5V$)



■ 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	Ta=25°C	I _D	3.9	3	A
	Ta=70°C		3.1	2.4	
Pulsed Drain Current		I _{DM}	16		
Power Dissipation	Ta=25°C	P _D	1.28	0.75	W
	Ta=70°C		0.8	0.48	
Thermal Resistance.Junction- to-Ambient		R _{thJA}	100	166	°C/W
Thermal Resistance.Junction- to-Case		R _{thJC}		50	
Junction Temperature		T _J	150		°C
Storage Temperature Range		T _{stg}	-55 to 150		

N-Channel MOSFET

SI2318DS (K12318DS)

■ 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	40			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =32V, V _{GS} =0V			0.5	μA
		V _{DS} =32V, 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 =250μA	1		3	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =3.9A			45	mΩ
		V _{GS} =4.5V, I _D =3.5A			58	
On State Drain Current	I _{D(ON)}	V _{DS} ≥4.5V, V _{GS} =10V	6			A
Forward Transconductance	g _{FS}	V _{DS} =10V, I _D =3.9A		11		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =20V, f=1MHz		540		pF
Output Capacitance	C _{oss}			80		
Reverse Transfer Capacitance	C _{rss}			45		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz		1.8		Ω
Total Gate Charge	Q _g	V _{GS} =10V, V _{DS} =20V, I _D =3.9A		10	15	nC
Gate Source Charge	Q _{gs}			1.6		
Gate Drain Charge	Q _{gd}			2.1		
Turn-On DelayTime	t _{d(on)}	V _{DD} = 20V, R _L = 20Ω I _D =1A, V _{GEN} = 10V, R _G = 6Ω		5	10	ns
Turn-On Rise Time	t _r			12	20	
Turn-Off DelayTime	t _{d(off)}			20	30	
Turn-Off Fall Time	t _f			15	25	
Maximum Body-Diode Continuous Current	I _S				1.25	A
Diode Forward Voltage	V _{SD}	I _S =1.25A, V _{GS} =0V			1.2	V

