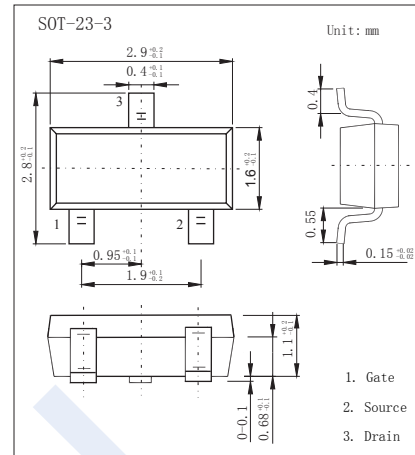
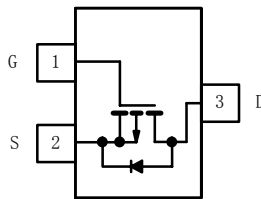


## P-Channel Enhancement MOSFET

## SI2325DS (KI2325DS)

## ■ Features

- $V_{DS} (V) = -150V$
- $I_D = -0.69A$  ( $V_{GS} = -10V$ )
- $R_{DS(ON)} < 1.2\ \Omega$  ( $V_{GS} = -10V$ )
- $R_{DS(ON)} < 1.3\ \Omega$  ( $V_{GS} = -6V$ )

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

Parameter	Symbol	5 sec	Steady State	Unit	
Drain-Source Voltage	$V_{DS}$	-150		V	
Gate-Source Voltage	$V_{GS}$	$\pm 20$			
Continuous Drain Current ( $T_J = 150^\circ C$ ) *1	$I_D$	$T_a = 25^\circ C$	-0.69	-0.53	A
		$T_a = 70^\circ C$	-0.55	-0.43	
Pulsed Drain Current	$I_{DM}$	-1.6			
Single-Pulse Avalanche Current	$I_{AS}$	4.5			
Single-Pulse Avalanche Energy	$E_{AS}$	1.01		mJ	
Power Dissipation	$P_D$	$T_a = 25^\circ C$	1.25	0.75	W
		$T_a = 70^\circ C$	0.8	0.48	
Thermal Resistance.Junction- to-Ambient $t \leq 5$ sec Steady State	$R_{thJA}$	100		$^\circ C/W$	
		166			
Thermal Resistance.Junction- to-Foot	$R_{thJF}$	50			
Junction Temperature	$T_J$	150		$^\circ C$	
Storage Temperature Range	$T_{stg}$	-55 to 150			

\*1 Surface Mounted on 1" x 1" FR4 Board.

## P-Channel Enhancement MOSFET

### SI2325DS (KI2325DS)

#### ■ 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	-150			V
Zero Gate Voltage Drain Current	I <sub>BSS</sub>	V <sub>DS</sub> =-150V, V <sub>GS</sub> =0V			-1	μA
		V <sub>DS</sub> =-150V, 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> =-250 μA	-2.5		-4.5	V
Static Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =-10V, I <sub>D</sub> =-0.5A		1.0	1.2	Ω
		V <sub>GS</sub> =-6V, I <sub>D</sub> =-0.5A		1.05	1.3	
On state drain current	I <sub>D(ON)</sub>	V <sub>GS</sub> =-10V, V <sub>DS</sub> =-15V	-1.6			A
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =-15V, I <sub>D</sub> =-0.5A		2.2		S
Gate Resistance	R <sub>g</sub>	f=1.0MHz		9		Ω
Input Capacitance	C <sub>iss</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =-25V, f=1MHz *1		340	510	pF
Output Capacitance	C <sub>oss</sub>			30		
Reverse Transfer Capacitance	C <sub>rss</sub>			16		
Total Gate Charge	Q <sub>g</sub>	V <sub>GS</sub> =-10V, V <sub>DS</sub> =-75V, I <sub>D</sub> =-0.5A *1		7.7	12	nC
Gate Source Charge	Q <sub>gs</sub>			1.5		
Gate Drain Charge	Q <sub>gd</sub>			2.5		
Turn-On DelayTime	t <sub>d(on)</sub>	V <sub>GS</sub> =-10V, V <sub>DS</sub> =-75V, R <sub>L</sub> =75 Ω, R <sub>GEN</sub> =6 Ω  I <sub>D</sub> =-1.0A *1		7	11	ns
Turn-On Rise Time	t <sub>r</sub>			11	17	
Turn-Off DelayTime	t <sub>d(off)</sub>			16	25	
Turn-Off Fall Time	t <sub>f</sub>			11	17	
Body Diode Reverse Recovery Charge	Q <sub>rr</sub>	IF = 0.5 A, di/dt = 100 A/ s		90	135	nC
Maximum Body-Diode Continuous Current	I <sub>S</sub>	5 sec			-1.0	A
		Steady State			-0.6	
Diode Forward Voltage	V <sub>SD</sub>	I <sub>S</sub> =-1.0A, V <sub>GS</sub> =0V		-0.7	-1.2	V

