

DESCRIPTION

INK0010AC1 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 4V

- Low on Resistance.

$R_{DS(ON)}=4.0\Omega$ (TYP) @ $I_D=100mA$, $V_{GS}=4.0V$

$R_{DS(ON)}=3.0\Omega$ (TYP) @ $I_D=100mA$, $V_{GS}=10V$

- High speed switching.

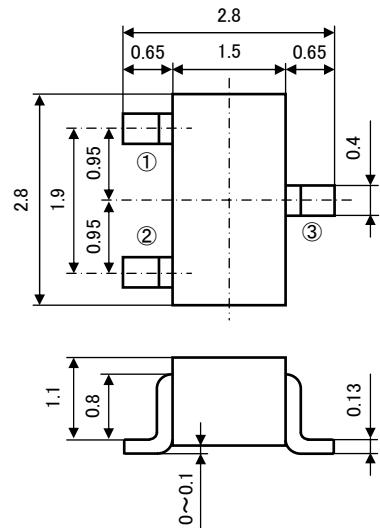
- Small package for easy mounting.

APPLICATION

High speed switching, Analog switching

OUTLINE DRAWING

UNIT:mm



JEITA: SC-59

JEDEC: Similar to TO-236

TERMINAL CONNECTOR

①: Gate

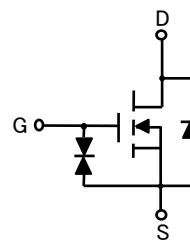
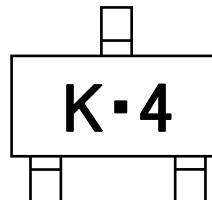
②: SOURCE

③: DRAIN

MAXIMUM RATING (Ta=25°C)

