

# INJ021AAP1

High Speed Switching  
Silicon P-channel MOSFET

## DESCRIPTION

INJ021AAP1 is a Silicon P-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  $I_D = -1.2A$
- Drive voltage  $-4.0V$
- Low on Resistance.  $R_{DS(on)} = 0.7\Omega$  (TYP).
- High speed switching.

## APPLICATION

Switching

## MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Rating	Unit
V <sub>DSS</sub>	Drain-Source Voltage	-100	V
V <sub>GS</sub>	Gate-Source Voltage	±20	V
I <sub>D</sub>	Drain Current(DC)	-1.2	A
I <sub>DP</sub>	Drain current(Pulse) ※1	-3	A
P <sub>D</sub>	Total Power Dissipation※2	0.5	W
		1.2(※2)	
T <sub>ch</sub>	Channel Temperature	+150	°C
T <sub>stg</sub>	Storage temperature	-55~+150	°C

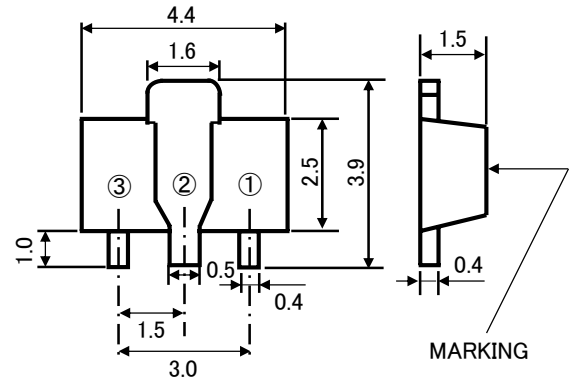
※1: Single pulse,  $P_w \leq 1ms$

※2: package mounted on glass-epoxy substrate

(20mm × 20mm × 1mm, Cu pad 100mm<sup>2</sup>)

