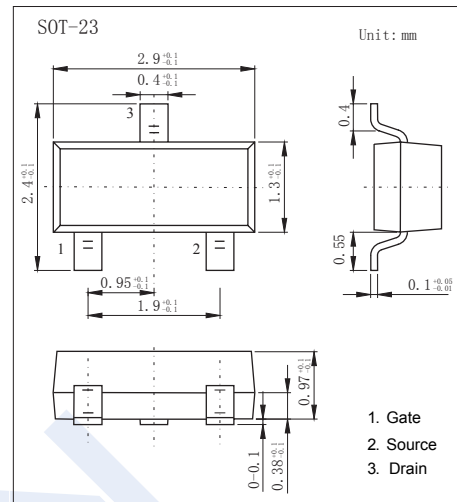
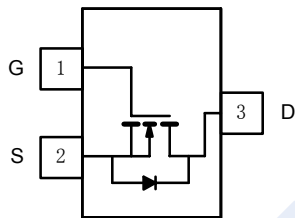


## N-Channel MOSFET

### SI2318DS (KI2318DS)

#### ■ 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		$V_{GS}$	$\pm 20$		
Continuous Drain Current	$T_a = 25^\circ C$	$I_D$	3.9	3	A
	$T_a = 70^\circ C$		3.1	2.4	
Pulsed Drain Current		$I_{DM}$	16		
Power Dissipation	$T_a = 25^\circ C$	$P_D$	1.28	0.75	W
	$T_a = 70^\circ C$		0.8	0.48	
Thermal Resistance.Junction- to-Ambient		$R_{thJA}$	100	166	$^\circ C/W$
Thermal Resistance.Junction- to-Case		$R_{thJC}$		50	
Junction Temperature		$T_J$	150		$^\circ C$
Storage Temperature Range		$T_{stg}$	-55 to 150		

