

# INJ0002AX SERIES

High speed switching  
Silicon P-channel MOSFET

## DESCRIPTION

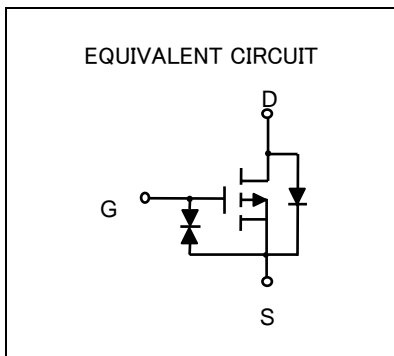
INJ0002AX is a Silicon P-channel MOSFET.  
This product is most suitable for low voltage use such as portable machinery, because of low voltage drive and low on resistance.

## FEATURE

- Input impedance is high, and not necessary to consider a drive electric current.
- V<sub>th</sub> is low, and drive by low voltage is possible. V<sub>th</sub>=-0.6~-1.2V
- Low on Resistance. Ron=3Ω(TYP)
- High speed switching.
- Small package for easy mounting.

## APPLICATION

high speed switching, Analog switching



## OUTLINE DRAWING

Unit: mm

Model	JEITA, JEDEC	ISAHAYA	Terminal Connector
INJ0002AT2	—	T-USM	①: GATE ②: SOURCE ③: DRAIN
INJ0002AM1	SC-70	—	①: GATE ②: SOURCE ③: DRAIN
INJ0002AU1	SC-75A	—	①: GATE ②: SOURCE ③: DRAIN
INJ0002AC1	SC-59	Similar to TO-236	T TERMINAL CONNECTOR ①: GATE ②: SOURCE ③: DRAIN

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High speed switching  
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## MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING				UNIT
		INJ0002AT2	INJ0002AU1	INJ0002AM1	INJ0002AC1	
V <sub>DSS</sub>	Drain-source voltage	-30				V
V <sub>GSS</sub>	Gate-source voltage	±8				V
I <sub>D</sub>	Drain current	-200				mA
P <sub>C</sub>	Total power dissipation (Ta=25°C)	125(※)	150	200		mW
T <sub>ch</sub>	Channel temperature	+125	+150			°C
T <sub>stg</sub>	Range of Storage temperature	-55~+125	-55~+150			°C

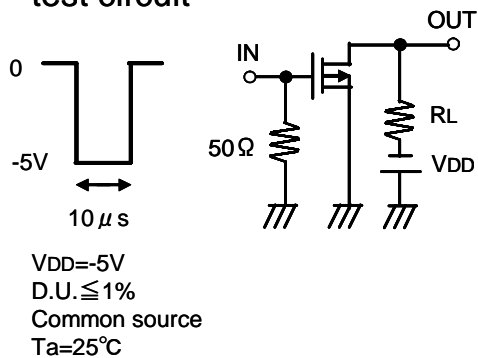
## ELECTRICAL CHARACTERISTICS (Ta=25°C)

※package mounted on 9mm × 19mm × 1mm glass-epoxy substrate.

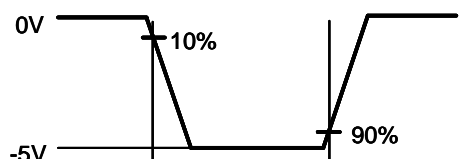
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT
			MIN	TYP	MAX	
V <sub>(BR)DSS</sub>	Drain-source breakdown voltage	I <sub>D</sub> =-100 μA, V <sub>GS</sub> =0V	-30	-	-	V
I <sub>GSS</sub>	Gate-source leak current	V <sub>GS</sub> =±5V, V <sub>DS</sub> =0V	-	-	±0.5	μA
I <sub>DSS</sub>	Zero gate voltage drain current	V <sub>DS</sub> =-30V, V <sub>GS</sub> =0V	-	-	-1.0	μA
V <sub>th</sub>	Gate threshold voltage	I <sub>D</sub> =-250 μA, V <sub>DS</sub> =V <sub>GS</sub>	-0.6	-	-1.2	V
Y <sub>fs</sub>	Forward transfer admittance	V <sub>DS</sub> =-10V, I <sub>D</sub> =-0.1A	-	220	-	mS
R <sub>DS(ON)</sub>	Static drain-source on-state resistance	I <sub>D</sub> =-100mA, V <sub>GS</sub> =-4.0V	-	3	-	Ω
C <sub>iss</sub>	Input capacitance	V <sub>DS</sub> =-10V, V <sub>GS</sub> =0V, f=1MHz	-	35	-	pF
C <sub>oss</sub>	Output capacitance	V <sub>DS</sub> =-10V, V <sub>GS</sub> =0V, f=1MHz	-	7.3	-	pF
t <sub>ON</sub>	Switching time	V <sub>DD</sub> =-5V, I <sub>D</sub> =-10mA V <sub>GS</sub> =0~-5V	-	14	-	ns
t <sub>OFF</sub>			-	100	-	

