

INK021AAP1

High Speed Switching
Silicon N-channel MOSFET

DESCRIPTION

INK021AAP1 is a Silicon N-channel MOSFET.

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

FEATURE

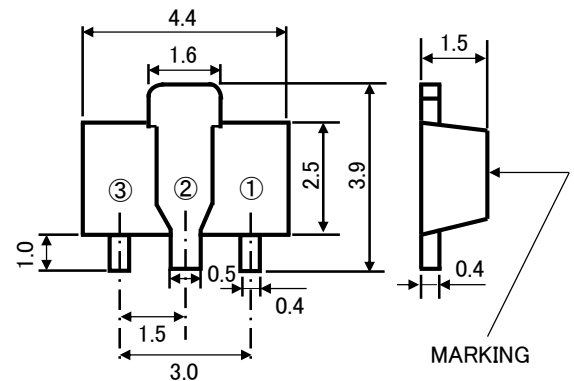
- Input impedance is high, and not necessary to consider a drive electric current.
- High drain current $I_D=2A$
- Drive voltage 4V
- Low on Resistance. $R_{DS(on)}=0.20\Omega$ (TYP).
- High speed switching.
- Small package for easy mounting.

FEATURE

Switching

OUTLINE DRAWING

UNIT: mm



TERMINAL CONNECTOR

JEITA: SC-62

①: GATE

JEDEC: SOT-89

②: DRAIN

③: SOURCE

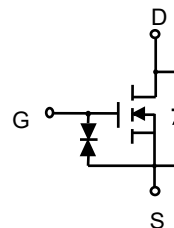
MAXIMUM RATINGS (Ta=25°C)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current(DC)	I_D	2	A
Drain Current(Pulse) (※1)	I_{DP}	8	A
Total Power Dissipation (※2)	P_D	1.5	W
Channel Temperature	T_{ch}	+150	°C
Storage Temperature	T_{stg}	-55~+150	°C

※1: Single pulse, $P_w \leq 1ms$

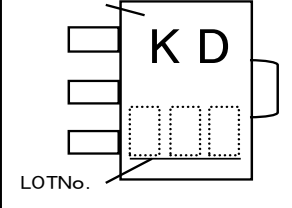
※2: package mounted on glass-epoxy substrate (20mm × 20mm × 1mm , Cu pad 257mm²).