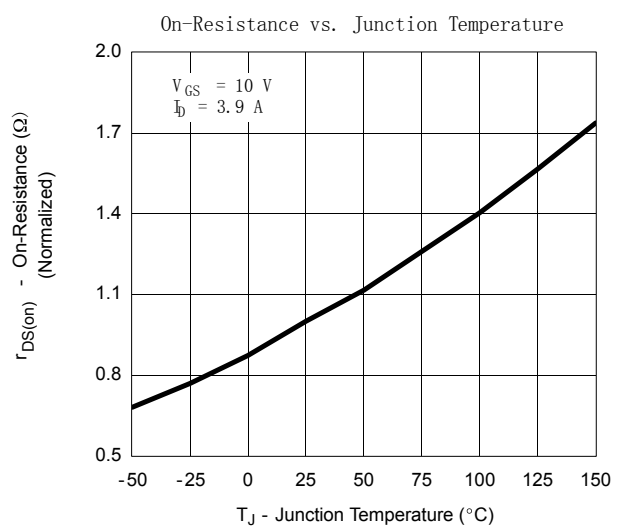
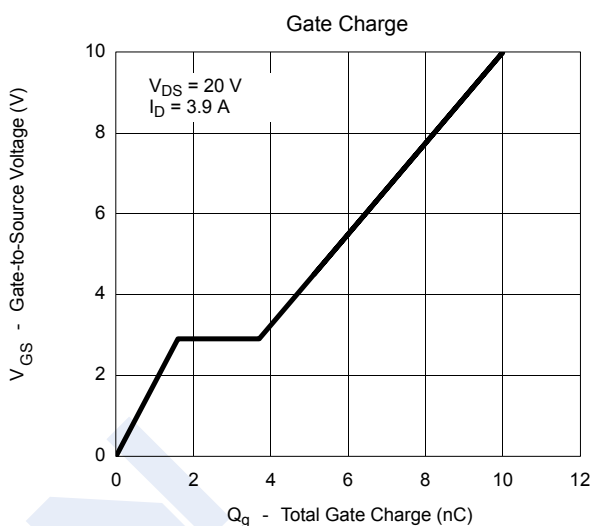
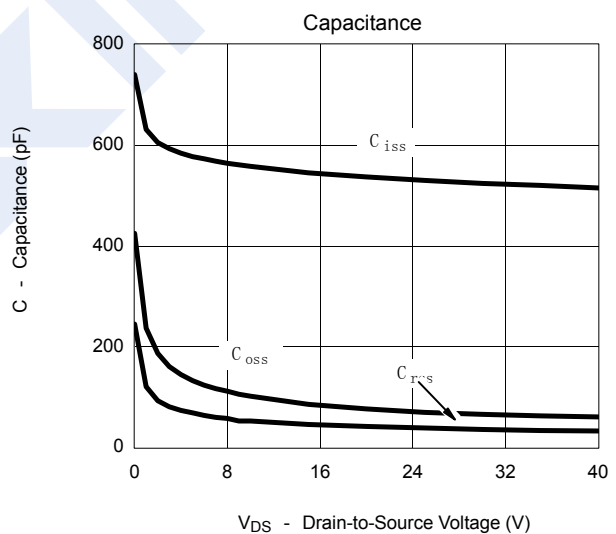
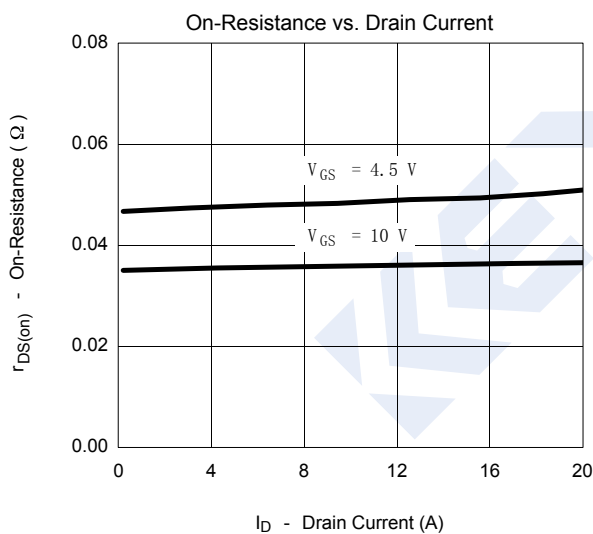
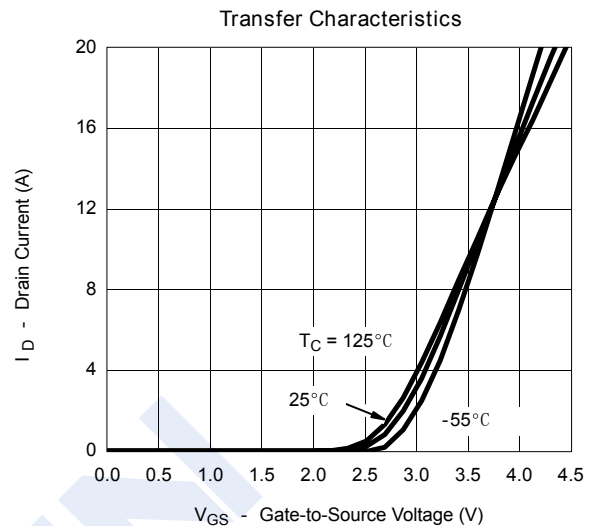
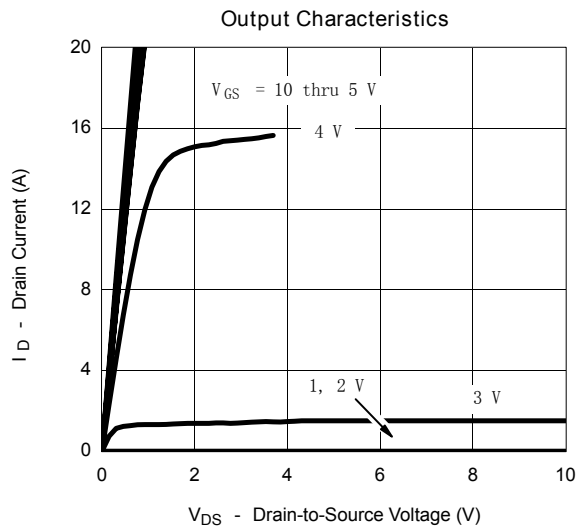
■ Marking

Marking	C8*
---------	-----

N-Channel MOSFET

SI2318DS (KI2318DS)

