

INK0302AC1

High Speed Switching
Silicon N-channel MOSFET

DESCRIPTION

INK0302AC1 is a Silicon N-channel MOSFET.
This product is most suitable for 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 2.5V
- Low on Resistance. $R_{DS(on)}=75m\Omega$ (TYP).
- High speed switching.
- Small package for easy mounting.

APPLICATION

Switching

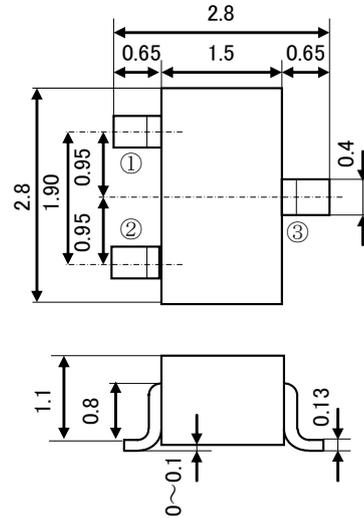
MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Rating	Unit
V _{DS}	Drain-Source Voltage	30	V
V _{GS}	Gate-Source Voltage	±10	V
I _D	Drain Current(DC)	2.5	A
I _{DP}	Drain current(Pulse) ※1	4	A
P _D	Total Power Dissipation	200	mW
T _{ch}	Channel Temperature	+150	°C
T _{stg}	Storage Temperature	-55~+150	°C

