

INK0012AX SERIES

High speed switching
Silicon N-channel MOSFET

DESCRIPTION

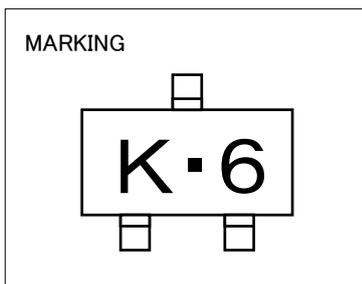
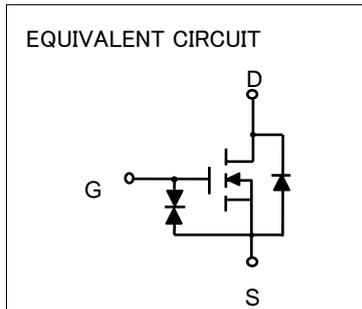
INK0012AX is a Silicon N-channel MOSFET. This product is most suitable for low voltage use such as portable machinery, because of low voltage drive and low on resistance.

FEATURE

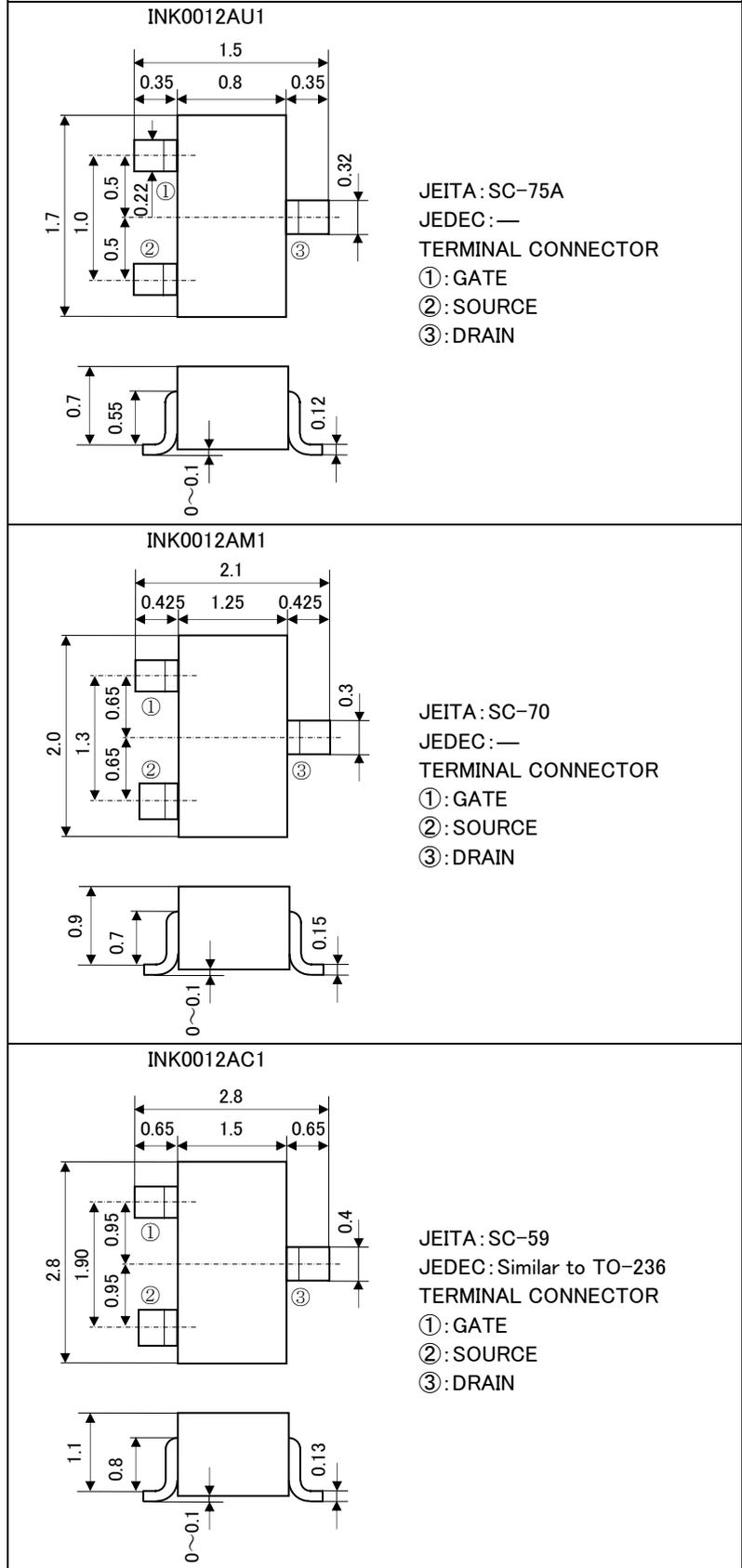
- Input impedance is high, and not necessary to consider a drive electric current.
- Drive voltage 4V
- Low on Resistance.
 $R_{DS(ON)}=1.7\ \Omega$ (TYP) @ $I_D=100\text{mA}$, $V_{GS}=4.0\text{V}$
 $R_{DS(ON)}=1.0\ \Omega$ (TYP) @ $I_D=100\text{mA}$, $V_{GS}=10\text{V}$
- High speed switching.
- Small package for easy mounting.