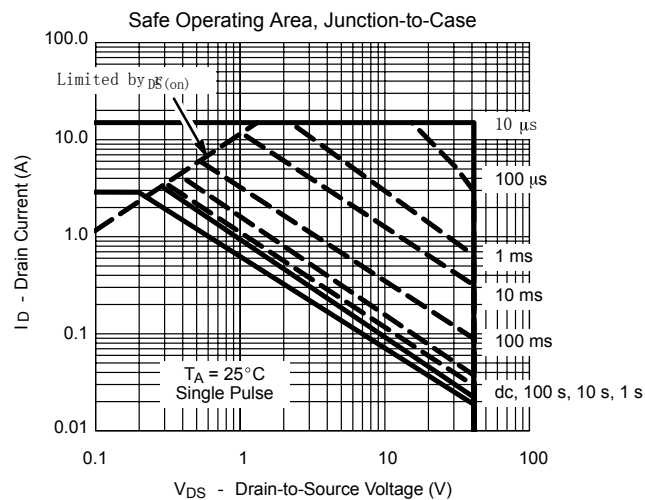
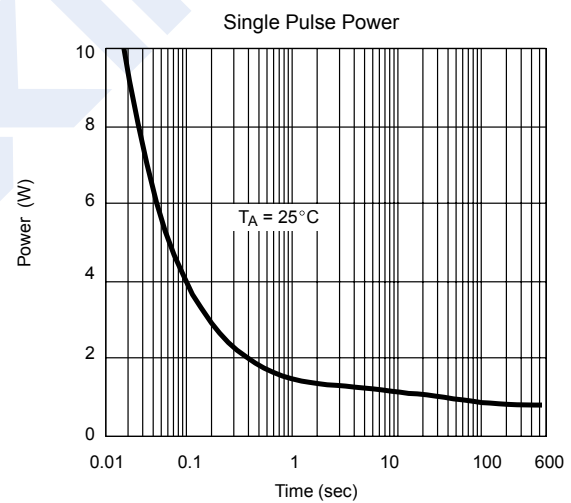
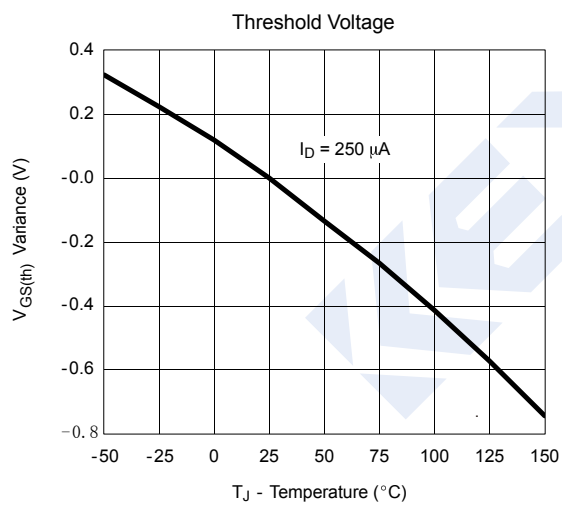
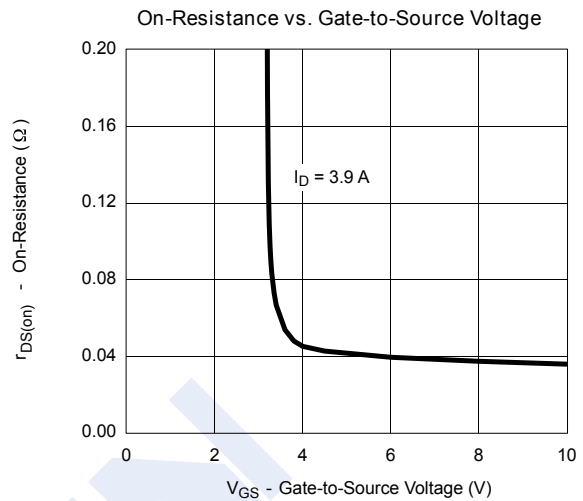
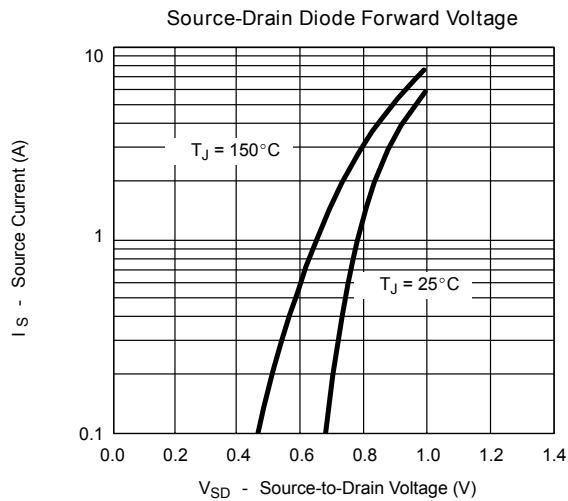
Typical Characteristics



N-Channel MOSFET

SI2318DS (KI2318DS)

■ Typical Characteristics



N-Channel MOSFET

SI2318DS (KI2318DS)

■ Typical Characteristics

