

INK021ABS1

High Speed Switching
Silicon N-channel MOSFET

DESCRIPTION

INK021ABS1 is a Silicon N-channel MOSFET.

This product is most suitable for use such as portable machinery, because of voltage drive and low on-resistance.

FEATURE

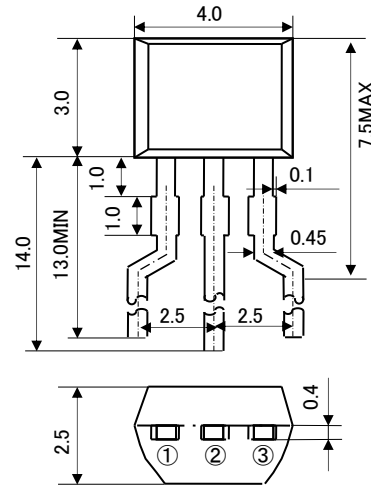
- Input impedance is high, and not necessary to consider a drive electric current.
- High drain current. $I_D=1.4A$
- Drive voltage 4.0V
- Low on Resistance. $R_{DS(on)}=0.2\Omega$ (TYP)
- High power Dissipation. $P_D=600mW$

APPLICATION

Switching

OUTLINE DRAWING

Unit: mm



TERMINAL CONNECTOR

- ①: SOURCE
- ②: DRAIN
- ③: GATE

JEITA:

JEDEC:

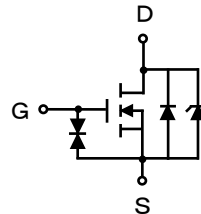
MAXIMUM RATINGS (Ta=25°C)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current(DC)	I_D	1.4	A
Drain Current(Pulse)	I_{DP}	2(※1)	A
		8(※2)	
Total Power Dissipation	P_D	600	mW
Channel Temperature	T_{ch}	+150	°C
Storage Temperature	T_{stg}	-55~+150	°C

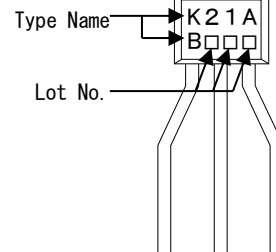
※1: $P_w \leq 3s$, Duty cycle $\leq 1\%$

