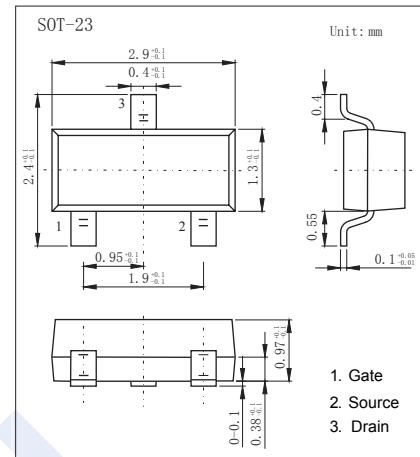
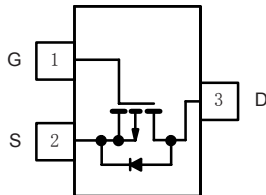


P-Channel MOSFET

SI2333DS-HF (KI2333DS-HF)

■ Features

- $V_{DS} (V) = -12V$
- $I_D = -5.3 A (V_{GS} = -4.5V)$
- $R_{DS(ON)} < 32m\Omega (V_{GS} = -4.5V)$
- $R_{DS(ON)} < 42m\Omega (V_{GS} = -2.5V)$
- $R_{DS(ON)} < 59m\Omega (V_{GS} = -1.8V)$
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



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

Parameter	Symbol	5s	Steady State	Unit	
Drain-Source Voltage	V_{DS}	-12		V	
Gate-Source Voltage	V_{GS}	± 8			
Continuous Drain Current	I_D	$T_A = 25^\circ C$	-5.3	-4.1	A
		$T_A = 70^\circ C$	-4.2	-3.3	
Pulsed Drain Current	I_{DM}	-20			
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	R_{thJA}	100	166	$^\circ C/W$	
Thermal Resistance.Junction- to-Foot	R_{thJF}	-	50		
Junction Temperature	T_J	150		$^\circ C$	
Junction Storage Temperature Range	T_{stg}	-55 to 150			

P-Channel MOSFET

SI2333DS-HF (KI2333DS-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} =-9.6V, V _{GS} =0V			-1	μA
		V _{DS} =-9.6V, 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	-0.4		-1	V
Static Drain-Source On-Resistance (Note.1)	R _{DS(on)}	V _{GS} =-4.5V, I _D =-5.3A			32	mΩ
		V _{GS} =-2.5V, I _D =-4.6A			42	
		V _{GS} =-1.8V, I _D =-2A			59	
On state drain current (Note.1)	I _{D(ON)}	V _{GS} =-5V, V _{DS} =-4.5V	-20			A
Forward Transconductance (Note.1)	g _{FS}	V _{DS} =-5V, I _D =-5.3A		17		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-6V, f=1MHz		1100		pF
Output Capacitance	C _{oss}			390		
Reverse Transfer Capacitance	C _{rss}			300		
Total Gate Charge	Q _g	V _{GS} =-4.5V, V _{DS} =-6V, I _D =-5.3A		11.5	18	nC
Gate Source Charge	Q _{gs}			1.5		
Gate Drain Charge	Q _{gd}			3.2		
Turn-On DelayTime	t _{d(on)}	V _{GS} =-4.5V, V _{DS} =-6V, R _L =6 Ω, R _G =6 Ω, I _D =-1A		25	40	ns
Turn-On Rise Time	t _r			45	70	
Turn-Off DelayTime	t _{d(off)}			72	110	
Turn-Off Fall Time	t _f			60	90	
Maximum Body-Diode Continuous Current	I _S				-1	A
Diode Forward Voltage	V _{SD}	I _S =-1A, V _{GS} =0V			-1.2	V

