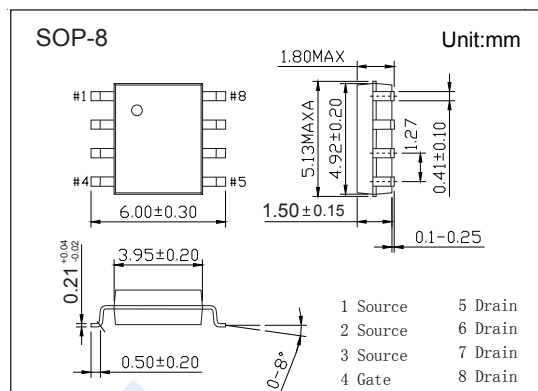
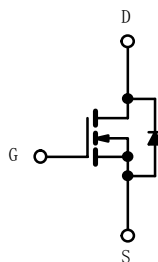


N-Channel MOSFET

SI4634DY (K14634DY)

■ Features

- $V_{DS} (V) = 30V$
- $I_D = 24.5 A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 5.2m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 6.7m\Omega$ ($V_{GS} = 4.5V$)



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

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	30	V
Gate-Source Voltage		V_{GS}	±20	
Continuous Drain Current	$T_C=25^\circ C$	I_D	24.5	A
	$T_C=70^\circ C$		19.5	
	$T_A=25^\circ C$		16.3	
	$T_A=70^\circ C$		13	
Pulsed Drain Current		I_{DM}	70	
Single Pulse Avalanche Current	$L=0.1mH$	I_{AS}	30	
Avalanche Energy		E_{AS}	45	mJ
Power Dissipation	$T_C=25^\circ C$	P_D	5.7	W
	$T_C=70^\circ C$		3.6	
	$T_A=25^\circ C$		2.5	
	$T_A=70^\circ C$		1.6	
Thermal Resistance.Junction- to-Ambient	$t \leq 10 s$	R_{thJA}	50	$^\circ C/W$
Thermal Resistance.Junction- to-Case	Steady State	R_{thJC}	22	
Junction Temperature		T_J	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55 to 150	

N-Channel MOSFET

SI4634DY (KI4634DY)

■ 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	30			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0V			1	μA
		V _{DS} =30V, 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	1.4		2.6	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =15A			5.2	mΩ
		V _{GS} =4.5V, I _D =10A			6.7	
On State Drain Current	I _{D(on)}	V _{GS} =10V, V _{DS} ≥5V	30			A
Forward Transconductance	g _{FS}	V _{DS} =15V, I _D =15A		78		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =15V, f=1MHz		3150		pF
Output Capacitance	C _{oss}			420		
Reverse Transfer Capacitance	C _{rss}			166		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz		0.75	1.5	Ω
Total Gate Charge	Q _g	V _{GS} =15V, V _{DS} =10V, I _D =10A		45.5	68	nC
		V _{GS} =15V, V _{DS} =4.5V, I _D =10A		21.5	33	
Gate Source Charge	Q _{gs}			8		
Gate Drain Charge	Q _{gd}			6.2		
Turn-On DelayTime	t _{d(on)}	V _{DD} = 15 V, R _L = 1.5 Ω I _D = 10 A, V _{GEN} = 4.5 V, R _g = 1 Ω		30	50	ns
Turn-On Rise Time	t _r			15	30	
Turn-Off DelayTime	t _{d(off)}			33	55	
Turn-Off Fall Time	t _f			10	20	
Turn-On DelayTime	t _{d(on)}	V _{DD} = 15 V, R _L = 1.5 Ω I _D = 10 A, V _{GEN} = 10V, R _g = 1 Ω		14	25	
Turn-On Rise Time	t _r			10	20	
Turn-Off DelayTime	t _{d(off)}			33	55	
Turn-Off Fall Time	t _f			8	16	
Body Diode Reverse Recovery Time	t _{rr}	I _F = 10A, di/dt= 100A/μs, T _J =25°C		30	60	nC
Body Diode Reverse Recovery Charge	Q _{rr}			35	70	
Reverse Recovery Fall Time	t _a			20		ns
Reverse Recovery Rise Time	t _b			10		
Continuous Source-Drain Diode Current	I _S	T _c =25°C			5.1	A
Pulse Diode Forward Current	I _{SM}				70	
Diode Forward Voltage	V _{SD}	I _S =3A, V _{GS} =0V			1.1	V