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

EQUIVALENT CIRCUIT



MARKING



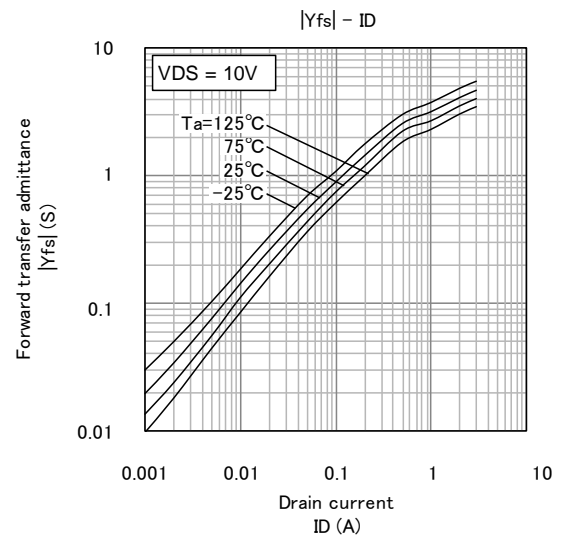
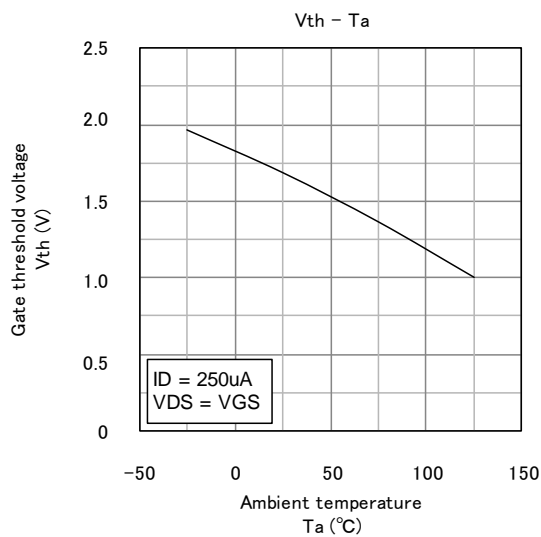
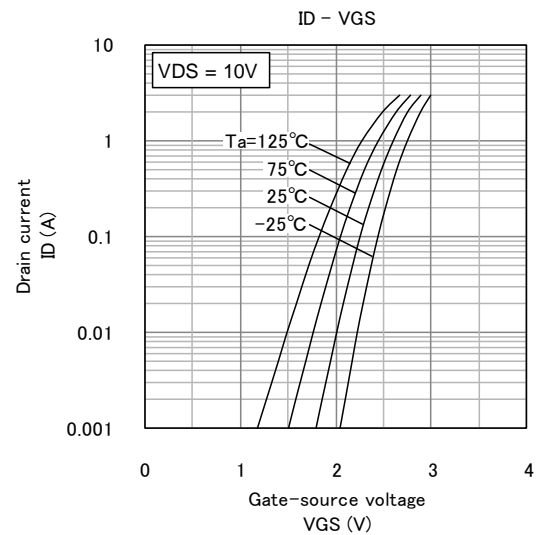
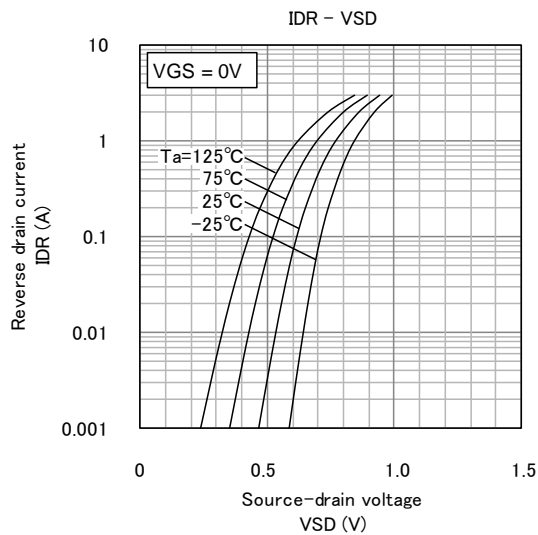
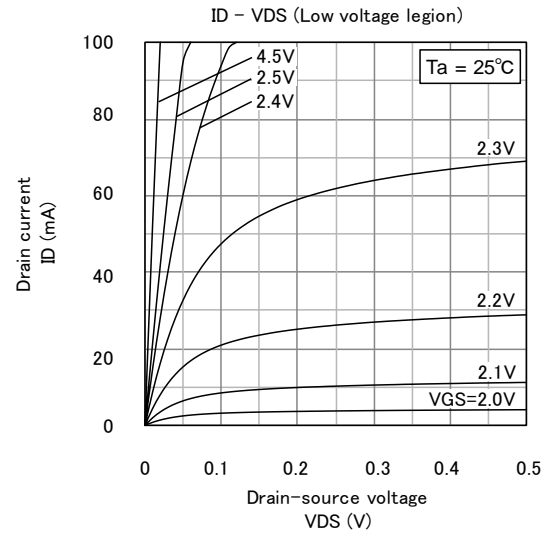
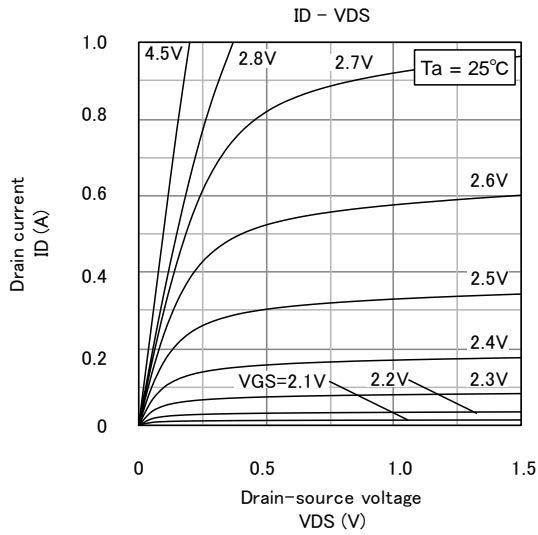
ELECTRICAL CHARACTERISTICS (Ta=25°C)