## N-Channel MOSFET

### SI2318DS (KI2318DS)

#### ■ Electrical Characteristics Ta = 25°C

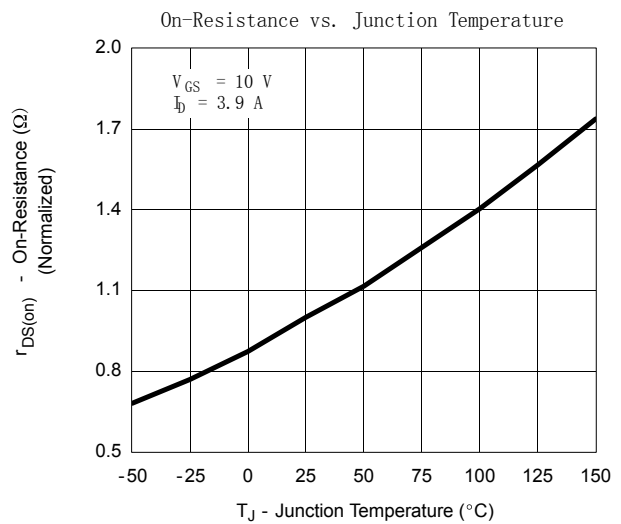
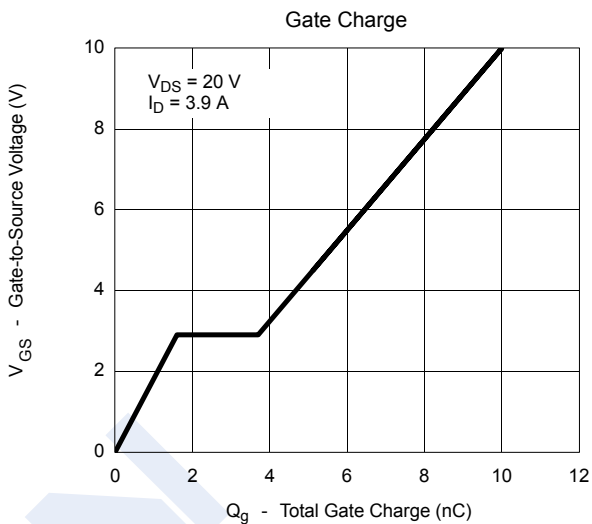
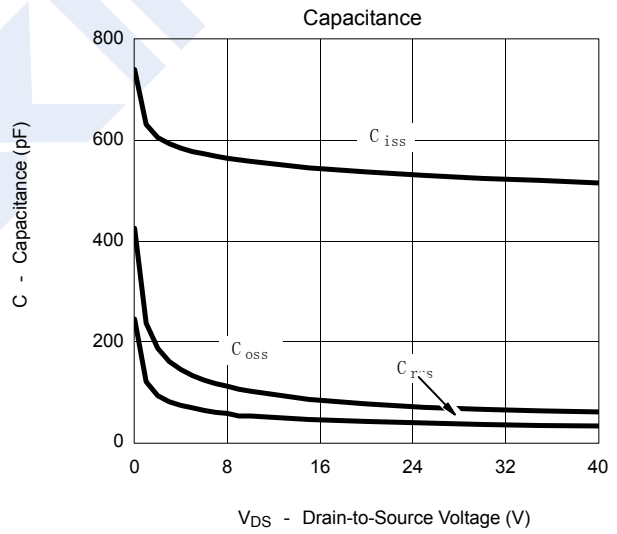
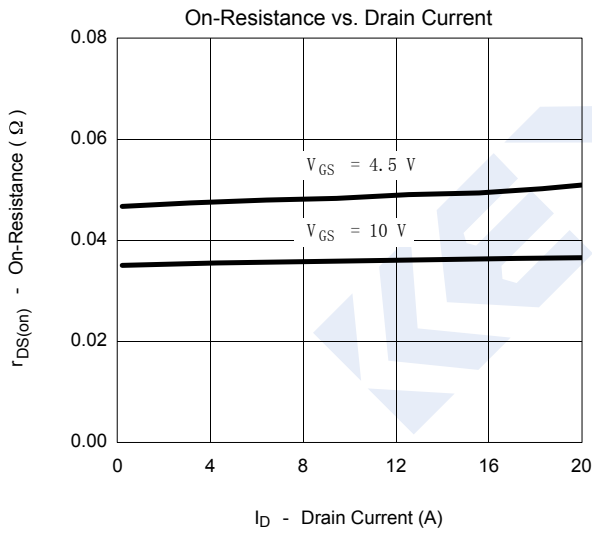
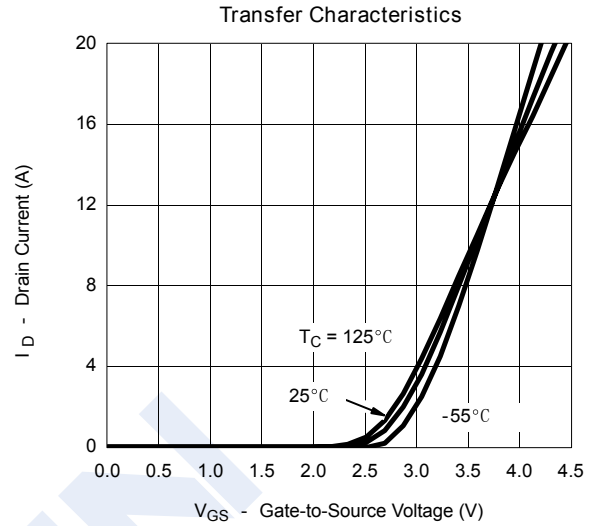
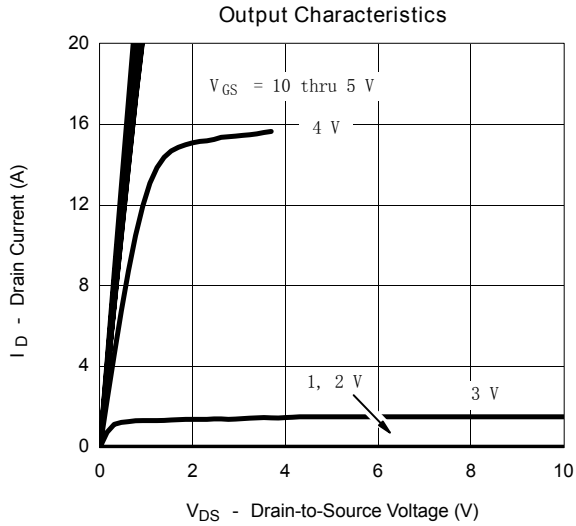
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V <sub>DSS</sub>	I <sub>D</sub> =250 μA, V <sub>GS</sub> =0V	40			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =32V, V <sub>GS</sub> =0V			0.5	μA
		V <sub>DS</sub> =32V, V <sub>GS</sub> =0V, T <sub>J</sub> =55°C			10	
Gate-Body Leakage Current	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±20V			±100	nA
Gate Threshold Voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA	1		3	V
Static Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =3.9A			45	mΩ
		V <sub>GS</sub> =4.5V, I <sub>D</sub> =3.5A			58	
On State Drain Current	I <sub>D(ON)</sub>	V <sub>DS</sub> ≥4.5V, V <sub>GS</sub> =10V	6			A
