

PRELIMINARY

Notice : This is not a final specification
Some parametric are subject to change.

INK0510AC2

Switching
Silicon N-channel MOSFET

DESCRIPTION

INK0510AC2 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

- High drain current $I_D=5A$
- Drive voltage 4.0V
- Low on Resistance. $R_{DS(ON)}=30m\Omega$ typ(@ $V_{GS}=10V$).
 $R_{DS(ON)}=35m\Omega$ typ(@ $V_{GS}=4.5V$).

APPLICATION

Switching.

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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current(DC) (※1)	I_D	5	A
Drain Current(Pulse) (※2)	I_{DP}	10	A
Total Power Dissipation (※1)	P_D	1.5	W
Channel Temperature	T_{ch}	+150	$^\circ C$
Storage Temperature	T_{stg}	-55~+150	$^\circ C$

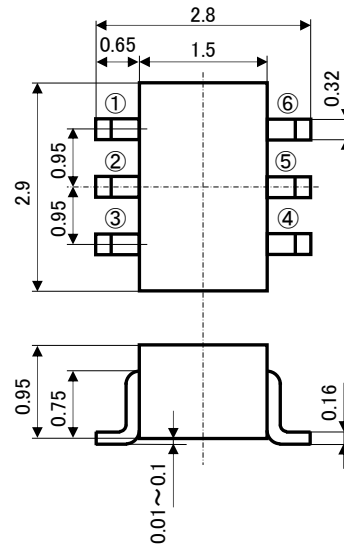
※1 package mounted on glass-epoxy substrate.

(39mm × 39mm × 1.6mm, Cu pad 1500mm²)

