

INK0310CC1

High Speed Switching
Silicon N-channel MOSFET

DESCRIPTION

INK0310CC1 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.
- High drain current $I_D=2.7A$
- Drive voltage 4V
- Low on Resistance. $R_{DS(ON)}=92m\Omega$ typ(@ $V_{GS}=10V$).
- High speed switching.

APPLICATION

High speed switching, Analog switching.

MAXIMUM RATINGS ($T_a=25^\circ C$)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	60	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current(DC) (※1)	I_D	2.7	A
Drain Current(Pulse) (※2)	I_{DP}	6	A
Total Power Dissipation (※1)	P_D	0.9	W
Channel Temperature	T_{ch}	+150	$^\circ C$
Storage Temperature	T_{stg}	-55~+150	$^\circ C$

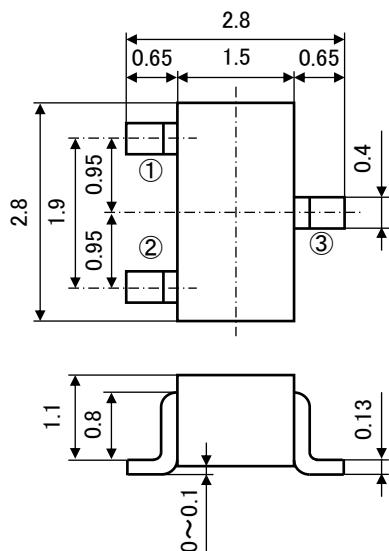
※1 package mounted on glass-epoxy substrate.

(39mm \times 39mm \times 1.6mm, Cu pad 1500mm 2)

※2 Single pulse $P_w \leq 10ms$, Duty cycle $\leq 1\%$

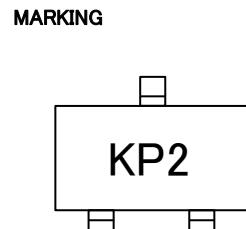
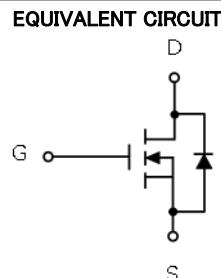
OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