EQUIVALENT CIRCUIT



MARKING

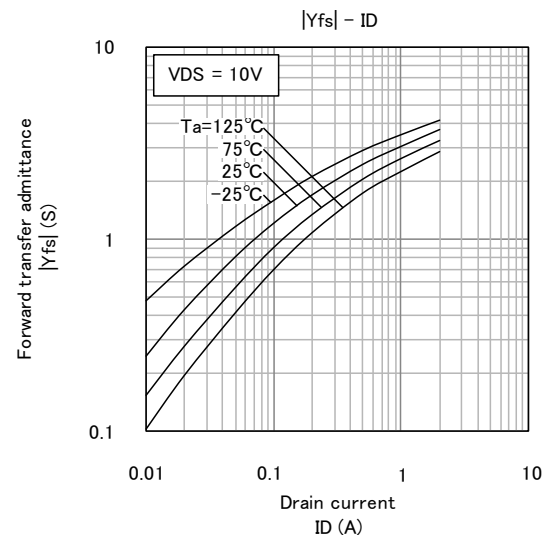
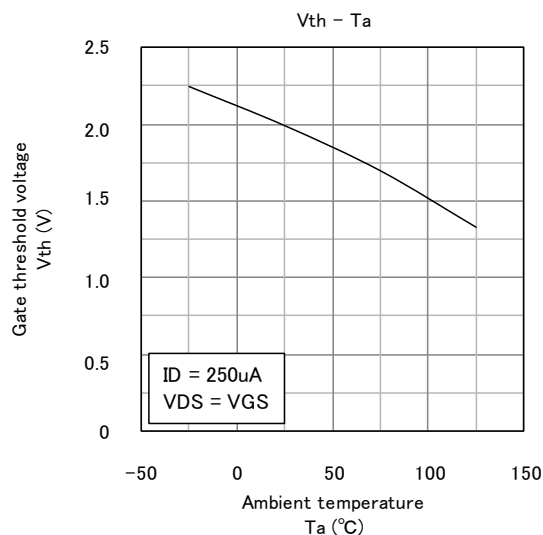
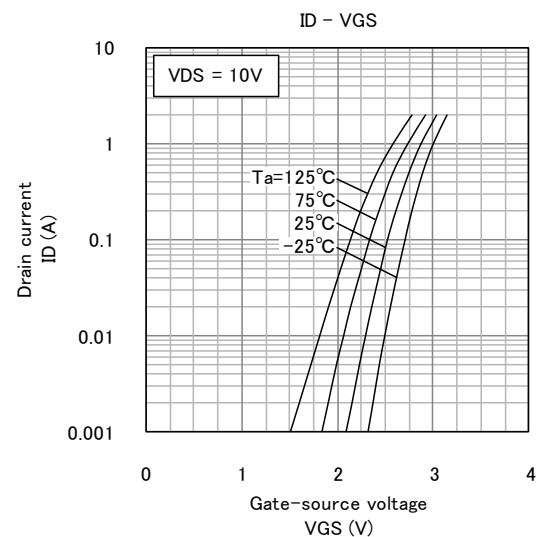
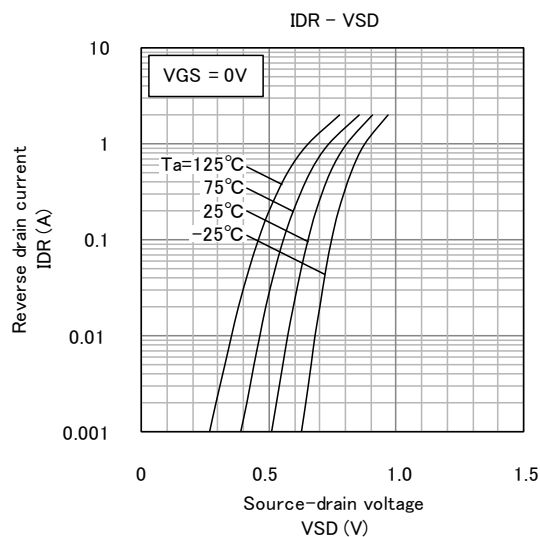
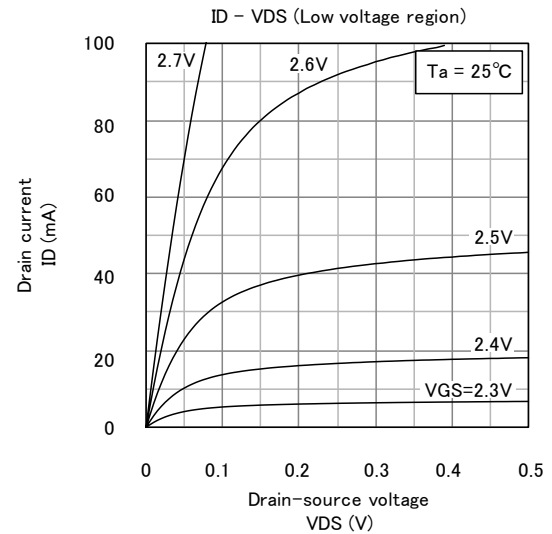
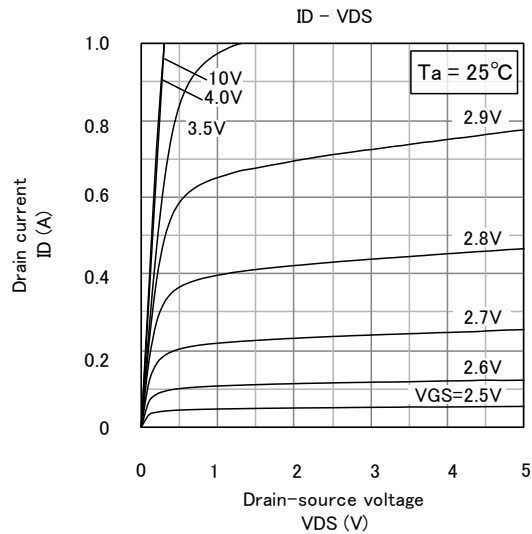
Type Name



ELECTRICAL CHARACTERISTICS (Ta=25°C)