※1: Pw ≤ 10 μs, Duty cycle ≤ 1%

OUTLINE DRAWING

Unit: mm



JEITA: SC-59

JEDEC: Similar to TO-236

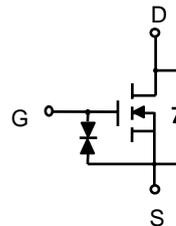
TERMINAL CONNECTER

①: GATE

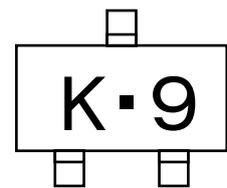
②: SOURCE

③: DRAIN

EQUIVALENT CIRCUIT



MARKING



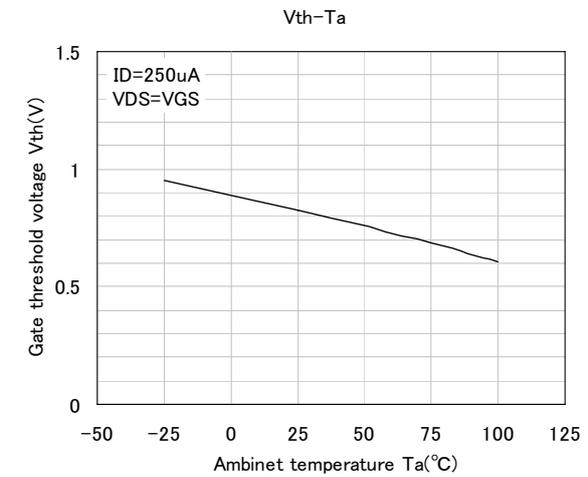
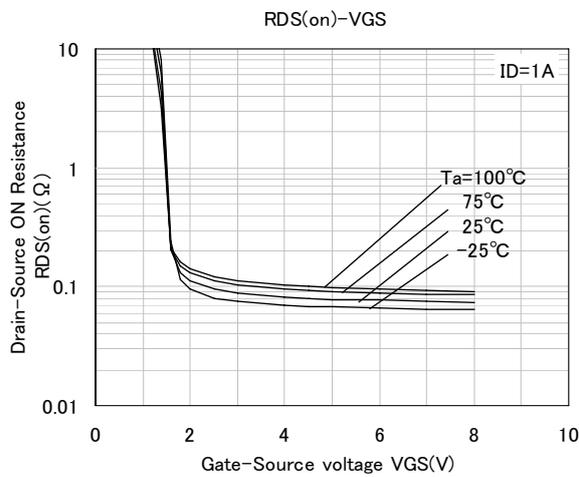
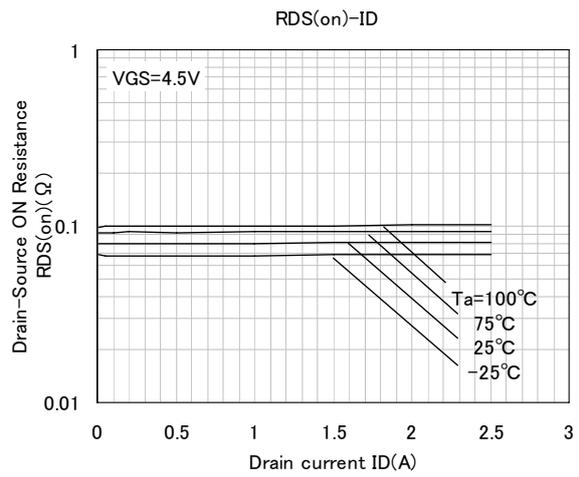
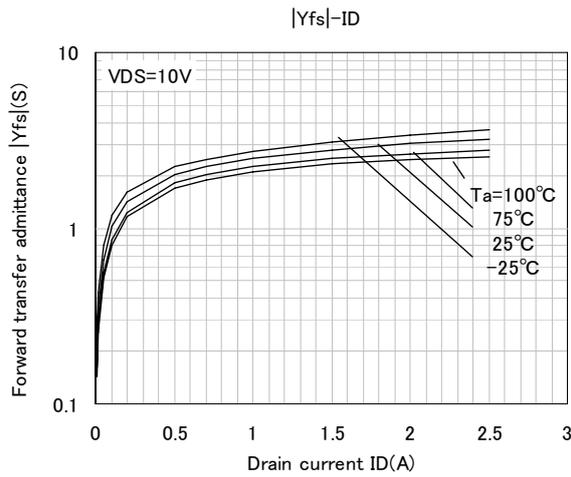
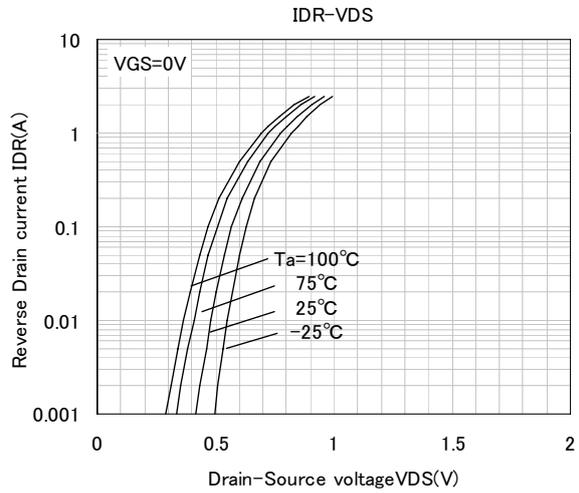
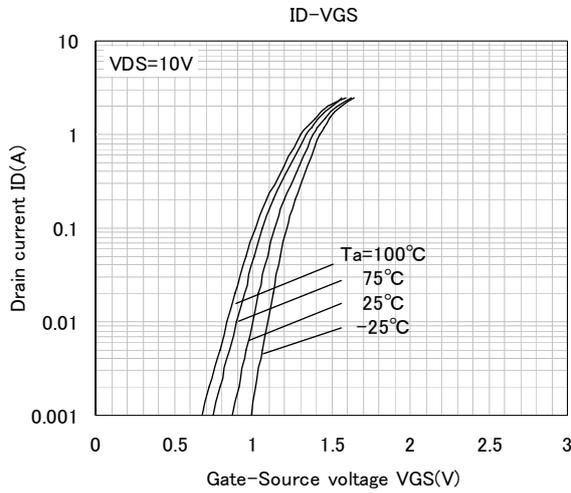
ELECTRICAL CHARACTERISTICS (Ta=25°C)

Parameter	Symbol	Test Condition	Limit			Unit
			MIN	TYP	MAX	
Drain-Source Breakdown Voltage	V _{(BR)DSS}	I _D =100 μA, V _{GS} =0V	30	-	-	V
Gate-Source Leak current	I _{GSS}	V _{GS} =±10V, I _{DS} =0A	-	-	±10	μA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0V	-	-	10	μA
Gate Threshold Voltage	V _{th}	I _D =-250 μA, V _{DS} =V _{GS}	0.4	-	1.2	V
Forward Transfer Admittance	Y _{fs}	V _{DS} =10V, I _D =1A	-	2.5	-	S
Static Drain-Source On-State Resistance	R _{DS(ON)}	I _D =1A, V _{GS} =4.5V	-	75	-	mΩ
Input Capacitance	C _{iss}	V _{DS} =10V, V _{GS} =0V, f=1MHz	-	350	-	pF
Output Capacitance	C _{oss}		-	60	-	pF
Switching Time	t _{on}	V _{DD} =15V, I _D =1A	-	20	-	ns
	t _{off}	V _{GS} =0~10V	-	65	-	ns