## OUTLINE DRAWING

UNIT:mm



TERMINAL CONNECTOR

JEITA: SC-62

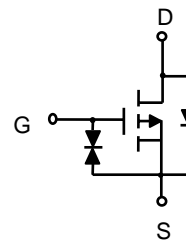
①: GATE

JEDEC: SOT-89

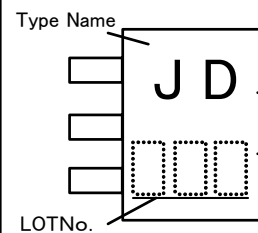
②: DRAIN

③: SOURCE

## EQUIVALENT CIRCUIT



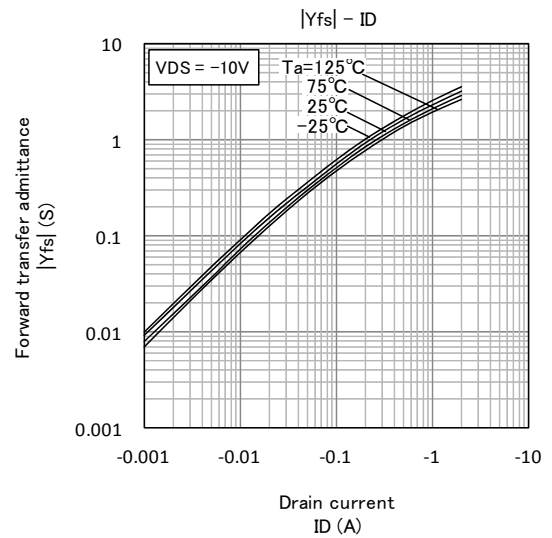