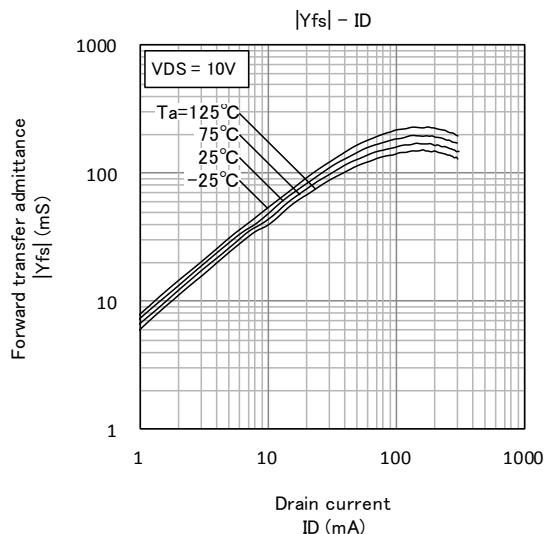
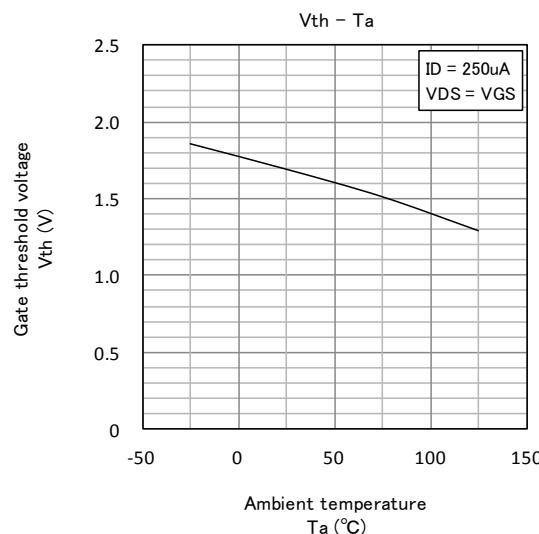
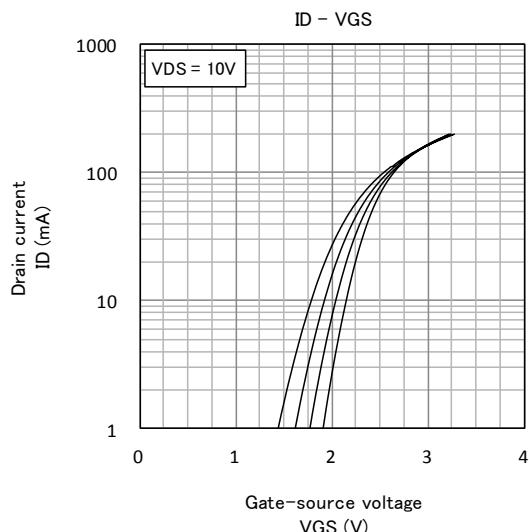
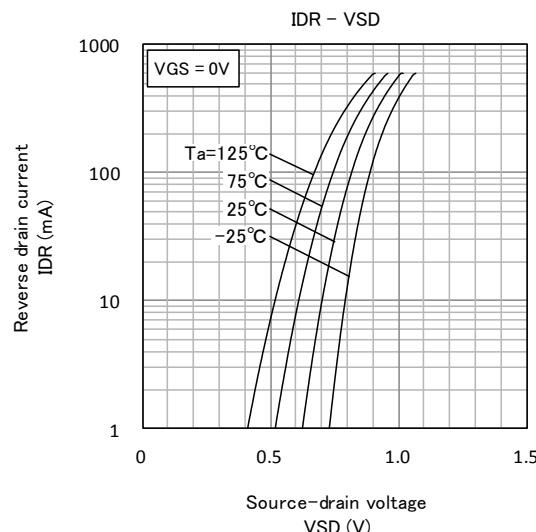
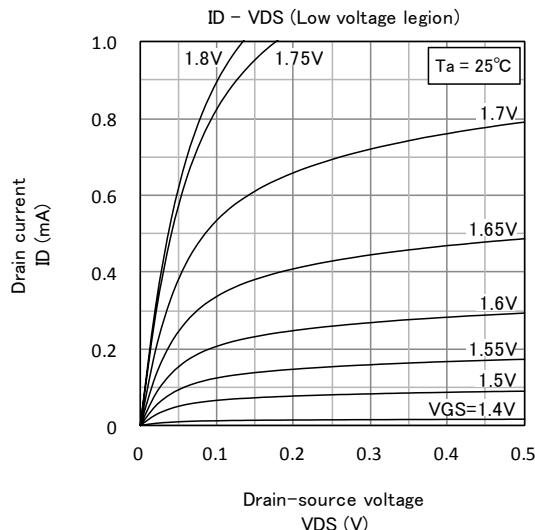
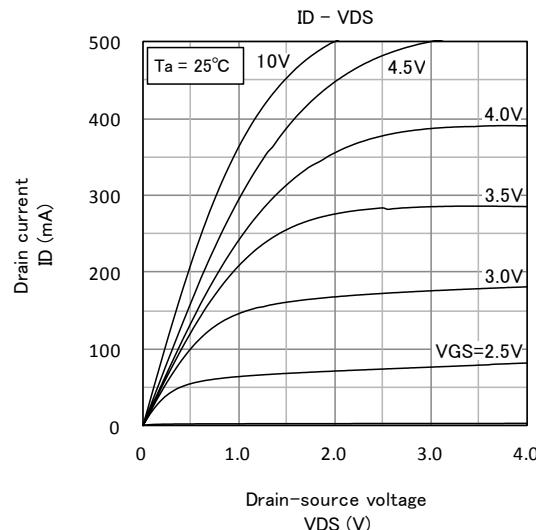
SYMBOL	PARAMETER	RATING	UNIT
VDSS	Drain-source voltage	60	V
VGSS	Gate-source voltage	± 20	V
ID	Drain current(DC)	260	mA
IDP	Drain current(Pulse) \ddagger	800	mA
PD	Total power dissipation	200	mW
Tch	Channel temperature	+150	°C
Tstg	Range of Storage temperature	-55~+150	°C

