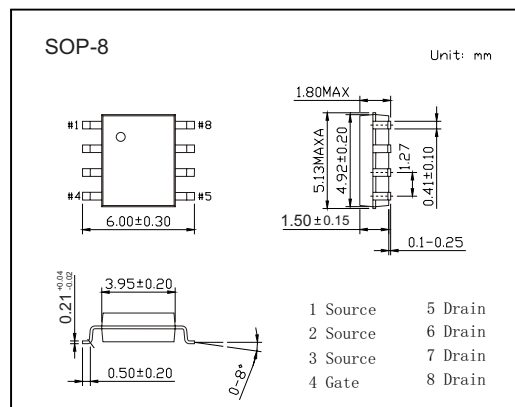
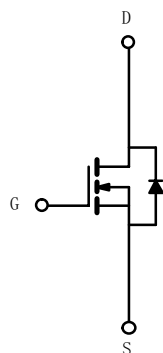


N-Channel MOSFET

KI10N03

■ Features

- $V_{DS} (V) = 30V$
- $I_D = 10 A (V_{GS} = 10V)$
- $R_{DS(ON)} < 13.5m\Omega (V_{GS} = 10V)$
- $R_{DS(ON)} < 20m\Omega (V_{GS} = 4.5V)$



■ 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 (Note.1)	$T_A=25^\circ C$	I_D	10	A
	$T_A=70^\circ C$		8	
Pulsed Drain Current		I_{DM}	50	
Power Dissipation	$T_A=25^\circ C$	P_D	2.5	W
	$T_A=70^\circ C$		1.6	
Thermal Resistance.Junction- to-Ambient (Note.1)		R_{thJA}	50	$^\circ C/W$
Thermal Resistance.Junction- to-Case		R_{thJC}	22	
Junction Temperature		T_J	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55 to 150	

Note.1:Surface Mounted on FR4 Board, $t \leq 10$ sec.

N-Channel MOSFET

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■ Electrical Characteristics Ta = 25℃

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℃			25	
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		3	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =10A (Note.1)			13.5	mΩ
		V _{GS} =4.5V, I _D =5A (Note.1)			20	
On State Drain Current	I _{D(on)}	V _{GS} =5V, V _{DS} =10V (Note.1)	20			A
Forward Transconductance	g _{FS}	V _{DS} =15V, I _D =5A (Note.1)		38		S
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz	0.5		2.6	Ω
Gate Charge	Q _g	V _{DS} = 15 V, V _{GS} = 5 V, I _D = 10 A		20	34	nC
Total Gate Charge	Q _{gt}	V _{GS} =10V, V _{DS} =15V, I _D =10A		37	60	
Gate Source Charge	Q _{gs}			7		
Gate Drain Charge	Q _{gd}			7		
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _{DS} =25V, I _D =1A R _L =25 Ω, R _{GEN} =6 Ω			30	ns
Turn-On Rise Time	t _r				20	
Turn-Off DelayTime	t _{d(off)}				100	
Turn-Off Fall Time	t _f				80	
Body Diode Reverse Recovery Time	t _{rr}	I _F = 2.3A, dI/dt= 100A/μs			80	
Maximum Body-Diode Continuous Current	I _S				2.3	A
Diode Forward Voltage	V _{SD}	I _S =2.3A, V _{GS} =0V (Note.1)			1.1	V