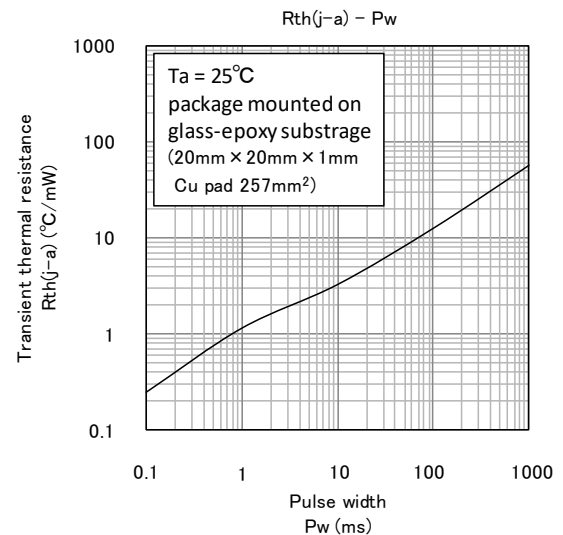
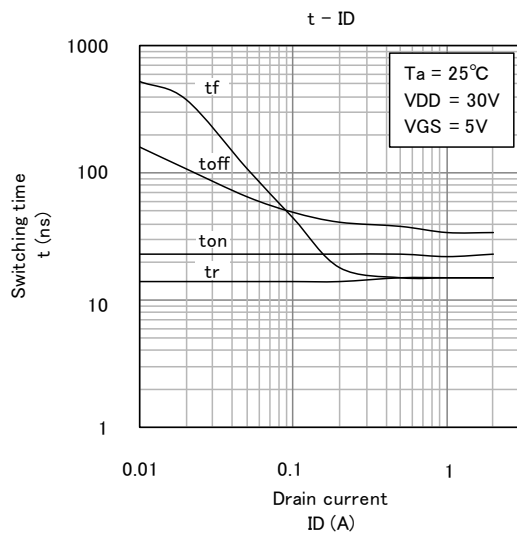
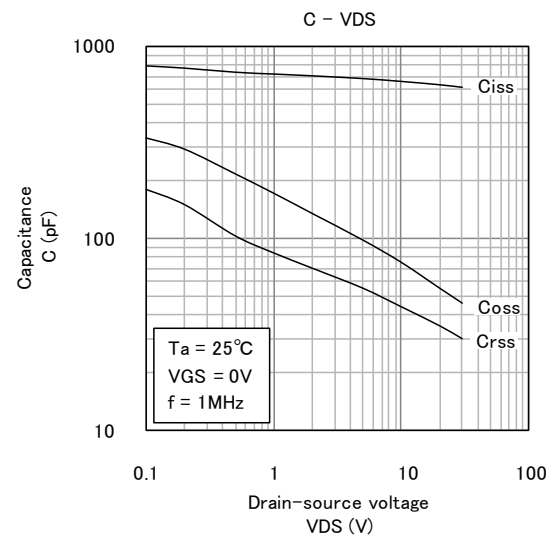
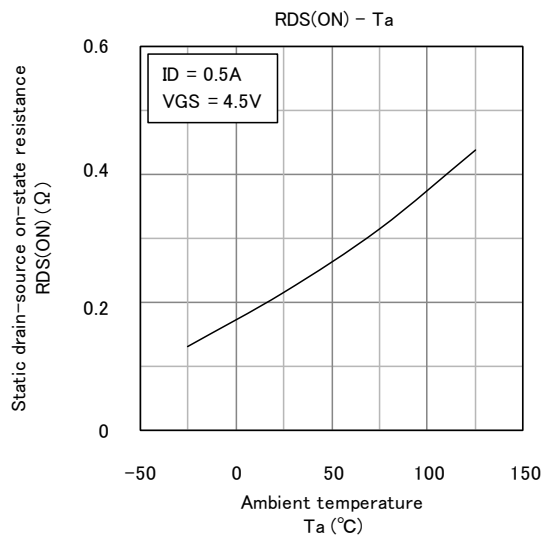
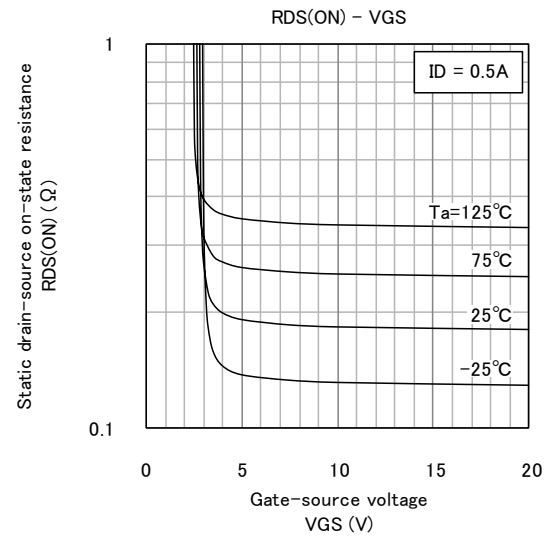
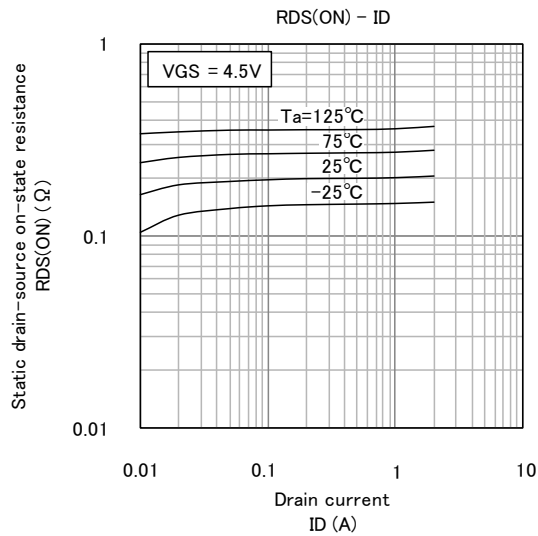
Parameter	Symbol	Test Condition	Limit			Unit
			MIN	TYP	MAX	
Drain-Source Breakdown Voltage	$V_{(BR)DS}$	$I_D=100\mu A, V_{GS}=0V$	100	-	-	V
Gate-Source Leak current	I_{GSS}	$V_{GS}=\pm 16V, V_{DS}=0V$	-	-	± 10	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100V, V_{GS}=0V$	-	-	1	μA
Gate Threshold Voltage	V_{th}	$I_D=250\mu A, V_{DS}=V_{GS}$	1.0	-	2.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS}=10V, I_D=1A$	-	3.0	-	S
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	$I_D=0.5A, V_{GS}=4.5V$	-	0.2	-	Ω
Input Capacitance	C_{iss}	$V_{DS}=10V, V_{GS}=0V, f=1MHz$	-	780	-	pF
Output Capacitance	C_{oss}		-	65	-	
Switching Time	t_{on}	$V_{DD}=30V, I_D=1A$	-	40	-	ns
	t_{off}	$V_{GS}=0\sim 5V$	-	55	-	