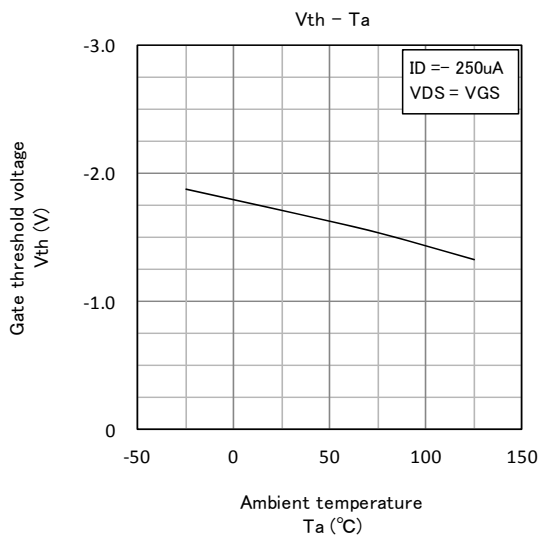
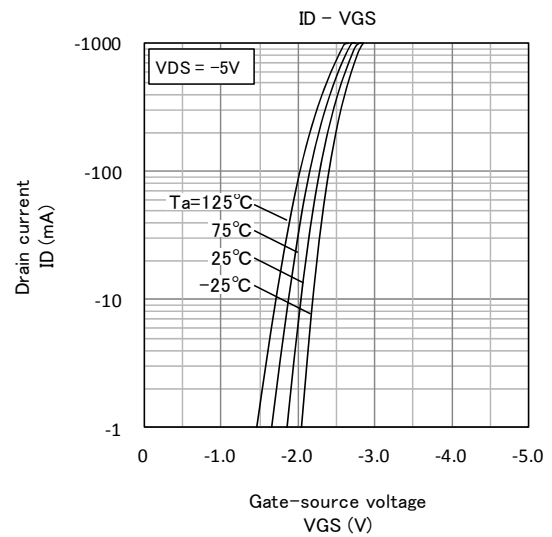
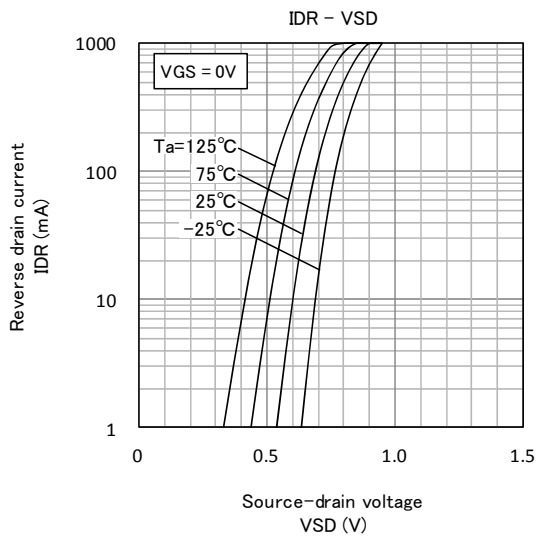
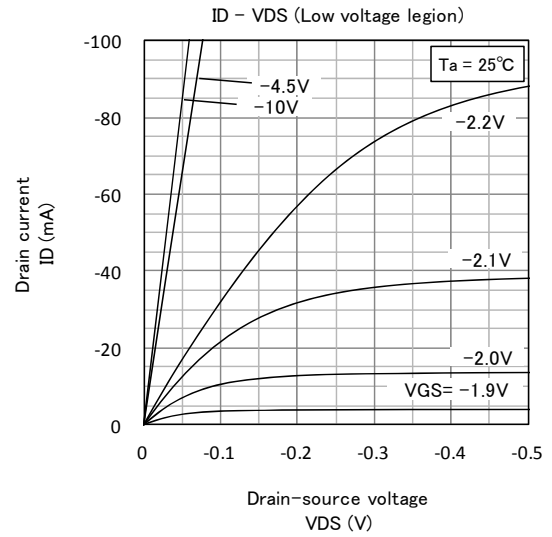
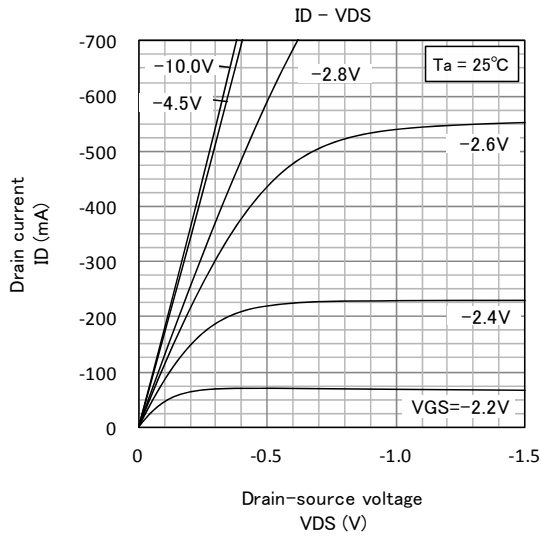
## MARKING