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

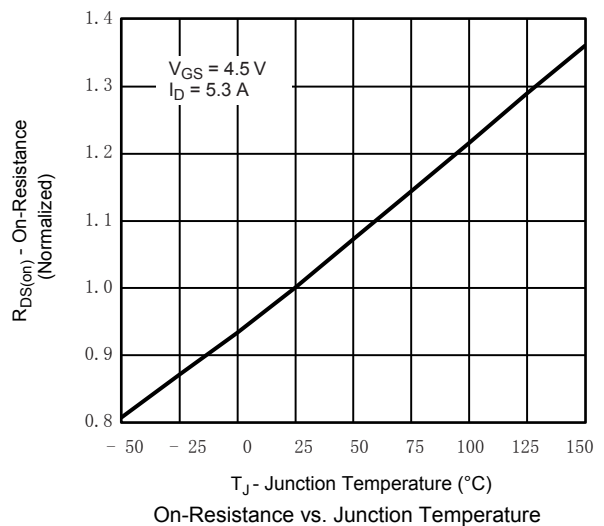
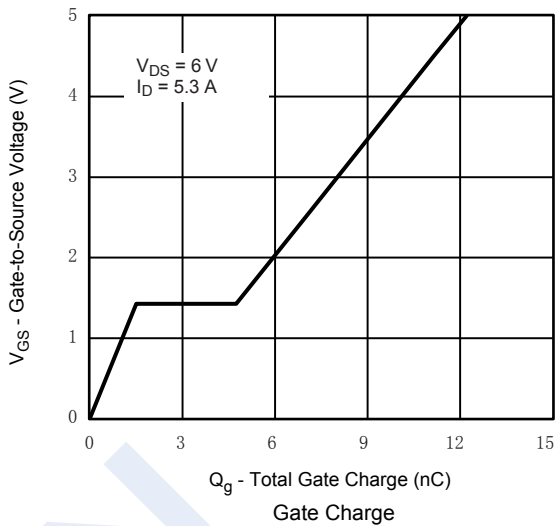
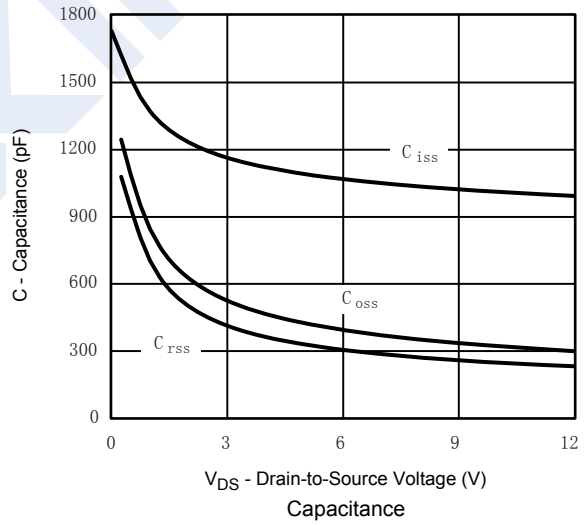
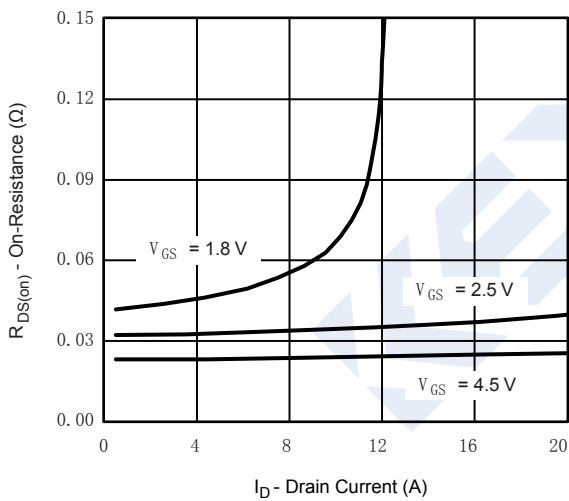
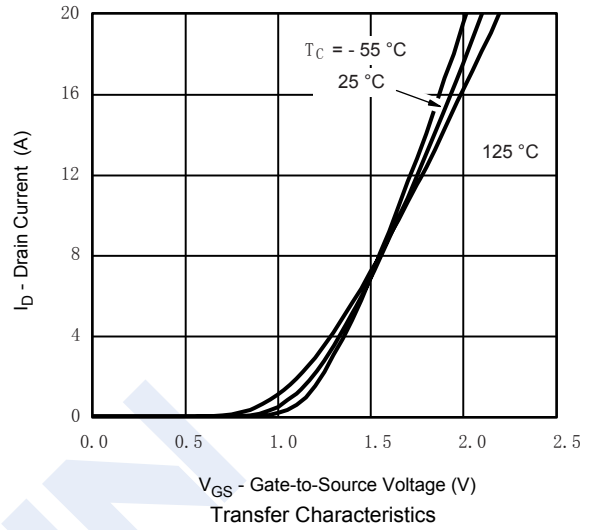
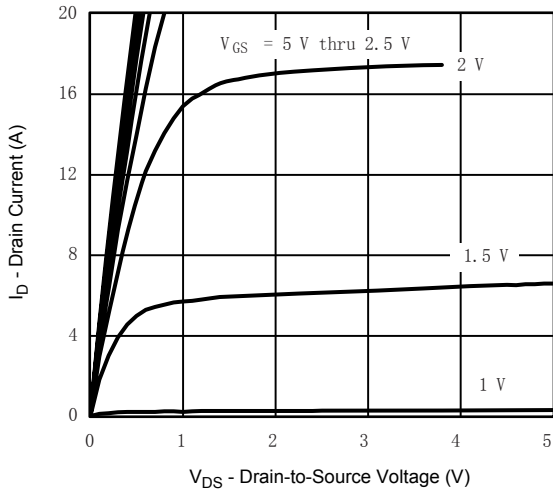
■ Marking

Marking	E3* F
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P-Channel MOSFET

SI2333DS-HF (KI2333DS-HF)