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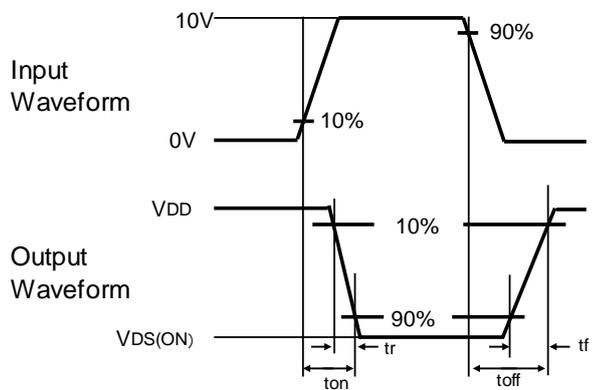
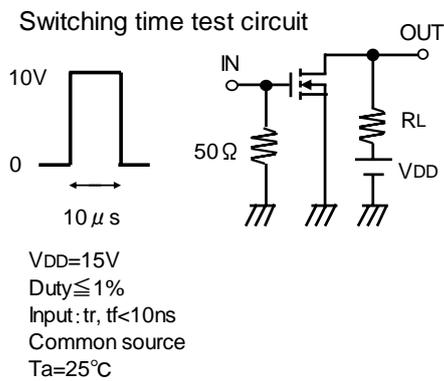
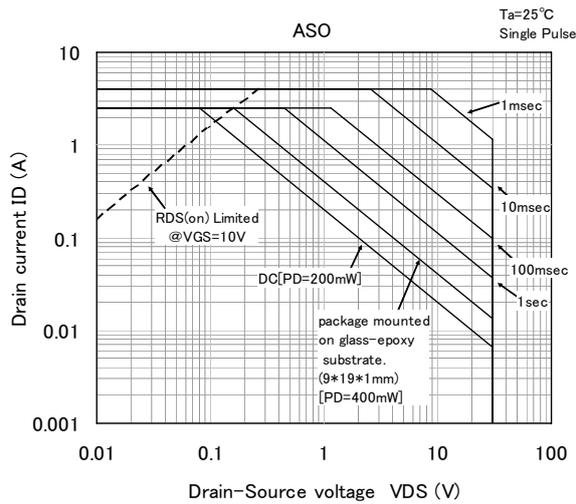
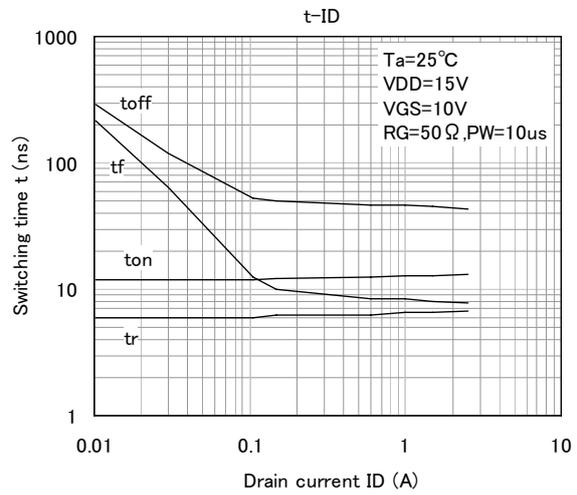
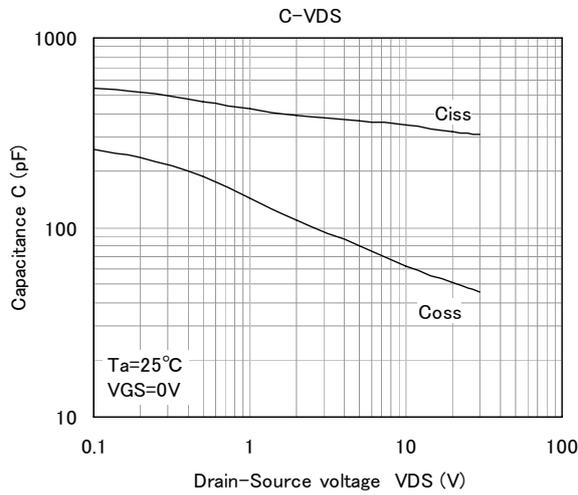
TYPICAL CHARACTERISTICS



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TYPICAL CHARACTERISTICS





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