\ddagger 1: $P_w \leq 10\mu s$, Duty cycle $\leq 1\%$

EQUIVALENT CIRCUIT**MARKING****ELECTRICAL CHARACTERISTICS (Ta=25°C)**

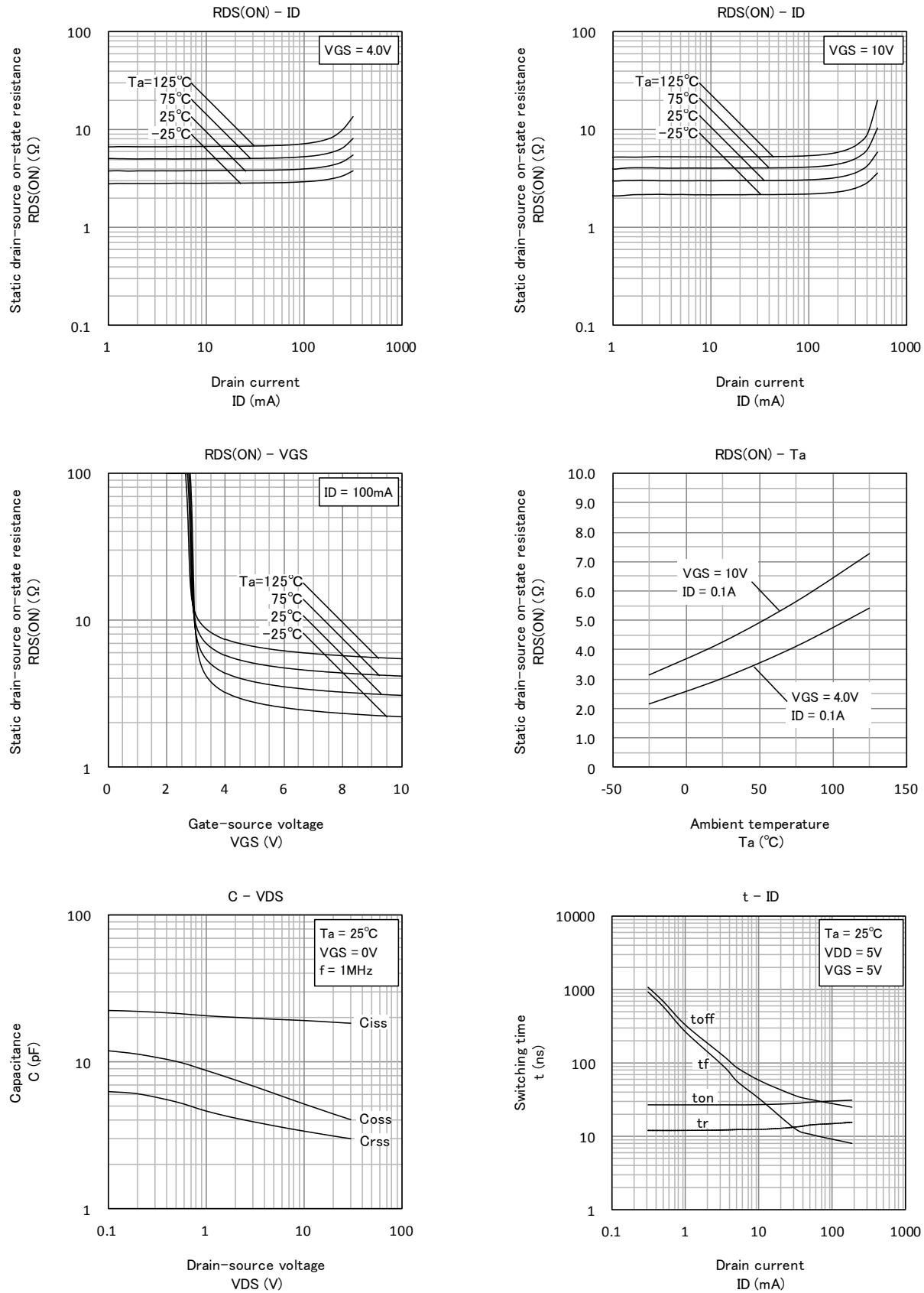
PARAMETER	SYMBOL	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
Drain-source breakdown voltage	V(BR)DSS	$I_D=100\mu A$, $V_{GS}=0V$	60	—	—	V
Gate-source leak current	IGSS	$V_{GS}=\pm 15V$, $V_{DS}=0V$	—	—	± 1.0	μA
Zero gate voltage drain current	IDSS	$V_{DS}=60V$, $V_{GS}=0V$	—	—	1.0	μA
Gate threshold voltage	V _{th}	$I_D=250\mu A$, $V_{DS}=V_{GS}$	1.0	—	2.0	V
Forward transfer admittance	Y _{fs}	$V_{DS}=10V$, $I_D=100mA$	—	200	—	mS
Static drain-source on-state resistance	R _{DS(ON)}	$I_D=100mA$, $V_{GS}=4.0V$	—	4.0	—	Ω
		$I_D=100mA$, $V_{GS}=10V$	—	3.0	—	
Input capacitance	C _{iss}	$V_{DS}=10V$, $V_{GS}=0V$, $f=1MHz$	—	20	—	pF
Output capacitance	C _{oss}		—	5.0	—	pF
Switching time	t _{on}	$V_{DD}=5V$, $I_D=10mA$	—	27	—	ns
	t _{off}	$V_{GS}=0\sim 5V$	—	58	—	ns