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

OUTLINE DRAWING

Unit: mm

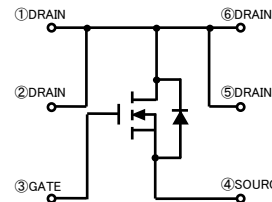


JEITA: Low-profile SC-74(SC-95)
JEDEC: SOT23-6L

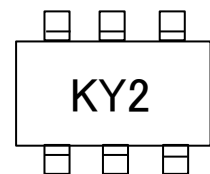
TERMINAL CONNECTOR

- ①: DRAIN
- ②: DRAIN
- ③: GATE
- ④: SOURCE
- ⑤: DRAIN
- ⑥: DRAIN

EQUIVALENT CIRCUIT



MARKING



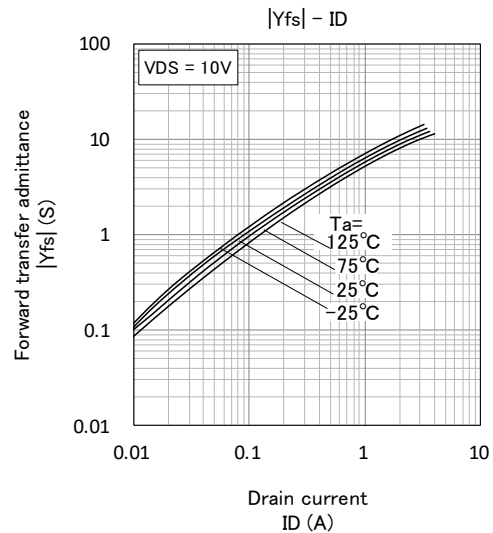
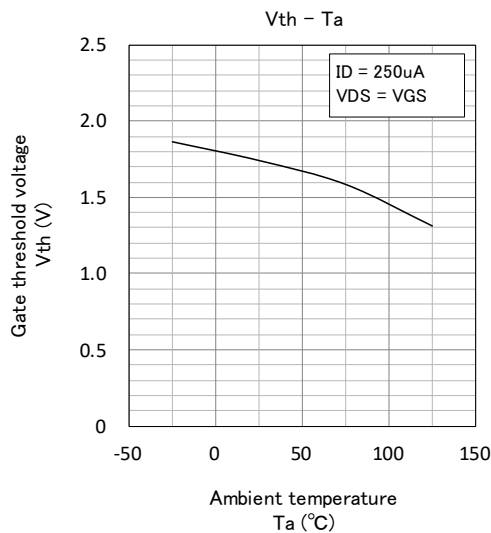
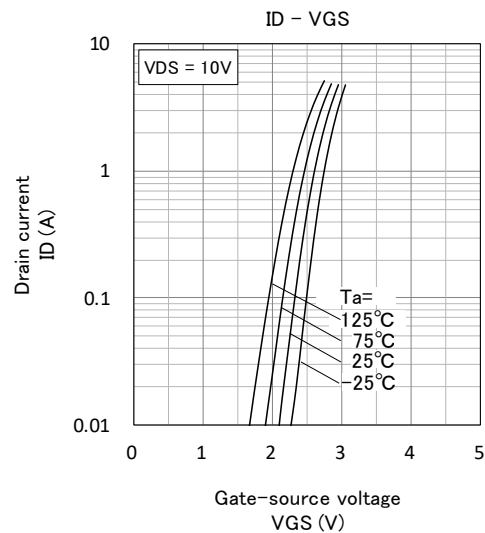
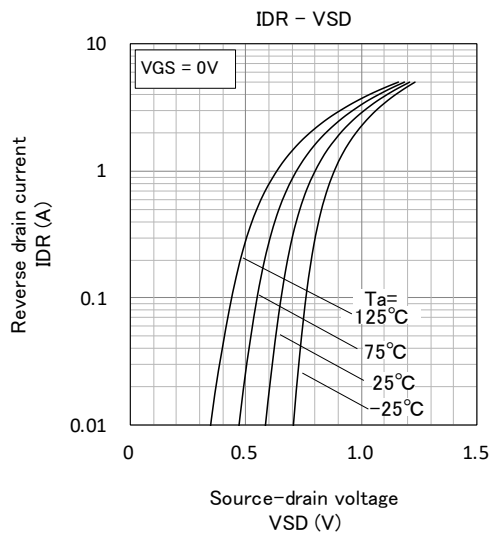
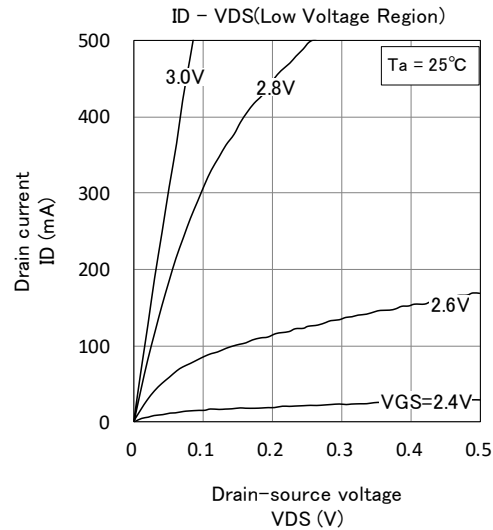
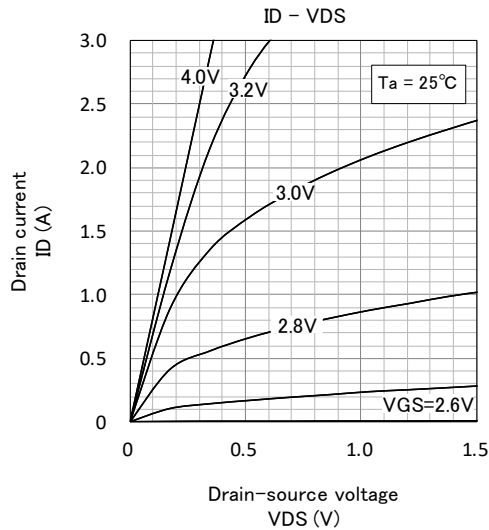
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

Parameter	Symbol	Test Condition	Limit			Unit
			MIN	TYP	MAX	
Drain-Source Breakdown Voltage	$V_{(BR)DS}$	$I_D=250\mu A$, $V_{GS}=0V$	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}	$I_D=250\mu A$, $V_{DS}=V_{GS}$	1.1	-	2.4	V
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	$I_D=5A$, $V_{GS}=4.5V$	-	35	60	$m\Omega$
		$I_D=5A$, $V_{GS}=10V$	-	30	50	$m\Omega$
Input Capacitance	C_{iss}	$V_{DS}=10V$, $V_{GS}=0V$, $f=1MHz$	-	800	-	pF
Output Capacitance	C_{oss}		-	95	-	
Feedback Capacitance	C_{rss}		-	50	-	
Switching Time	t_{on}	$V_{DD}=20V$, $I_D=200mA$, $V_{GS}=5V$	-	40	-	ns
	t_{off}		-	60	-	