TYPICAL CHARACTERISTICS



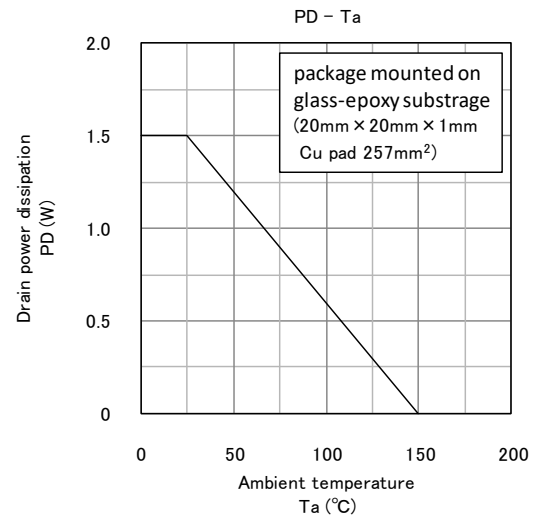
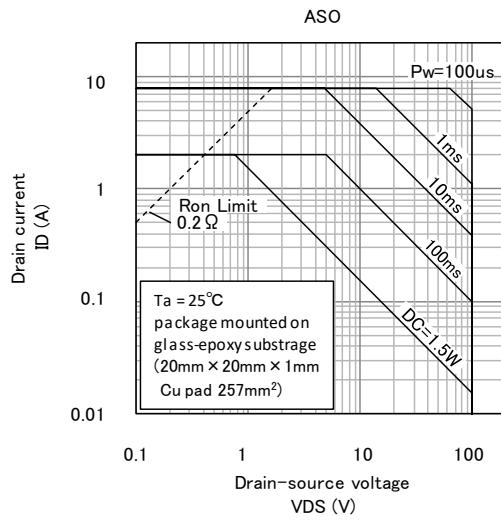
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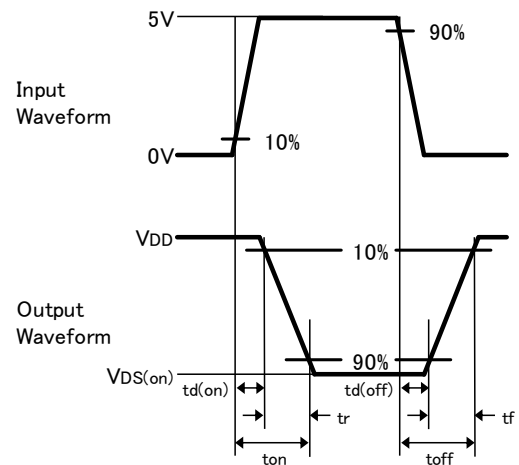
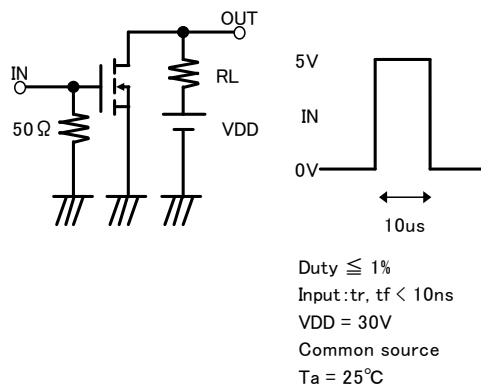


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Switching time test circuit



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