Note : Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2 %

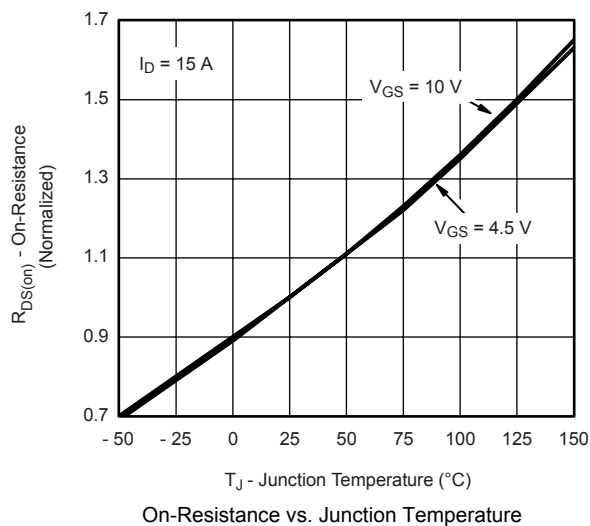
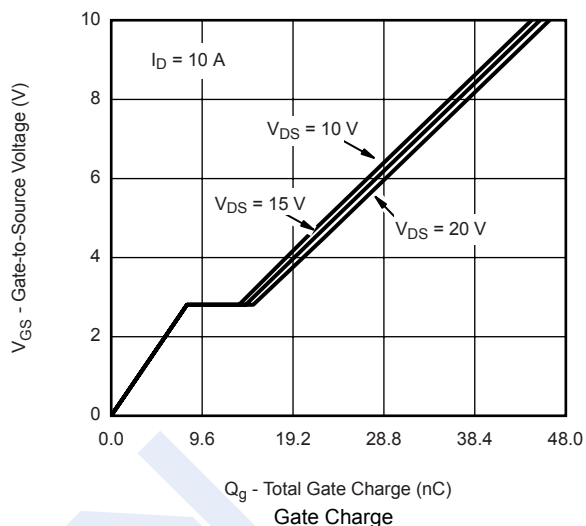
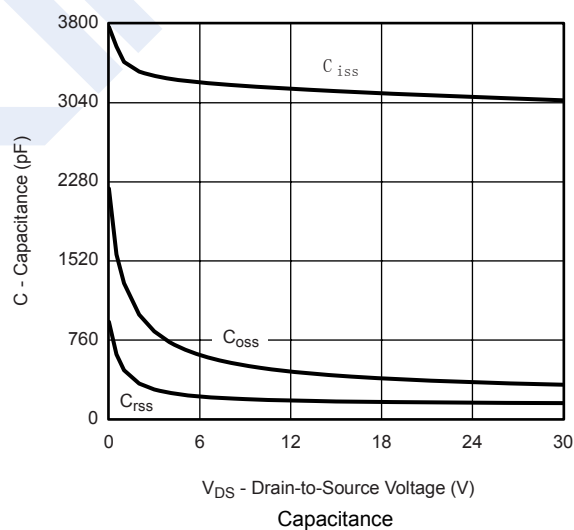
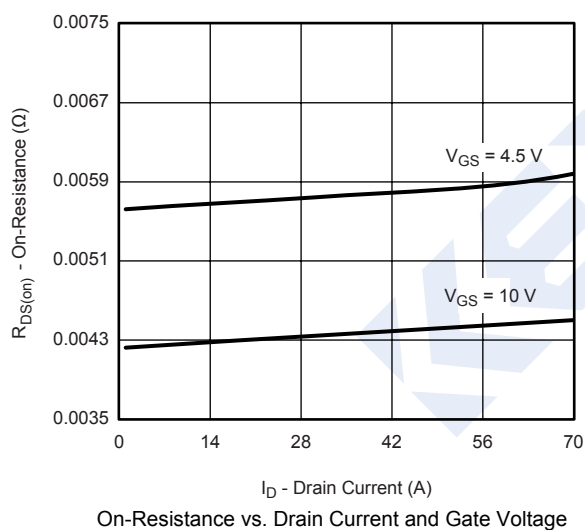
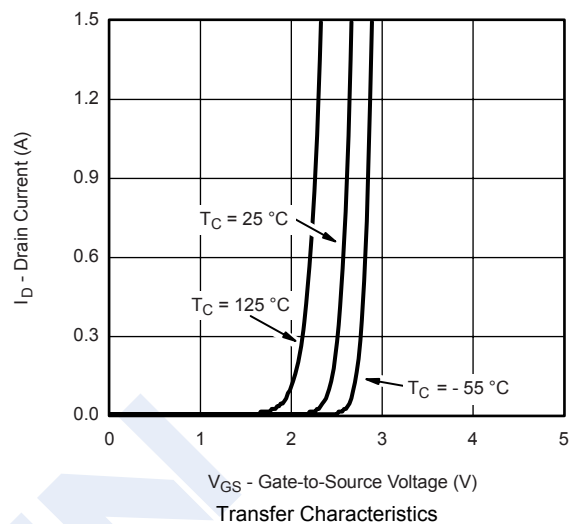
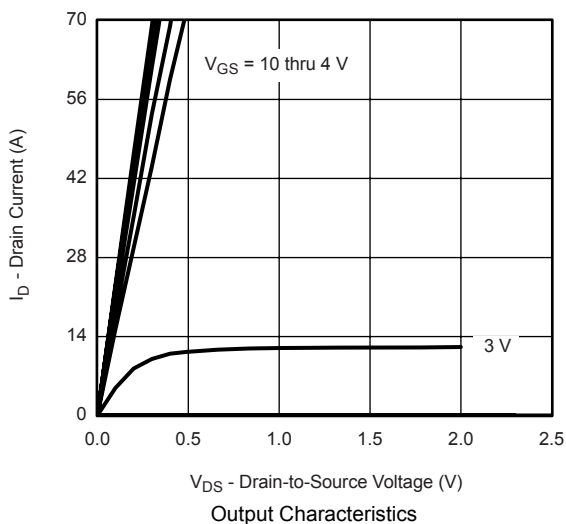
■ Marking