## ELECTRICAL CHARACTERISTICS (Ta=25°C)

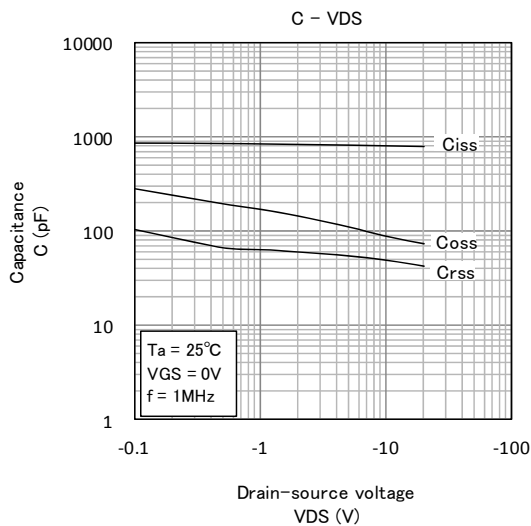
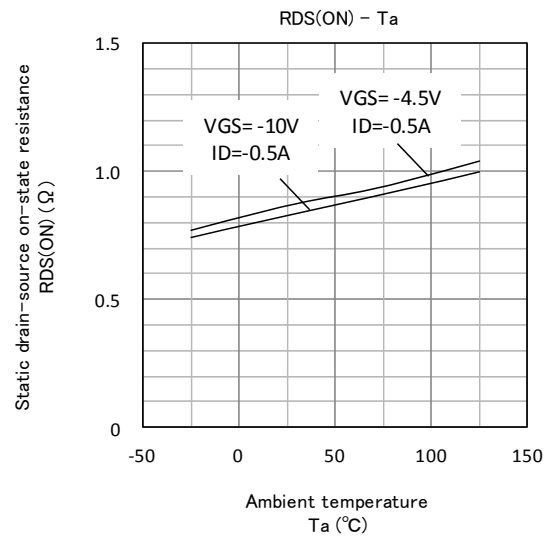
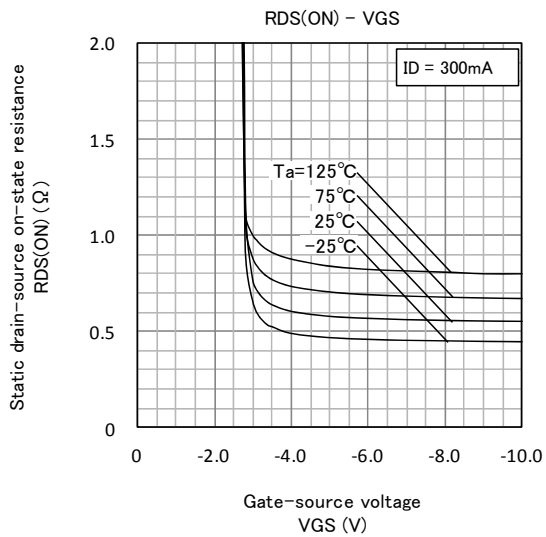
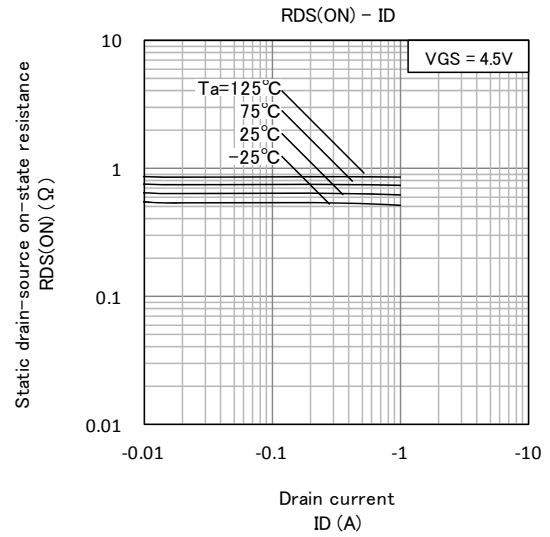
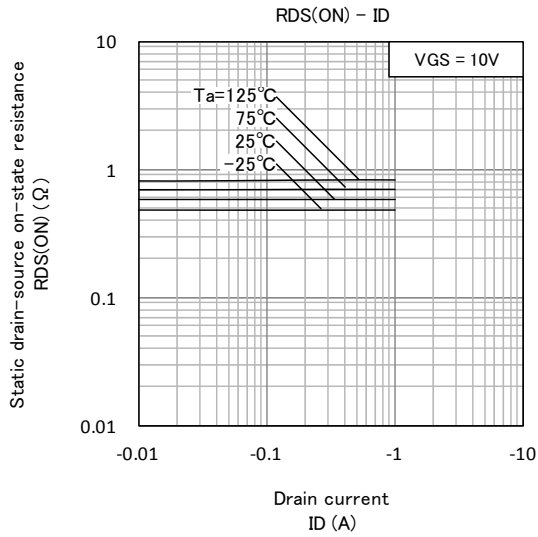
Parameter	Symbol	Test Condition	Limit			Unit
			MIN	TYP	MAX	
Drain-Source Breakdown Voltage	V(BR)DSS	$I_D = -100\mu A, V_{GS} = 0V$	-100	-	-	V
Gate-Source Leak current	I <sub>GSS</sub>	$V_{GS} = \pm 16V, I_{DS} = 0A$	-	-	±10	μA
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	$V_{DS} = -100V, V_{GS} = 0V$	-	-	-10	μA
Gate Threshold Voltage	V <sub>th</sub>	$I_D = -250\mu A, V_{DS} = V_{GS}$	-1.0	-	-2.5	V
Forward Transfer Admittance	Y <sub>fs</sub>	$V_{DS} = -10V, I_D = -1A$	-	2	-	S
Static Drain-Source On-State Resistance	R <sub>DS(ON)</sub>	$I_D = -0.5A, V_{GS} = -10V$	-	0.7	-	Ω
Input Capacitance	C <sub>iss</sub>	$V_{DS} = -10V, V_{GS} = 0V, f = 1MHz$	-	800	-	pF
Output Capacitance	C <sub>oss</sub>		-	90	-	pF
Switching Time	t <sub>on</sub>	$V_{DD} = -10V, I_D = -1A$	-	250	-	ns
	t <sub>off</sub>	$V_{GS} = 0 \sim -5V$	-	530	-	ns