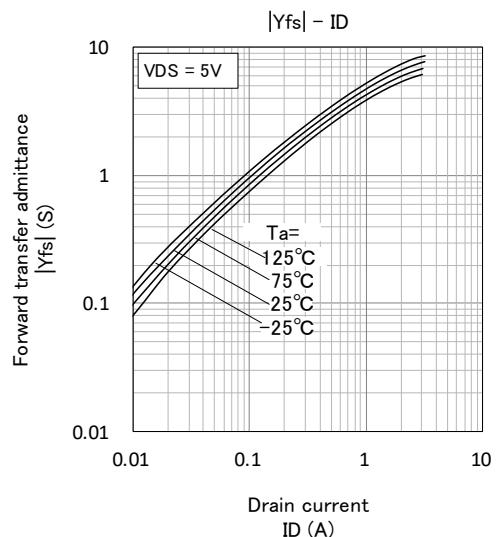
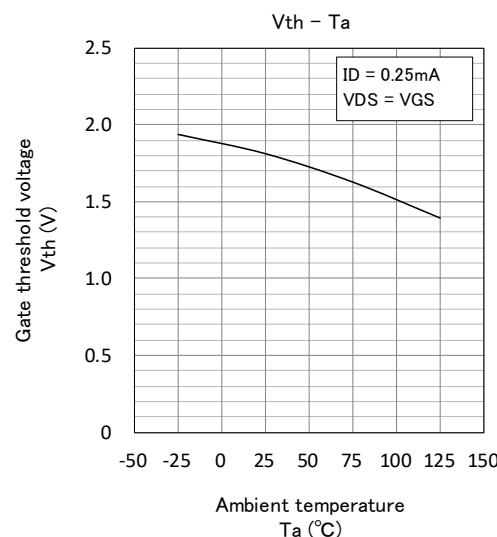
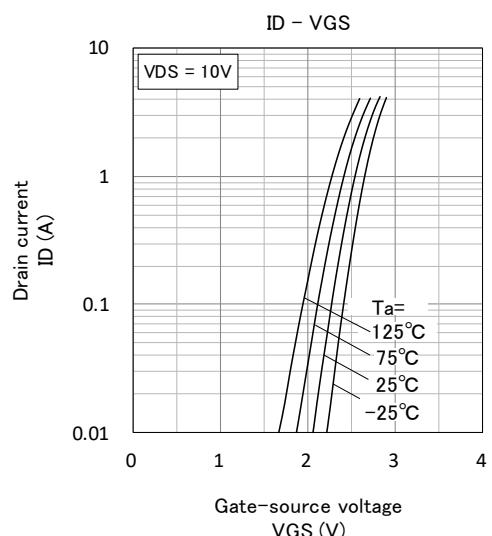
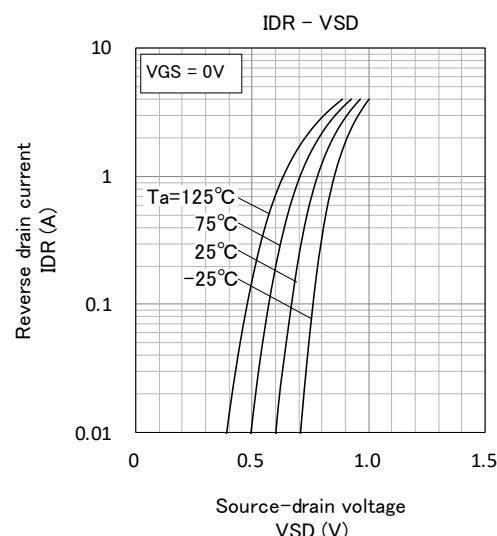
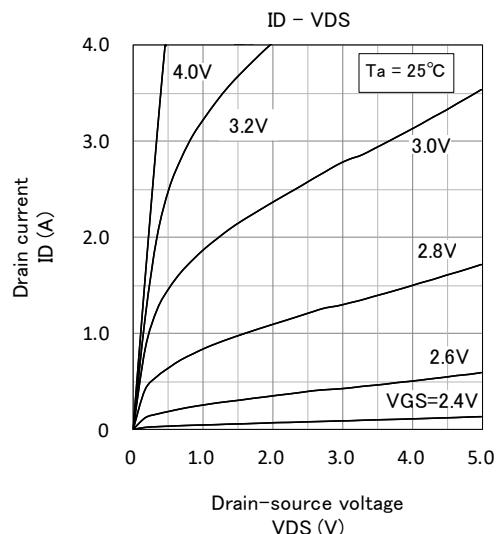
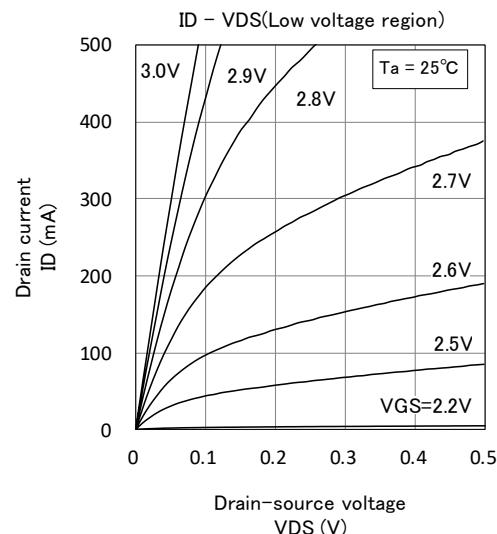
①: GATE JEITA: SC-59
②: SOURCE JEDEC: Similar to TO-236
③: DRAIN



ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

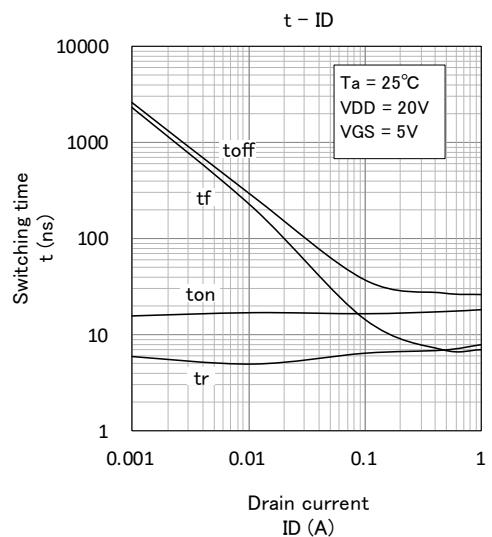
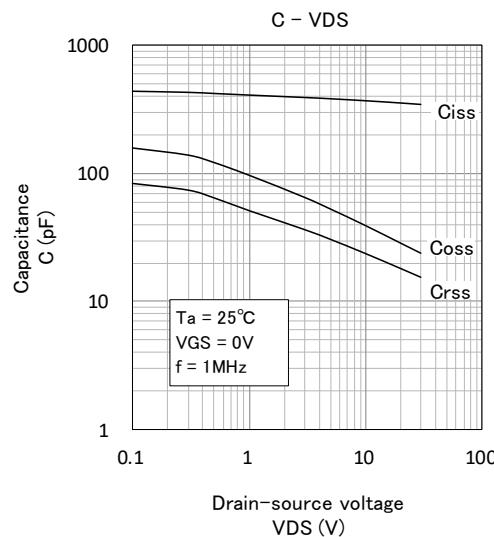
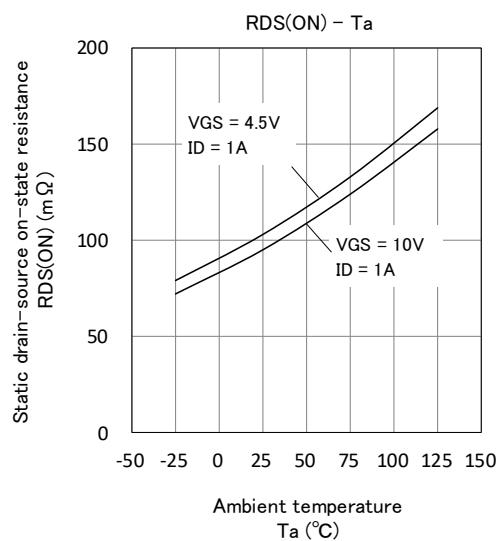
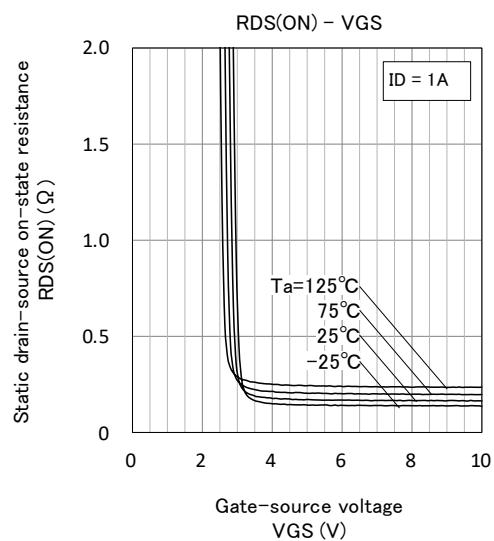
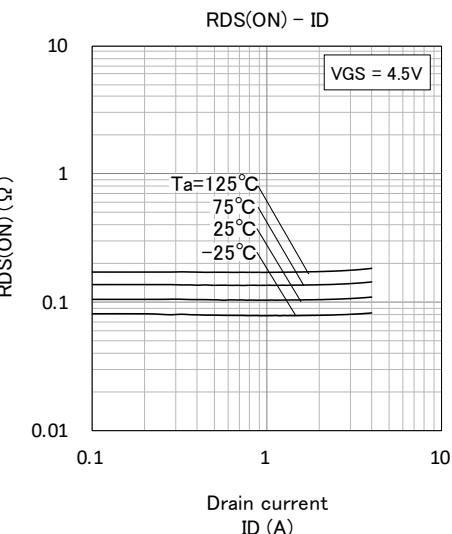
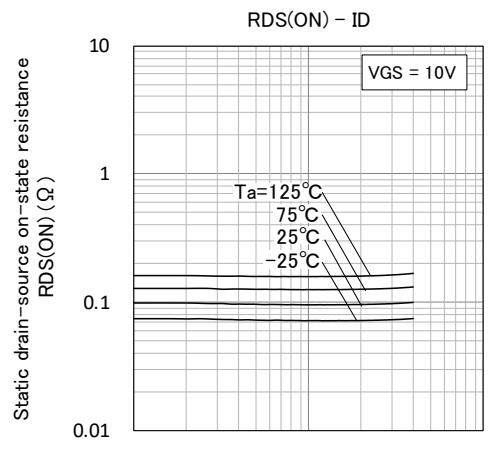
Parameter	Symbol	Test Condition	Limit			Unit
			MIN	TYP	MAX	
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=250\mu A, V_{GS}=0V$	60	—	—	V
Gate-Source Leak Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$	—	—	± 1.0	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60V, V_{GS}=0V$	—	—	1.0	μA
Gate Threshold Voltage	V_{th}	$I_D=250\mu A, V_{DS}=V_{GS}$	1.0	—	2.5	V
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	$I_D=2.7A, V_{GS}=4.5V$	—	94	132	$m\Omega$
		$I_D=2.7A, V_{GS}=10V$	—	92	120	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS}=10V, V_{GS}=0V, f=1MHz$	—	375	—	pF
Output Capacitance	C_{oss}		—	40	—	
Feedback Capacitance	C_{rss}		—	25	—	
Switching Time	t_{on}	$V_{DD}=20V, I_D=200mA, V_{GS}=5V$	—	18	—	ns
	t_{off}		—	30	—	