Parameter	Symbol	Test Condition	Limit			Unit
			MIN	TYP	MAX	
Drain-Source Breakdown Voltage	$V_{(BR)DS}$	$I_D=100\mu A, V_{GS}=0V$	100	-	-	V
Gate-Source Leak current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$	-	-	± 10	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100V, V_{GS}=0V$	-	-	1.0	μA
Gate Threshold Voltage	V_{th}	$I_D=250\mu A, V_{DS}=V_{GS}$	1.0	-	2.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS}=10V, I_D=1A$	-	3.6	-	S
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	$I_D=1A, V_{GS}=4.5V$	-	0.2	0.35	Ω
Input Capacitance	C_{iss}	$V_{DS}=10V, V_{GS}=0V, f=1MHz$	-	660	-	pF
Output Capacitance	C_{oss}		-	80	-	
Switching Time	t_{on}	$V_{DD}=30V, I_D=1A$	-	580	-	ns
	t_{off}	$V_{GS}=0\sim 5V$	-	910	-	

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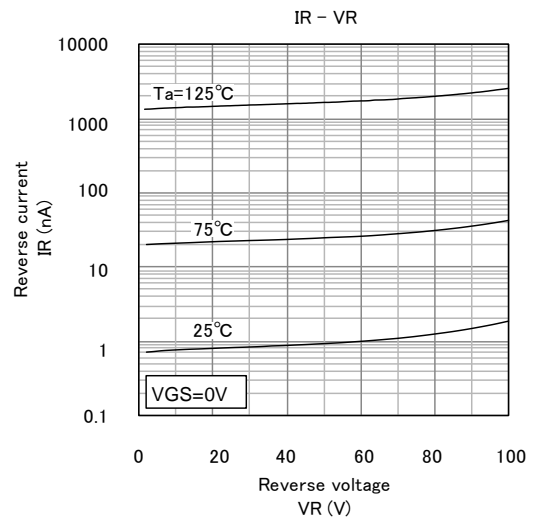
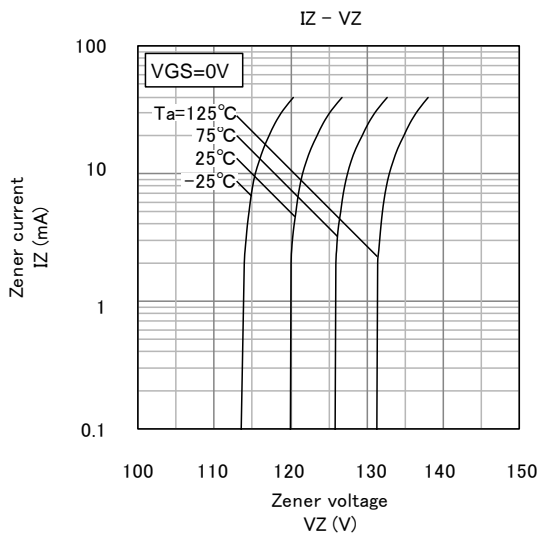
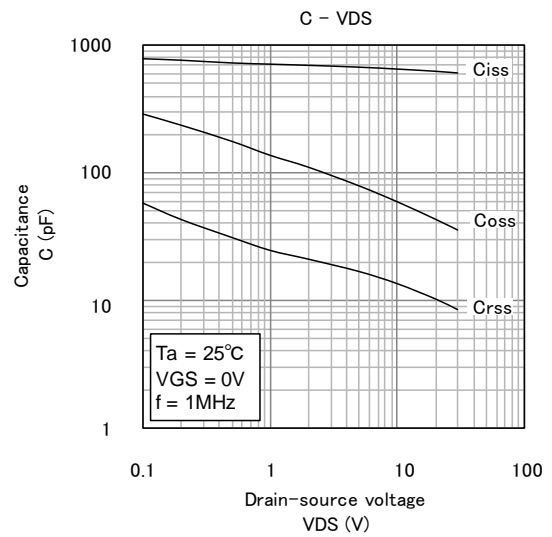
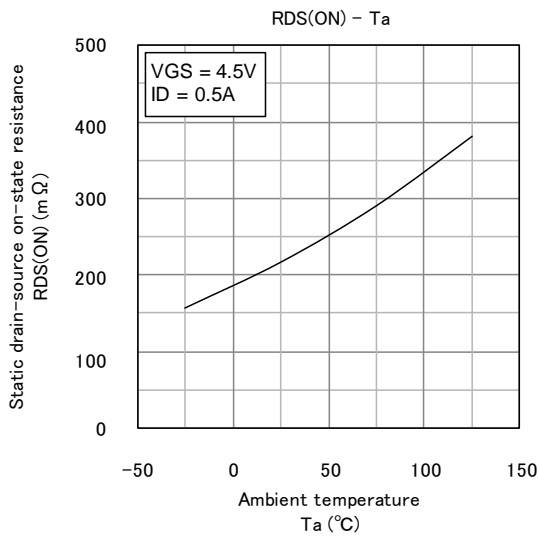
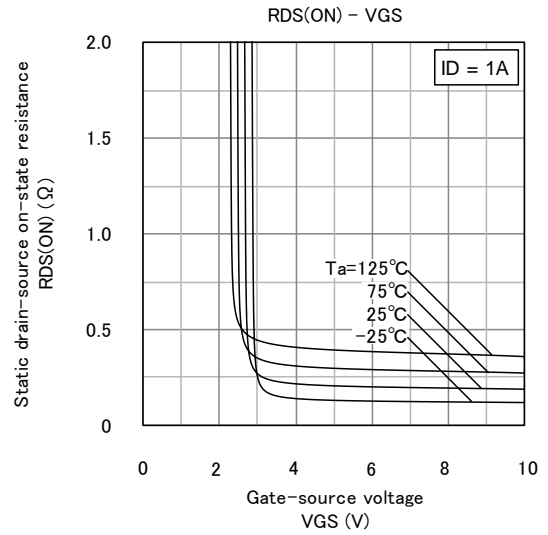
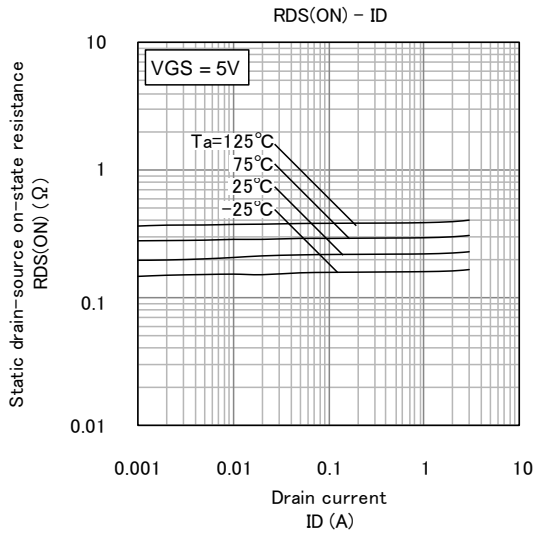
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TYPICAL CHARACTERISTICS