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =3.9A		11		S
Input Capacitance	C <sub>iss</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =20V, f=1MHz		540		pF
Output Capacitance	C <sub>oss</sub>			80		
Reverse Transfer Capacitance	C <sub>rss</sub>			45		
Gate Resistance	R <sub>g</sub>		V <sub>GS</sub> =0V, V <sub>DS</sub> =0V, f=1MHz		1.8	
Total Gate Charge	Q <sub>g</sub>	V <sub>GS</sub> =10V, V <sub>DS</sub> =20V, I <sub>D</sub> =3.9A		10	15	nC
Gate Source Charge	Q <sub>gs</sub>			1.6		
Gate Drain Charge	Q <sub>gd</sub>			2.1		
Turn-On DelayTime	t <sub>d(on)</sub>	V <sub>DD</sub> = 20V, R <sub>L</sub> = 20Ω I <sub>D</sub> =1A, V <sub>GEN</sub> = 10V, R <sub>G</sub> = 6Ω		5	10	ns
Turn-On Rise Time	t <sub>r</sub>			12	20	
Turn-Off DelayTime	t <sub>d(off)</sub>			20	30	
Turn-Off Fall Time	t <sub>f</sub>			15	25	
Maximum Body-Diode Continuous Current	I <sub>S</sub>				1.25	A
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =1.25A, V <sub>GS</sub> =0V			1.2	V