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

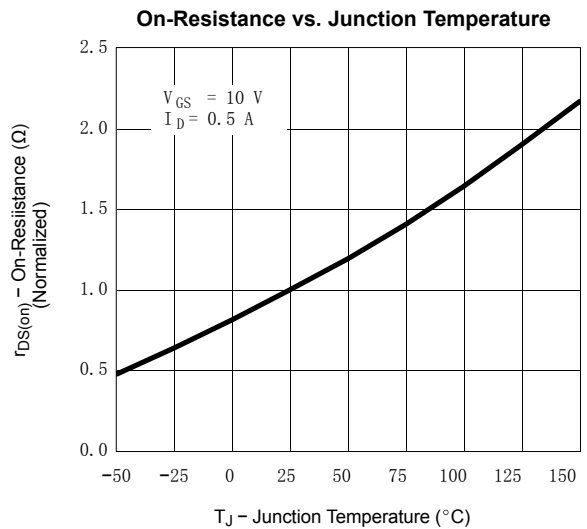
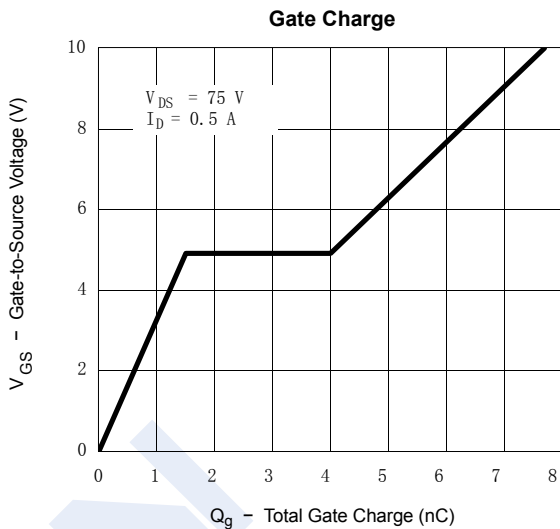
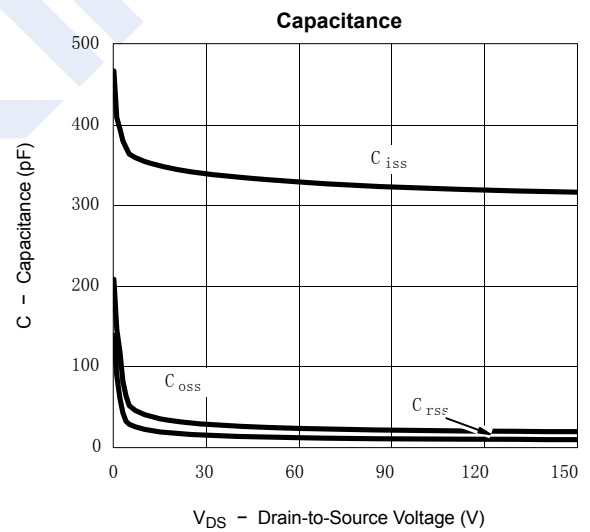