## TYPICAL CHARACTERISTICS



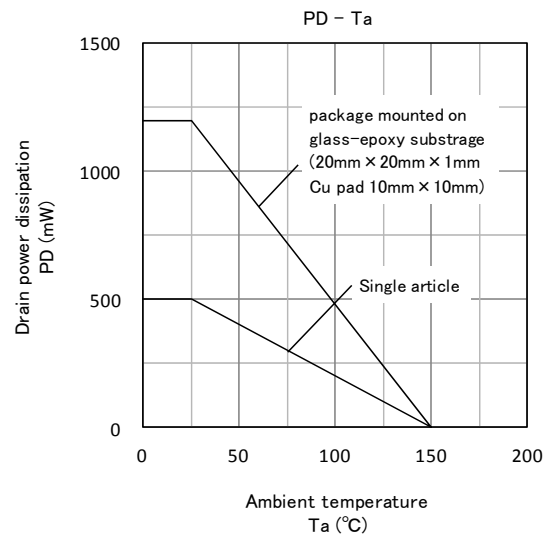
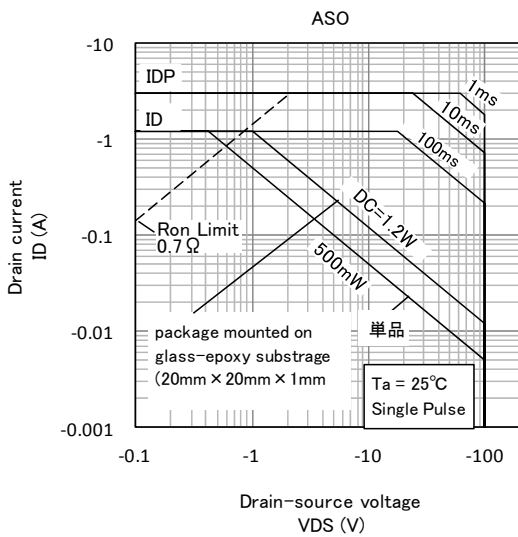
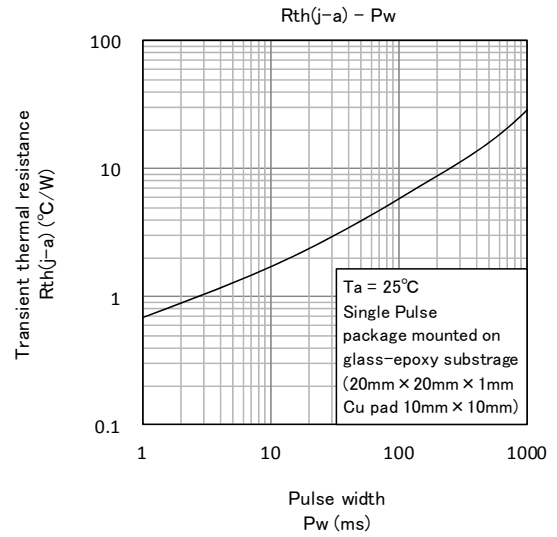
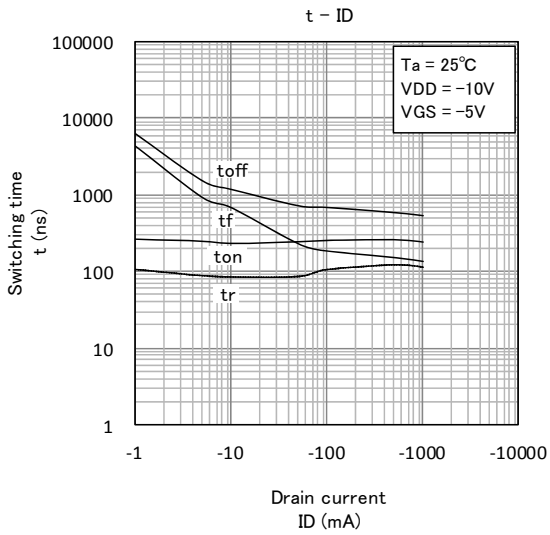
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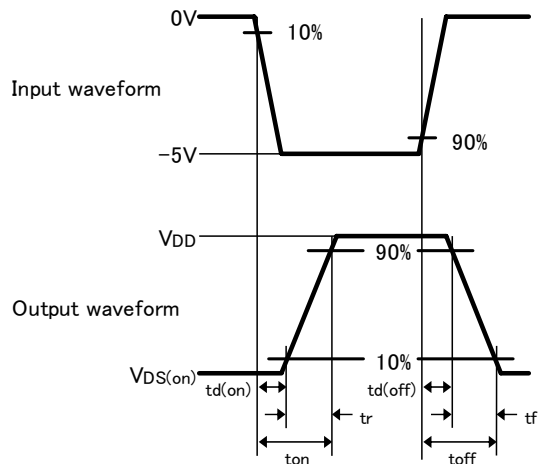
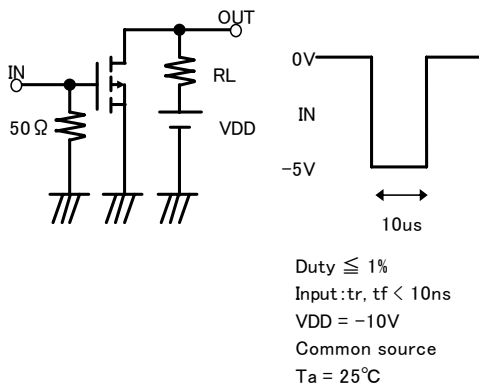


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Switching time test condition





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