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TYPICAL CHARACTERISTICS

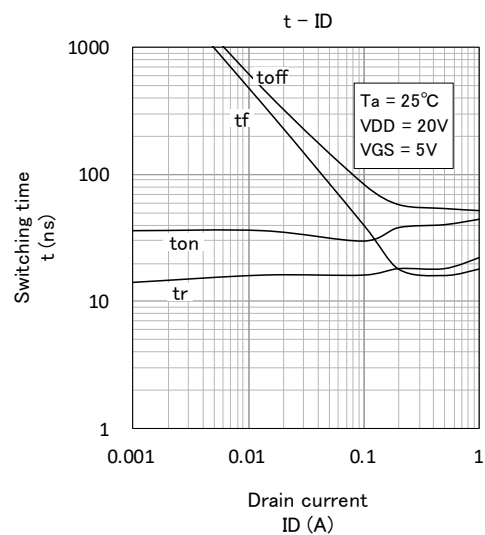
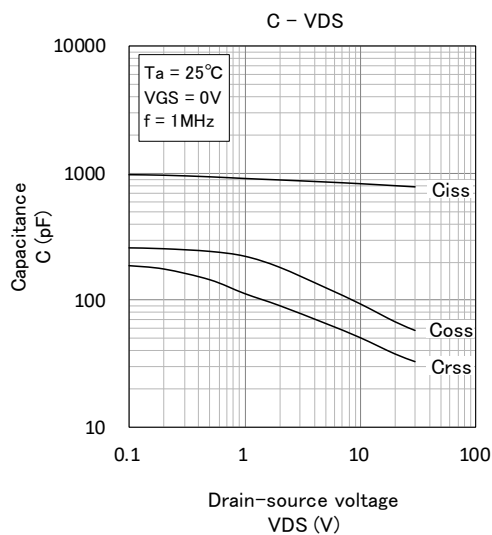
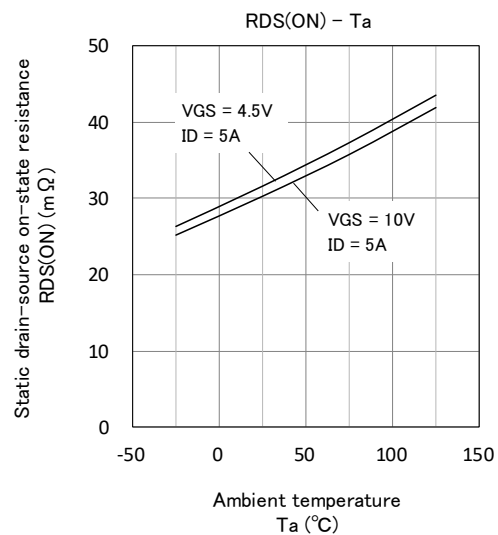
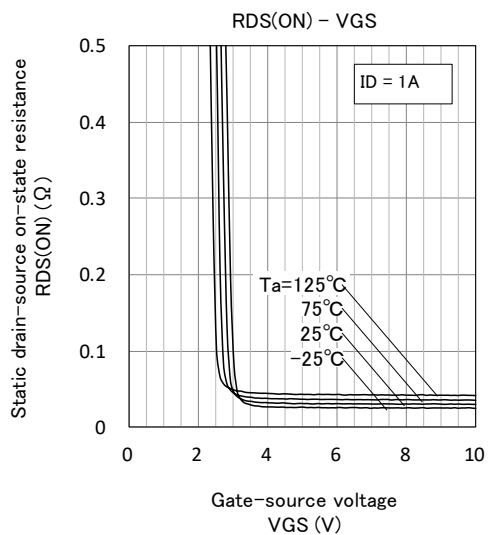
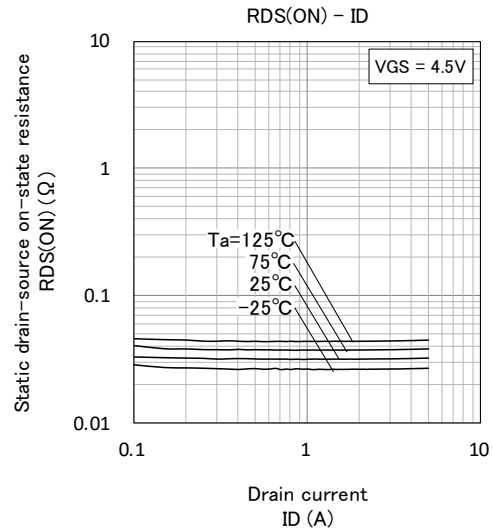
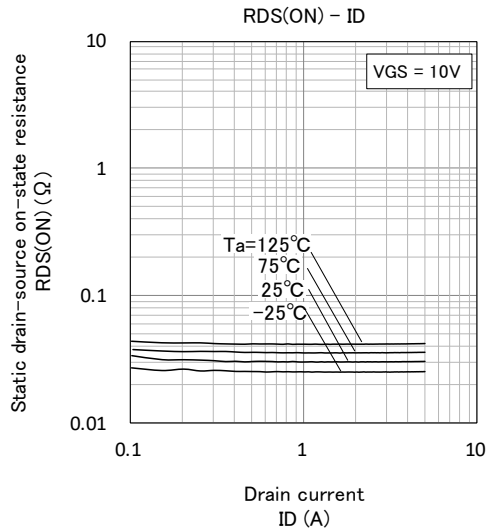


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