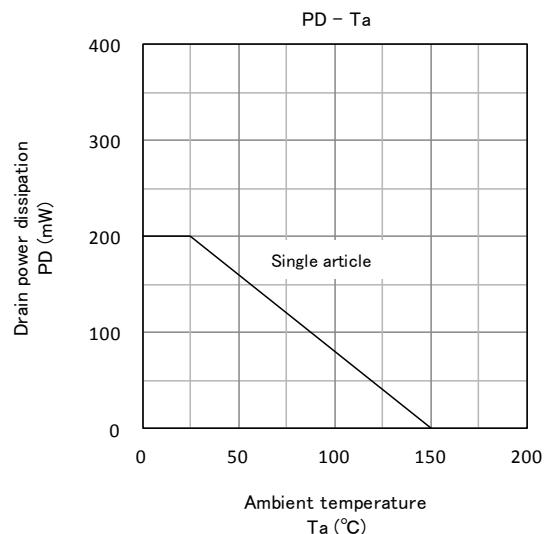
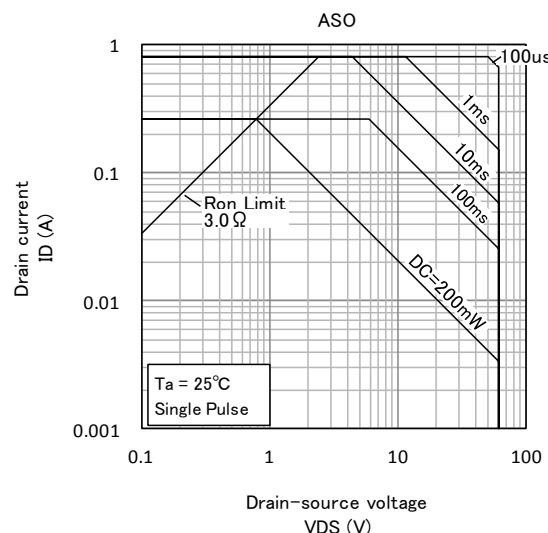
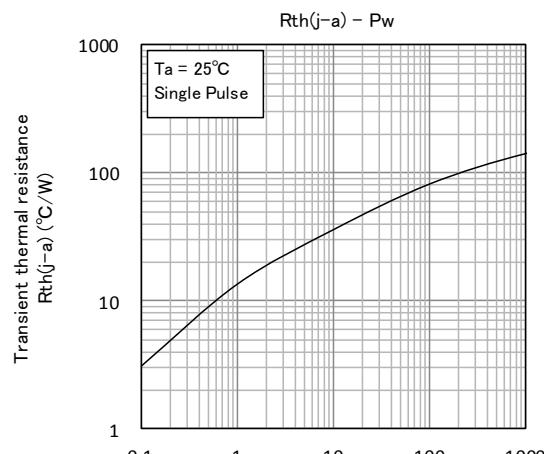
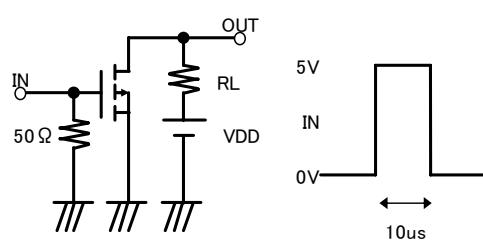
TYPICAL CHARACTERISTICS



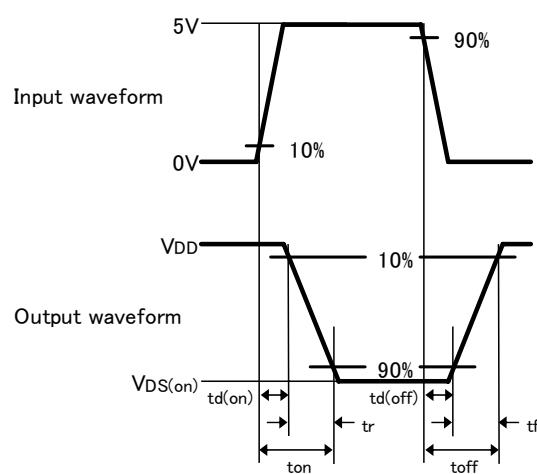
INK0010AC1-T150

High Speed Switching
Silicon N-channel MOSFET



Switching time test condition

Duty $\leq 1\%$
Input: $t_r, t_f < 10\text{ns}$
 $VDD = 5\text{V}$
Common source
 $T_a = 25^\circ\text{C}$



**Keep safety first in your circuit designs!**

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