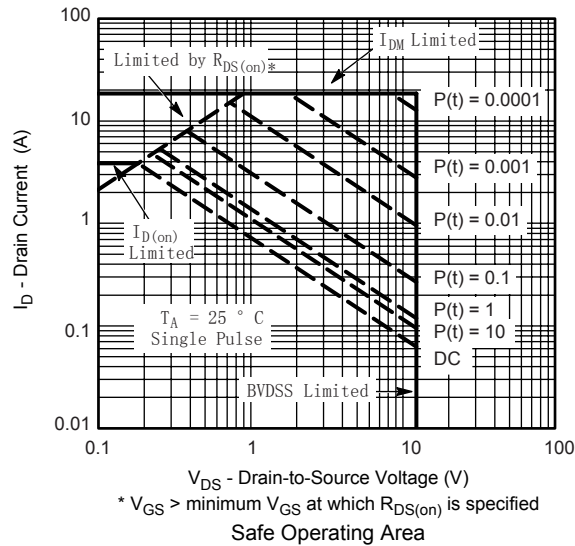
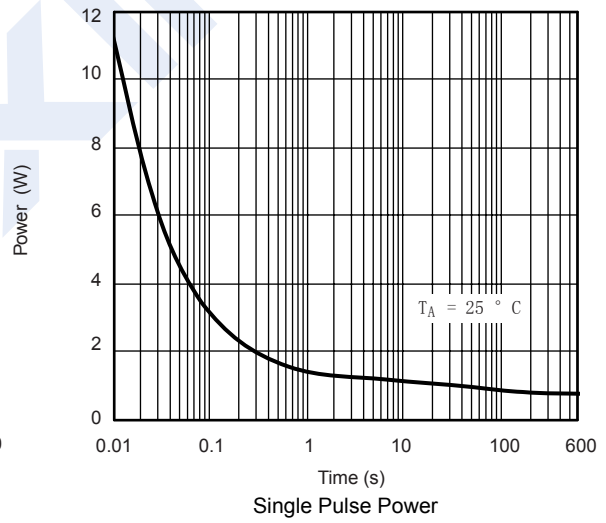
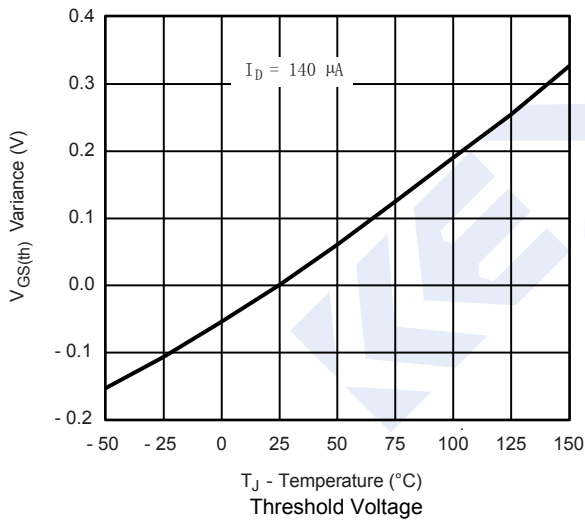
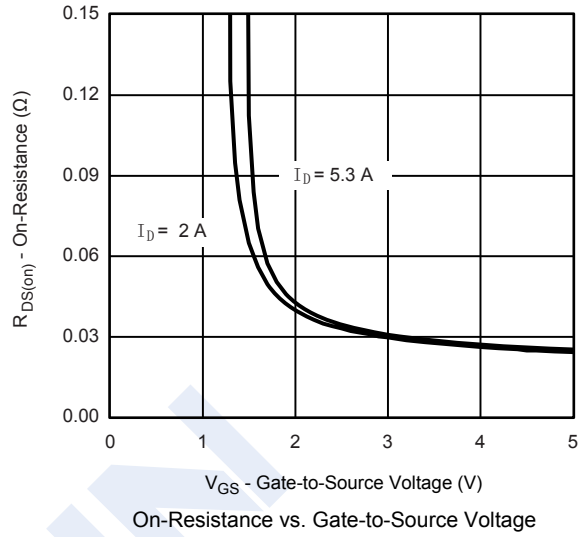
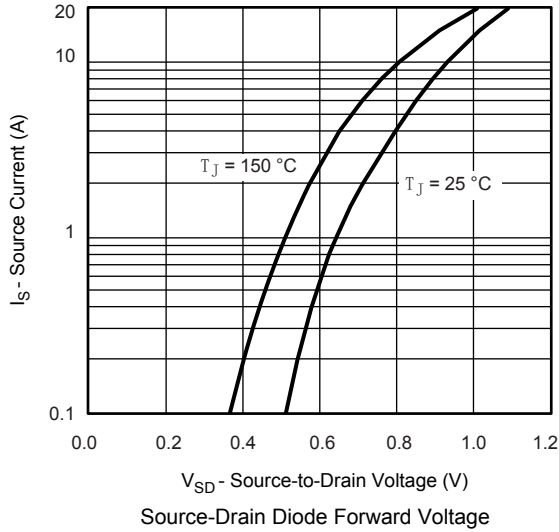
■ Typical Characteristics



P-Channel MOSFET

SI2333DS-HF (KI2333DS-HF)

■ Typical Characteristics



* $V_{GS} >$ minimum V_{GS} at which $R_{DS(on)}$ is specified
Safe Operating Area

P-Channel MOSFET SI2333DS-HF (KI2333DS-HF)

■ Typical Characteristics