APPLICATION

High speed switching, Analog switching



OUTLINE DRAWING (Unit:mm)



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MAXIMUM RATING (Ta=25°C)

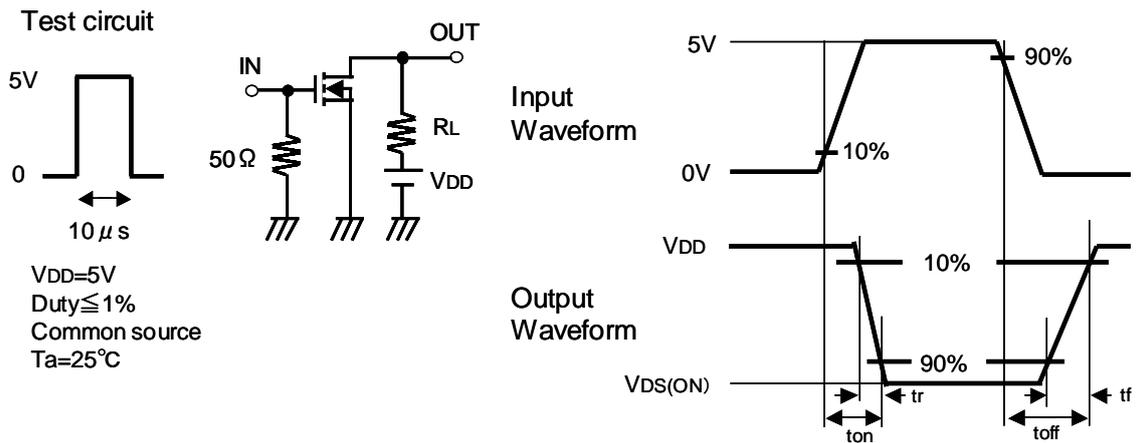
SYMBOL	PARAMETER	RATING			UNIT
		INK0012AU1	INK0012AM1	INK0012AC1	
V _{DSS}	Drain-source voltage	30			V
V _{GSS}	Gate-source voltage	±20			V
I _D	Drain current(DC)	200			mA
I _{DP}	Drain current(Pulse) ※1	400			mA
P _D	Total power dissipation	150	200		mW
T _{ch}	Channel temperature	+150			°C
T _{stg}	Range of Storage temperature	-55~+150			°C

※1: P_w ≤ 10μs, Duty cycle ≤ 1%

ELECTRICAL CHARACTERISTICS (Ta=25°C)

SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
V(BR)DSS	Drain-source breakdown voltage	I _D =100μA, V _{GS} =0V	30	-	-	V
I _{GSS}	Gate-source leak current	V _{GS} =±15V, V _{DS} =0V	-	-	±1.0	μA
I _{DSS}	Zero gate voltage drain current	V _{DS} =30V, V _{GS} =0V	-	-	1.0	μA
V _{th}	Gate threshold voltage	I _D =250μA, V _{DS} =V _{GS}	1.0	-	2.0	V
Y _{fs}	Forward transfer admittance	V _{DS} =10V, I _D =100mA	-	245	-	mS
R _{DS(ON)}	Static drain-source on-state resistance	I _D =100mA, V _{GS} =4.0V	-	1.7	-	Ω
		I _D =100mA, V _{GS} =10.0V	-	1.0	-	
C _{iss}	Input capacitance	V _{DS} =10V, V _{GS} =0V, f=1MHz	-	23	-	pF
C _{oss}	Output capacitance		-	7.0	-	
t _{on}	Switching time	V _{DD} =5V, I _D =10mA	-	30	-	ns
t _{off}		V _{GS} =0~5V	-	66	-	