#### ■ Marking

Marking	C8*
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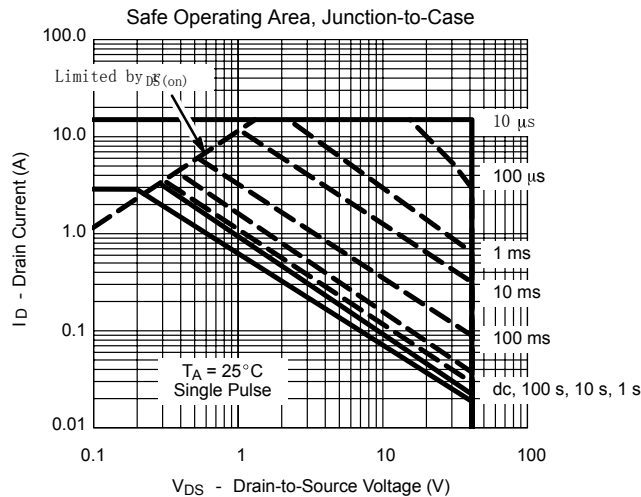
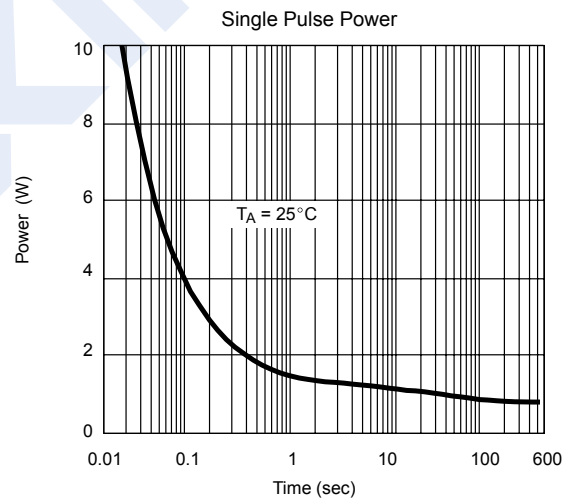
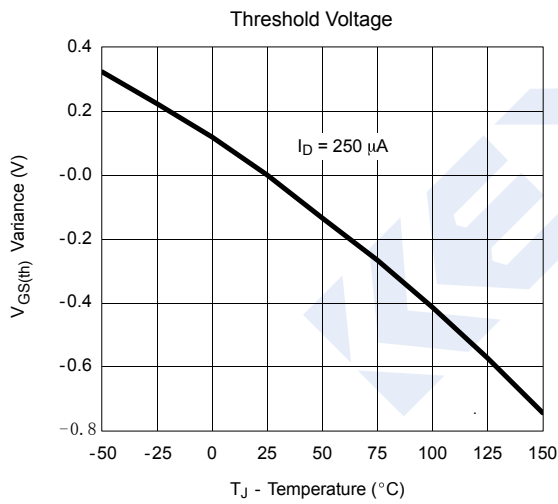
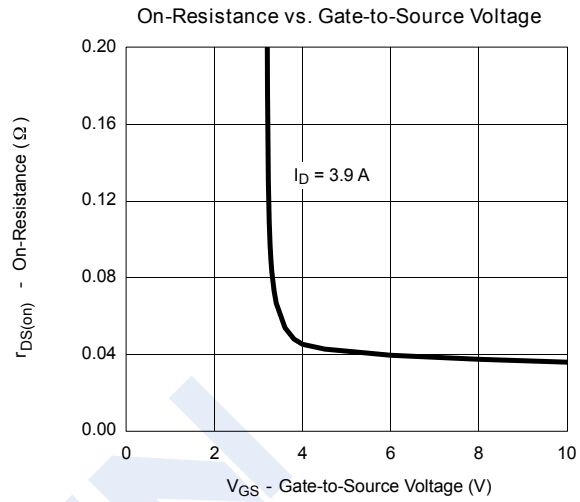
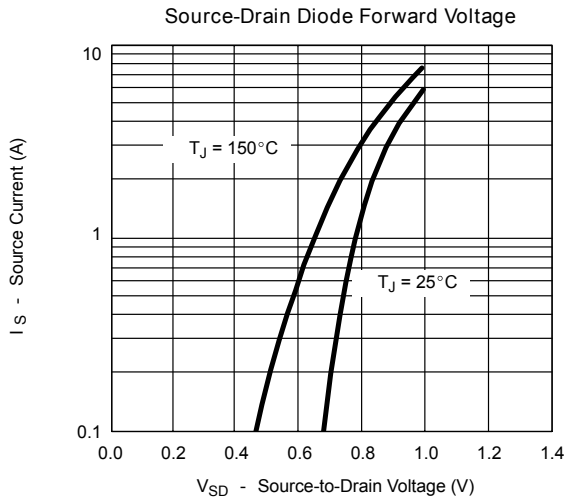
## N-Channel MOSFET SI2318DS (KI2318DS)

### Typical Characteristics



# N-Channel MOSFET SI2318DS (KI2318DS)

■ Typical Characteristics



## N-Channel MOSFET

### SI2318DS (KI2318DS)

#### ■ Typical Characteristics