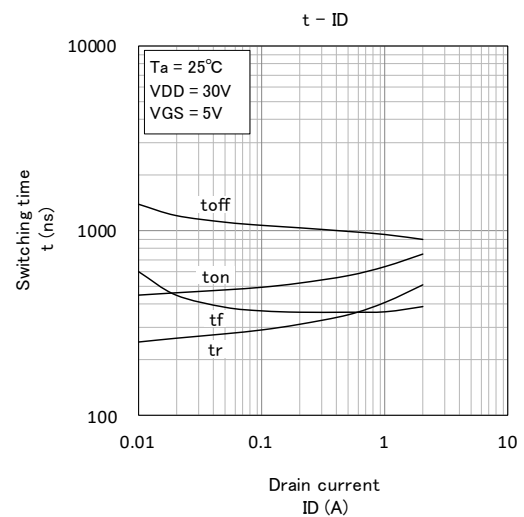
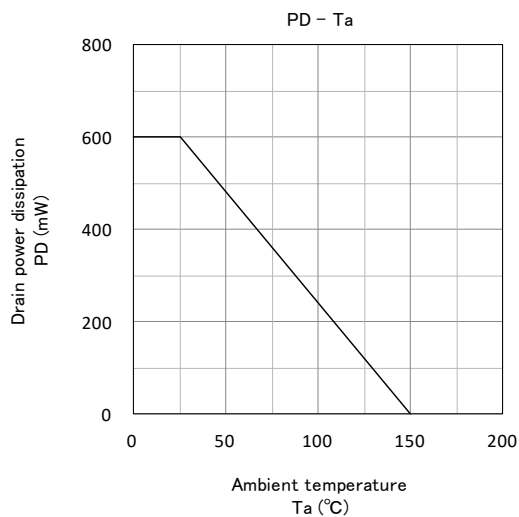
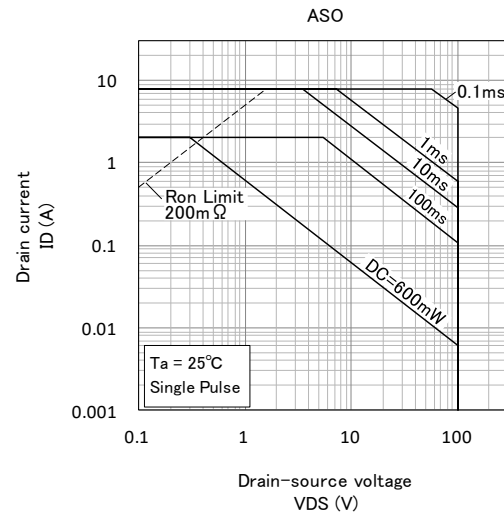
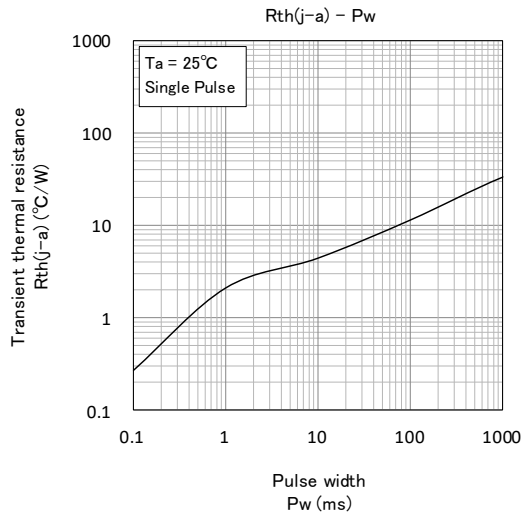
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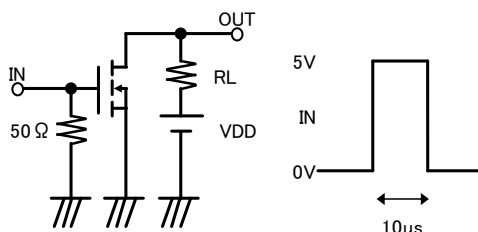


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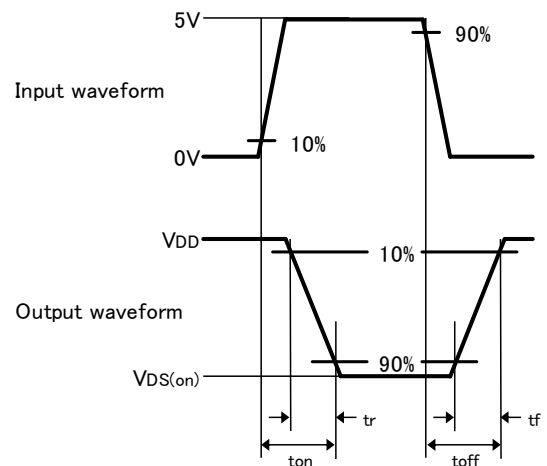
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Switching time test condition



Duty $\leq 1\%$
Input: $t_r, t_f < 10\text{ns}$
 $V_{DD} = 30\text{V}$
Common source
 $T_a = 25^{\circ}\text{C}$



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