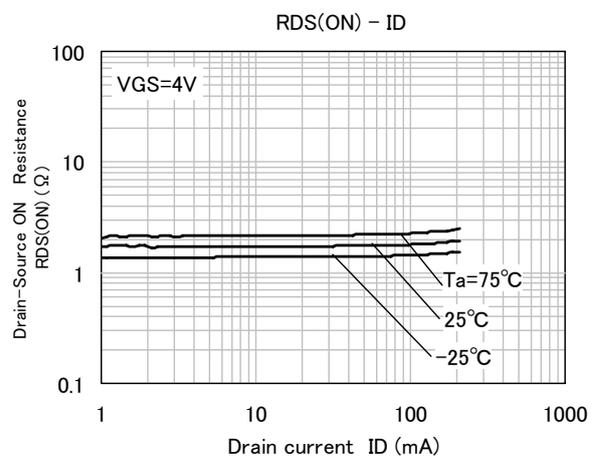
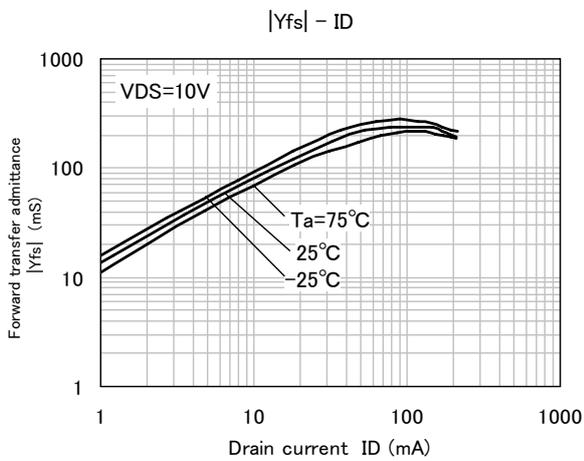
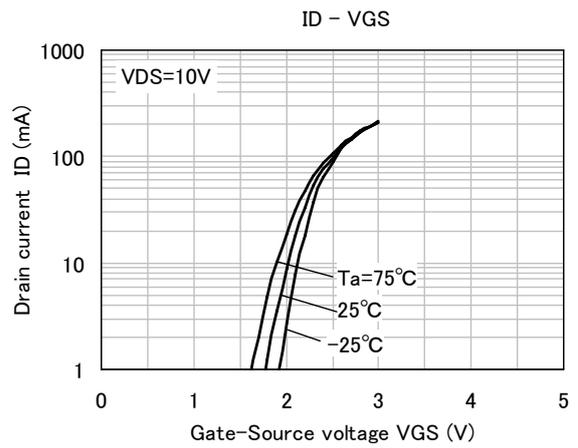
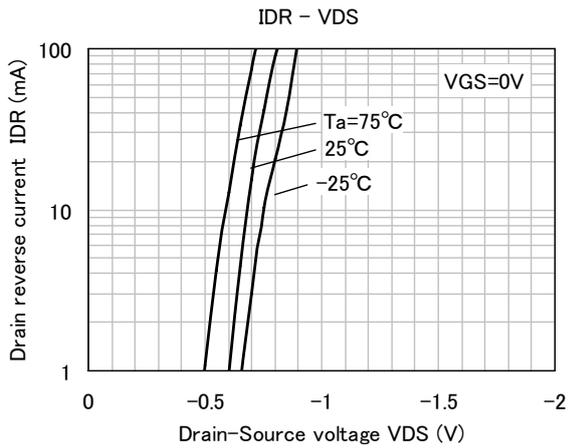
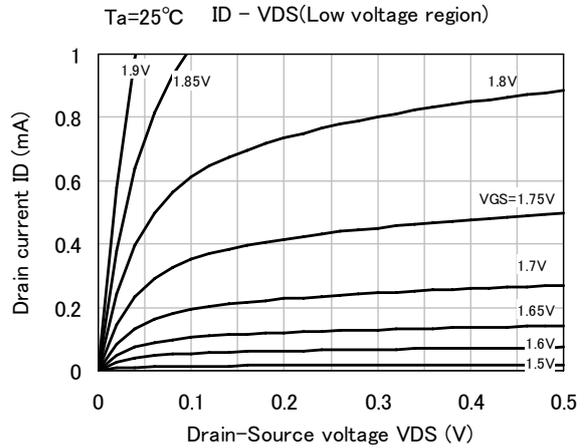
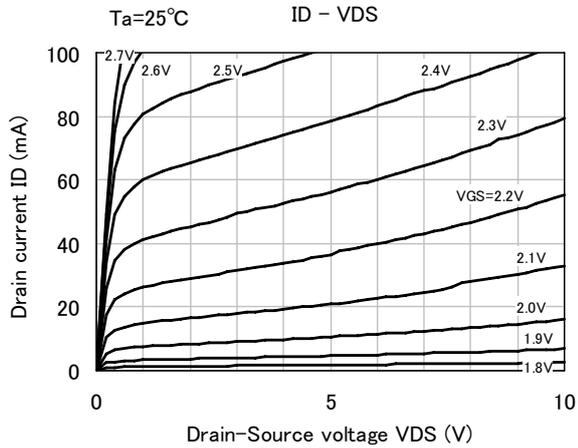
Switching time test condition