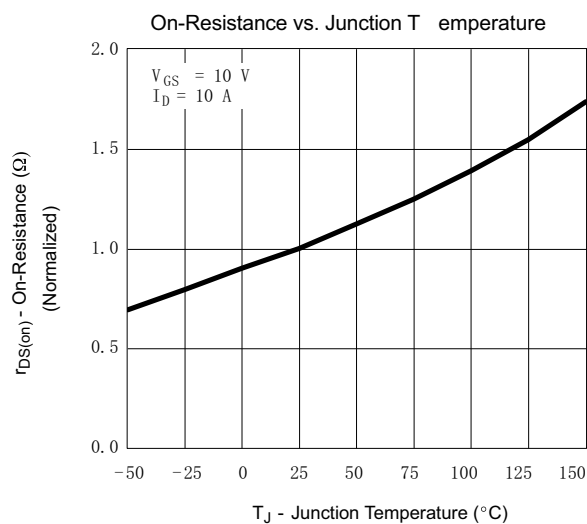
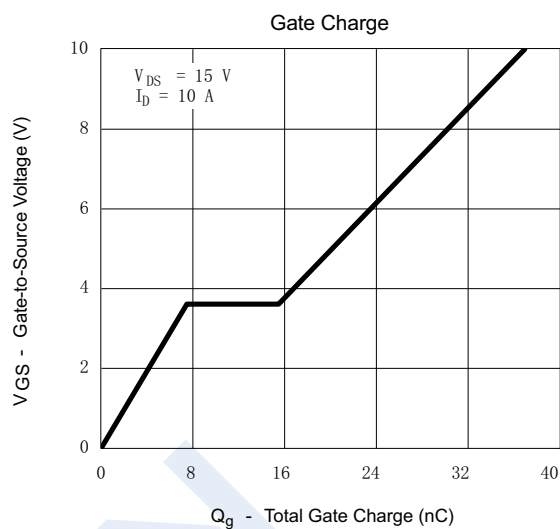
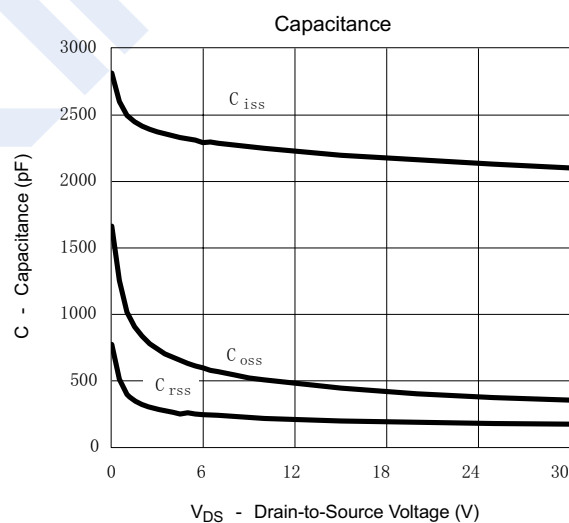
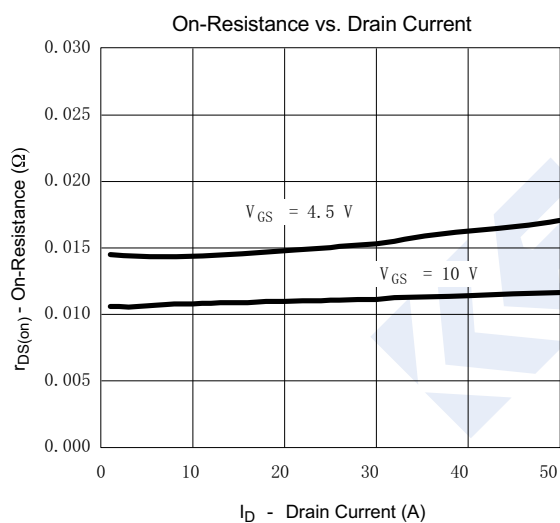
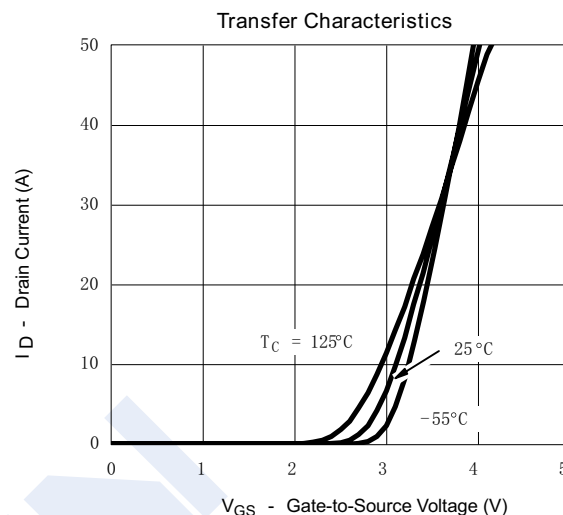
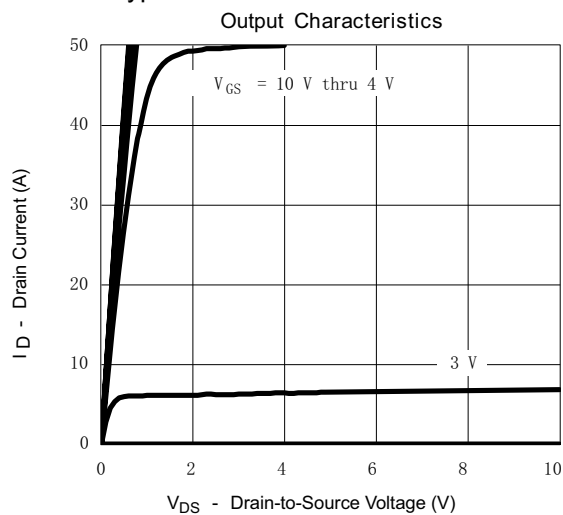
Note.1: Pulse test; pulse width ≤ 300us, duty cycle ≤ 2%.

■ Marking

Marking	10N03 KC***
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N-Channel MOSFET KI10N03

Typical Characteristics



N-Channel MOSFET KI10N03

Typical Characteristics