Marking	4634 KC****
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N-Channel MOSFET

SI4634DY (KI4634DY)

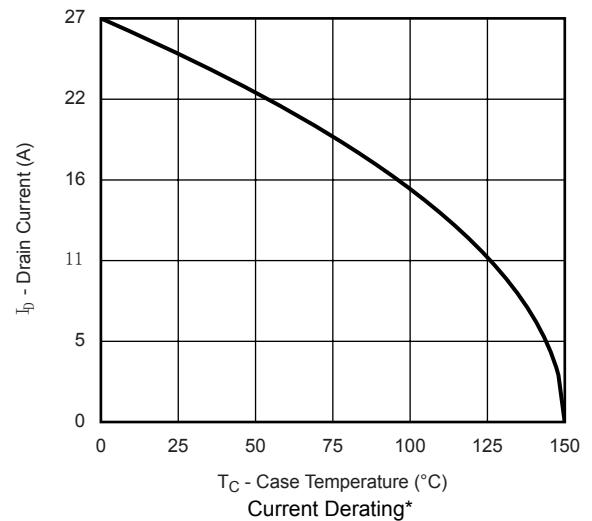
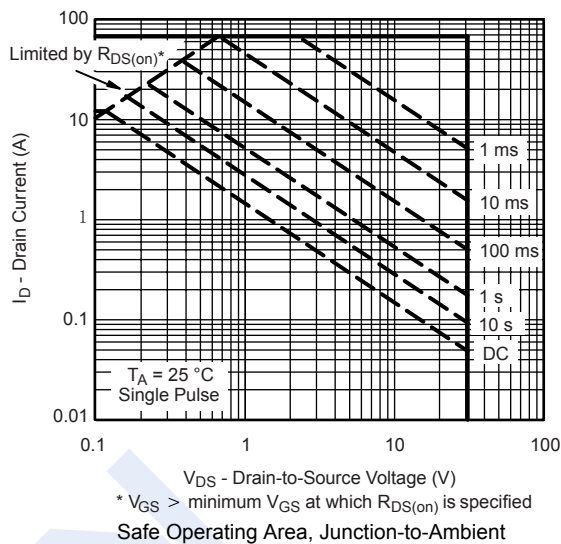
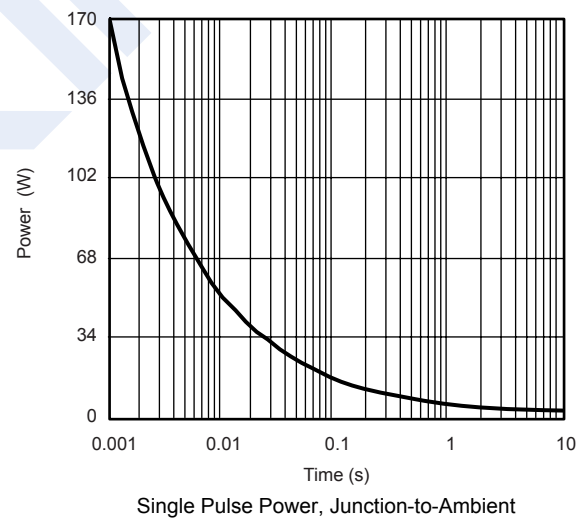
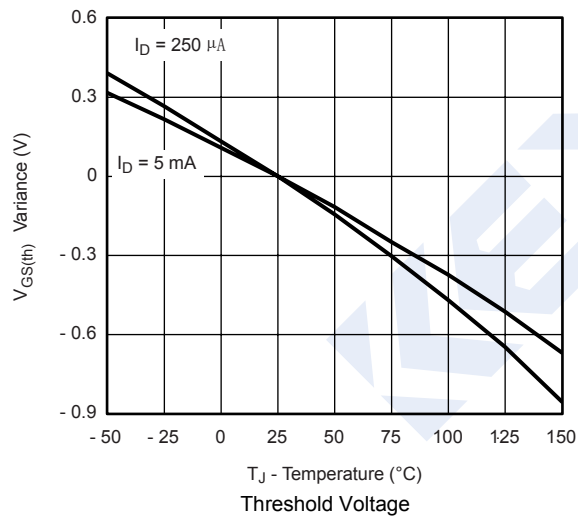