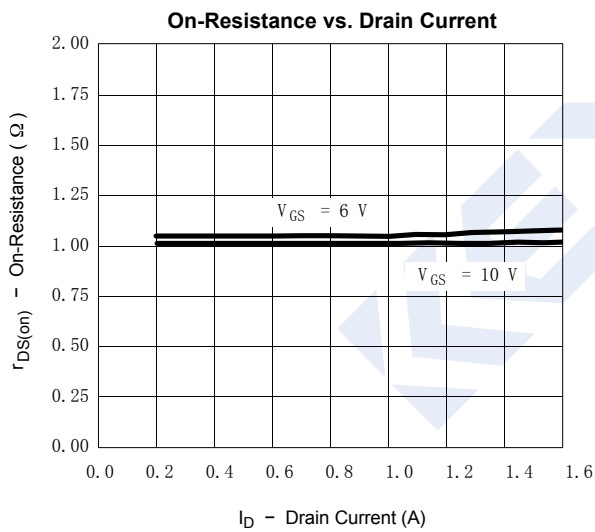
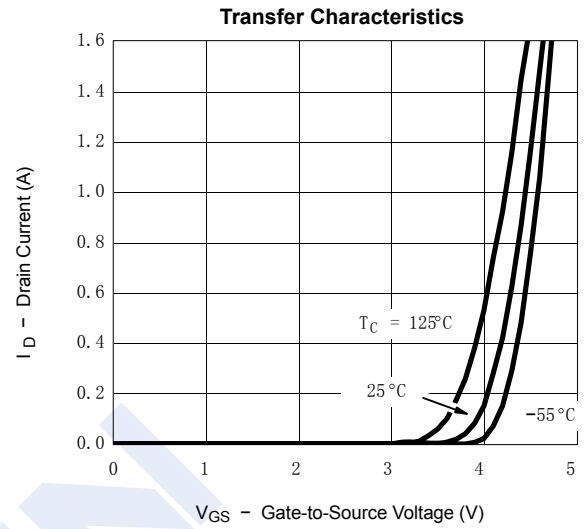
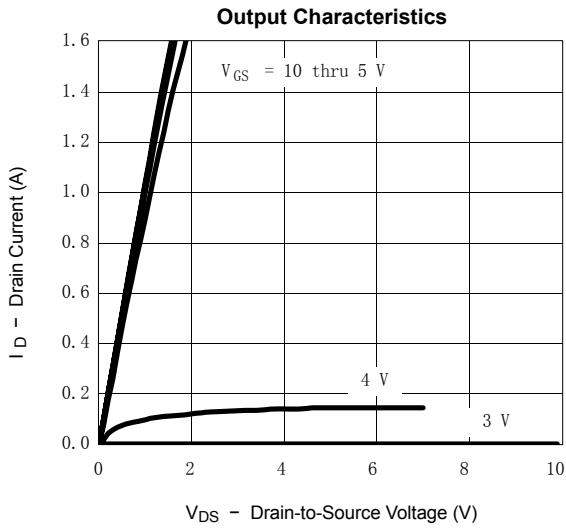
#### ■ Marking