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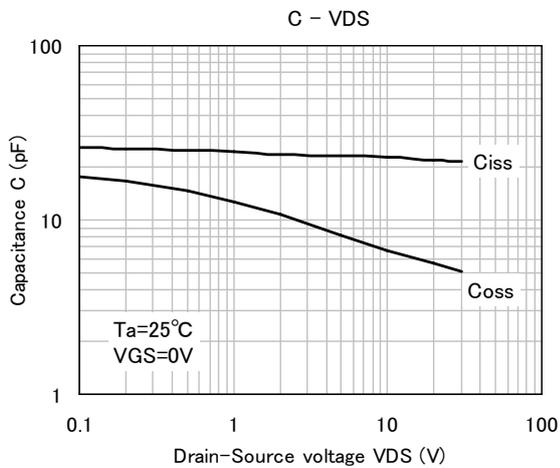
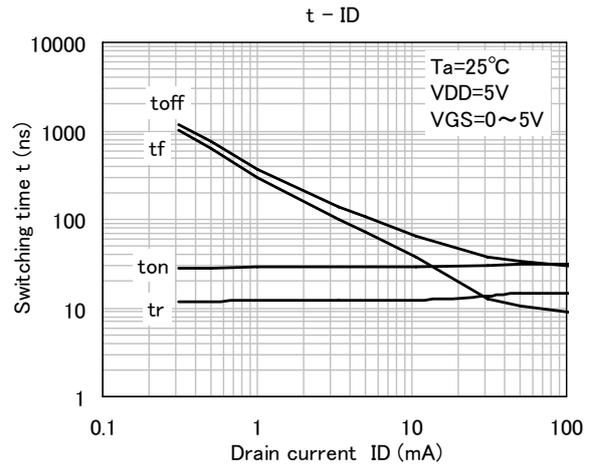
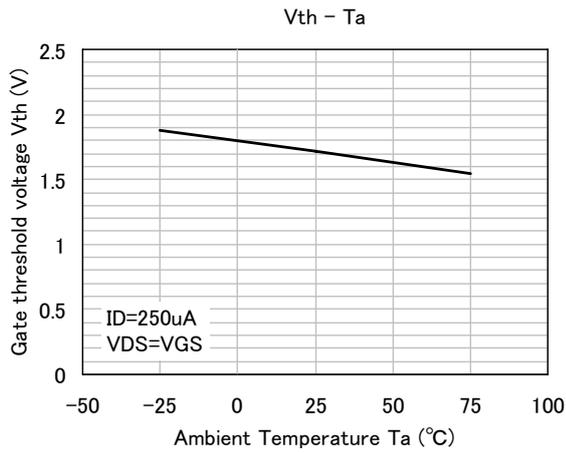
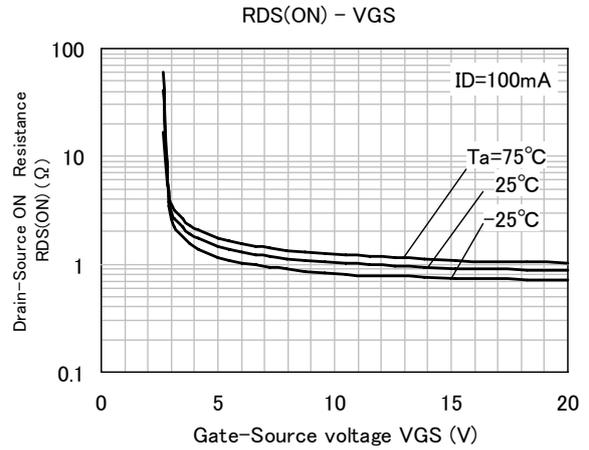
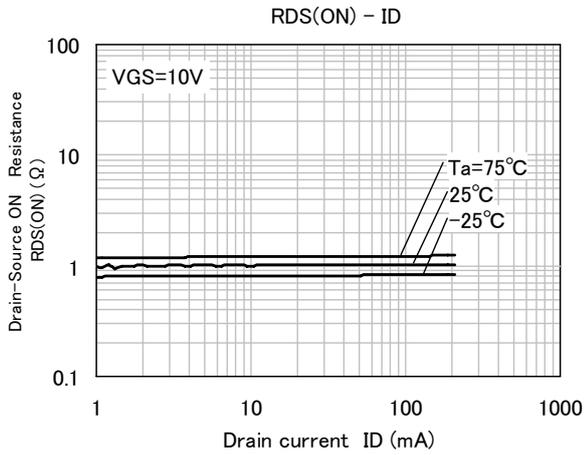
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TYPICAL CHARACTERISTICS



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Keep safety first in your circuit designs!

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