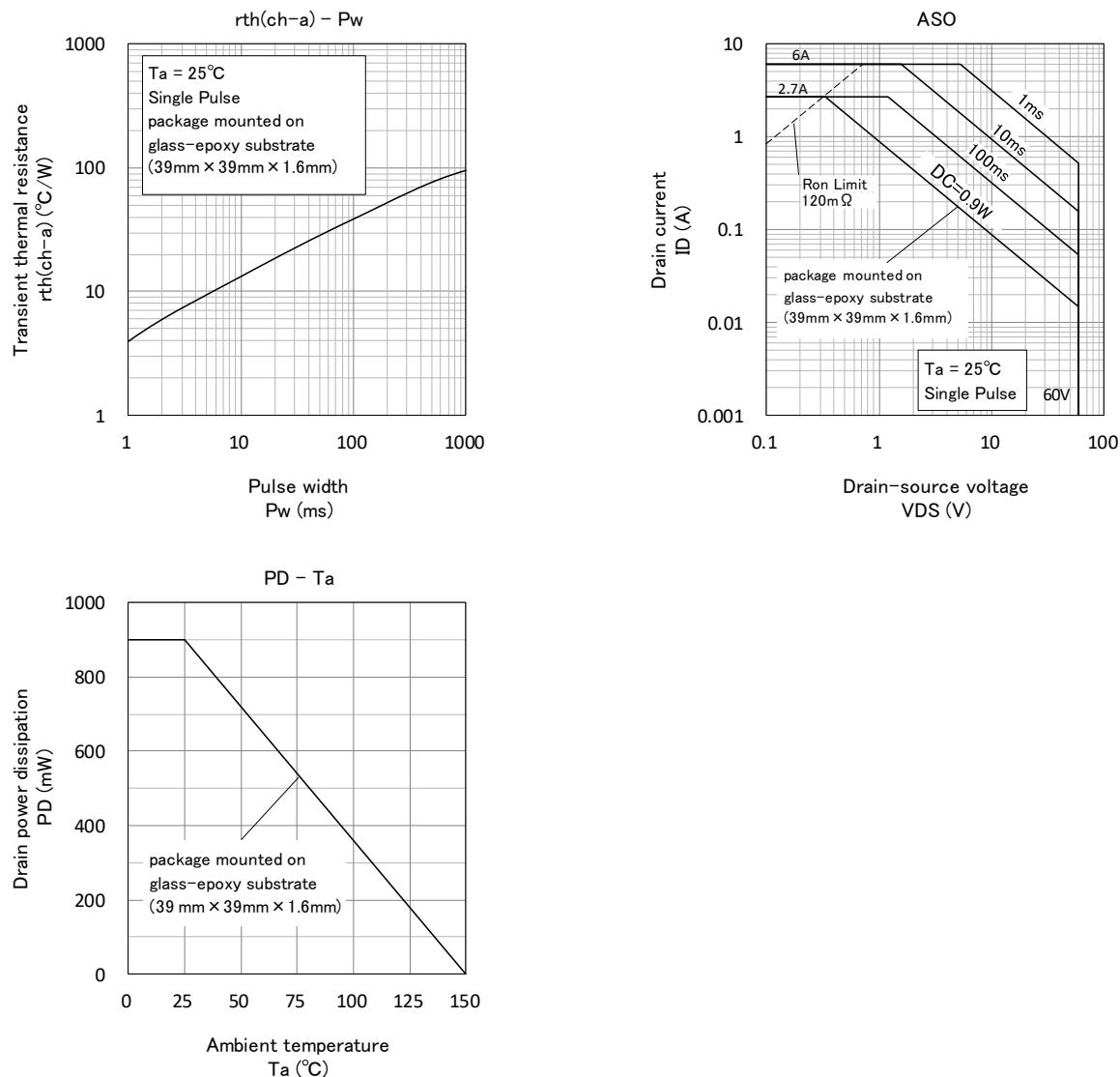
TYPICAL CHARACTERISTICS



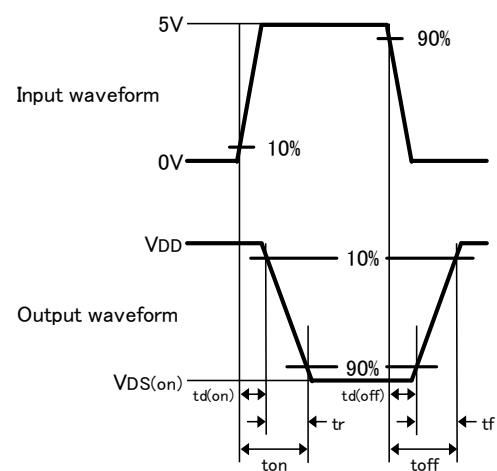
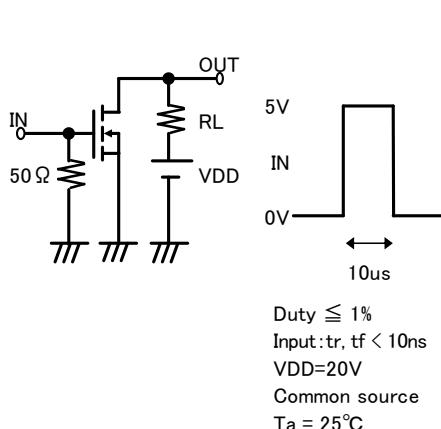
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Switching time test condition



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