Marking	D5*
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## P-Channel Enhancement MOSFET

### SI2325DS (KI2325DS)

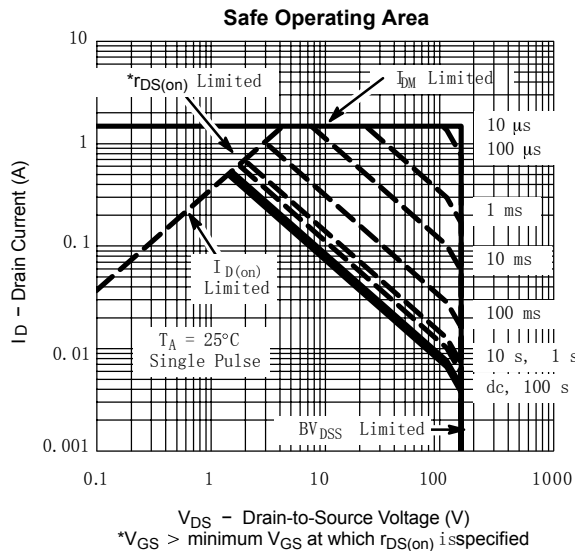
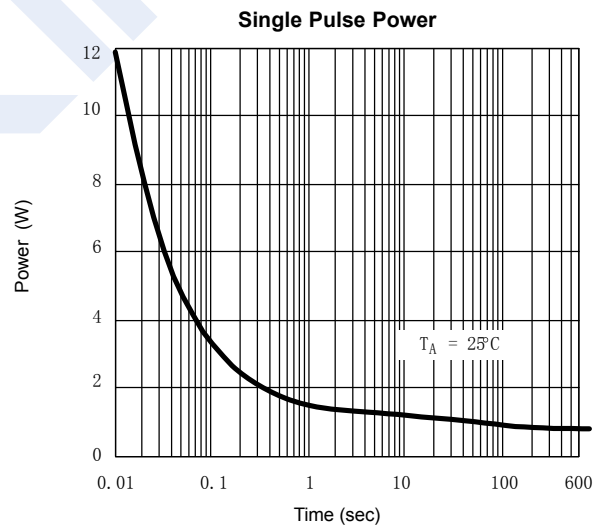
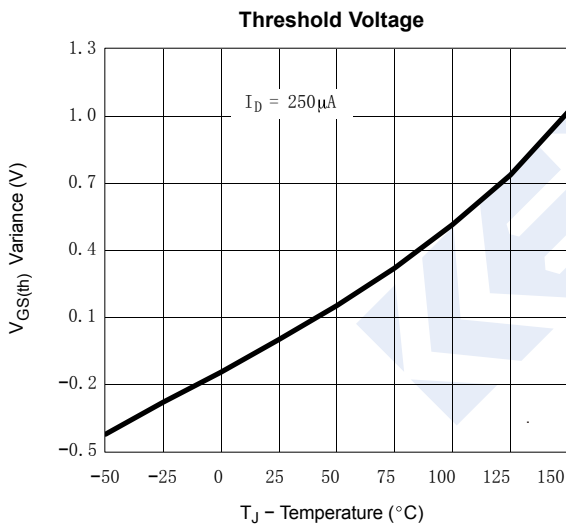
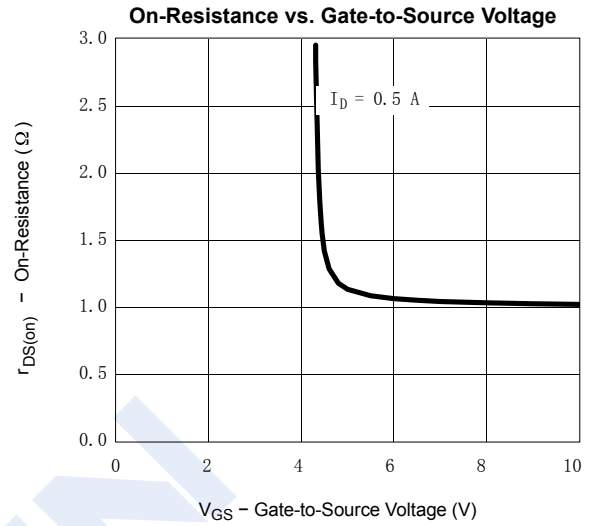
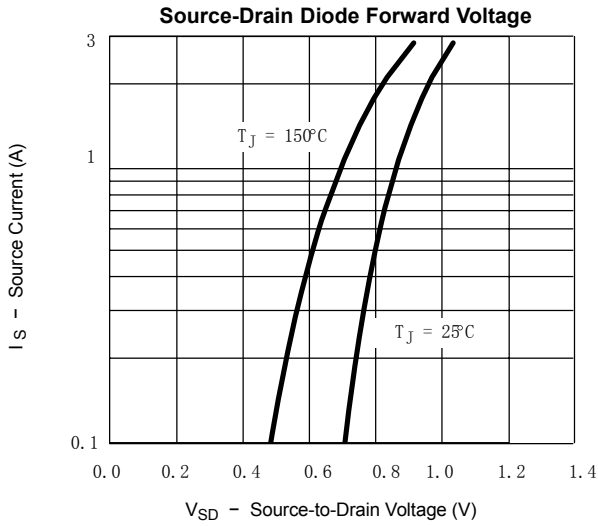
■ Typical Characteristics



## P-Channel Enhancement MOSFET

### SI2325DS (K12325DS)

■ Typical Characteristics



## P-Channel Enhancement MOSFET

## SI2325DS (KI2325DS)

## ■ Typical Characteristics