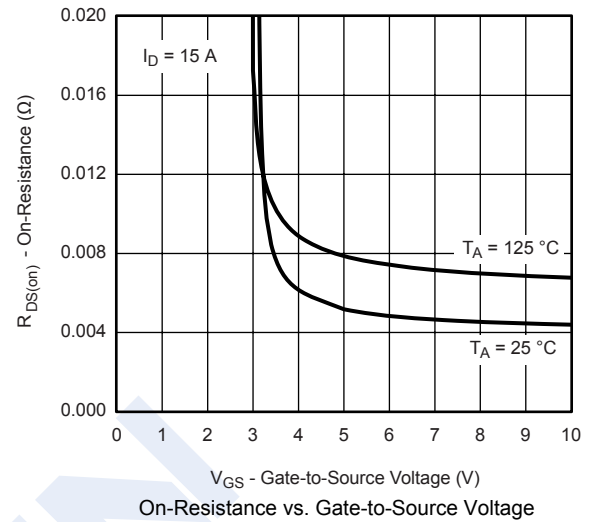
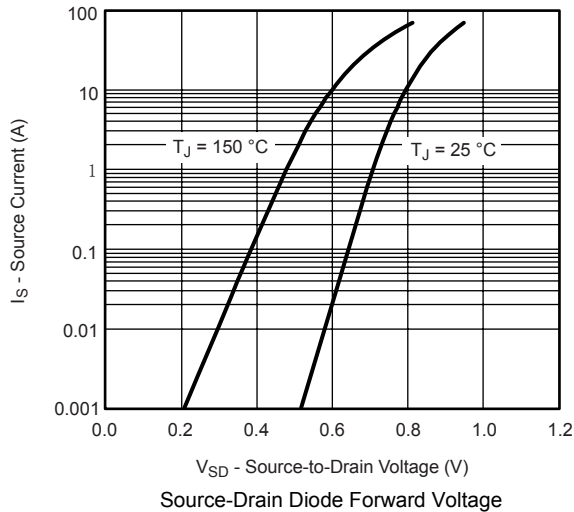
■ Typical Characteristics



N-Channel MOSFET

SI4634DY (KI4634DY)

Typical Characteristics



N-Channel MOSFET

SI4634DY (KI4634DY)

Typical Characteristics