## Switching time test condition

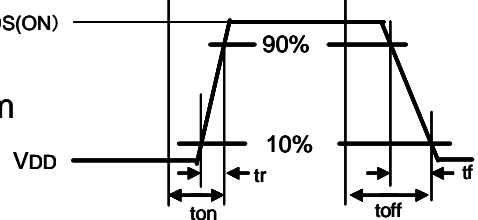
### test circuit



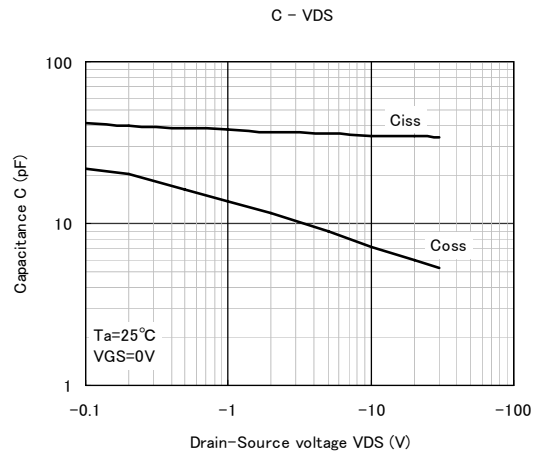
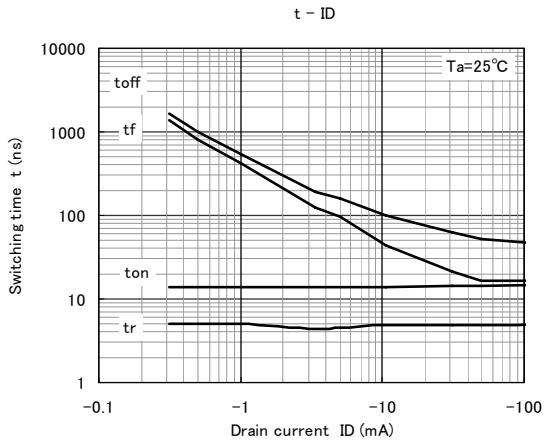
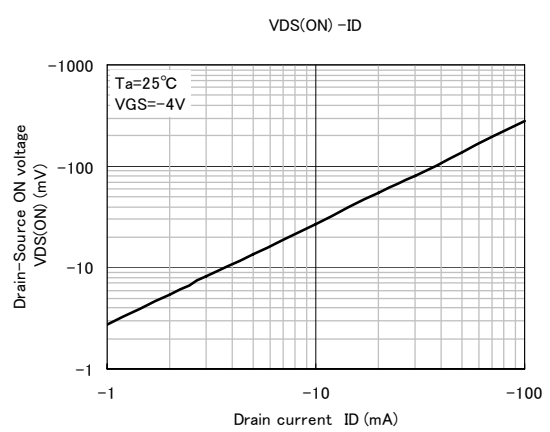
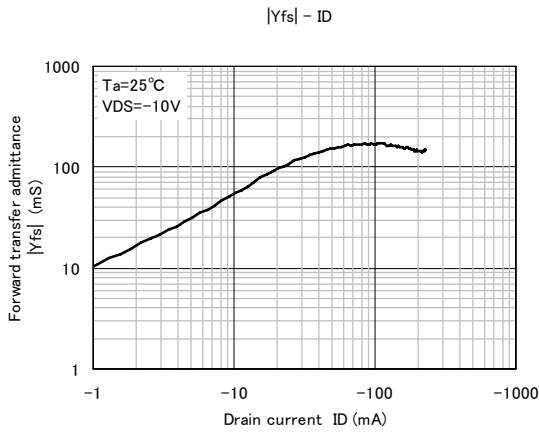
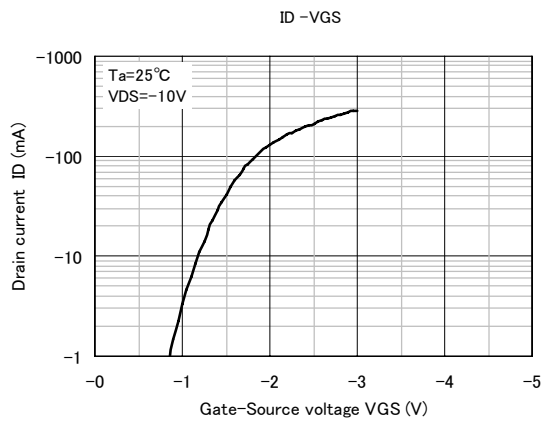
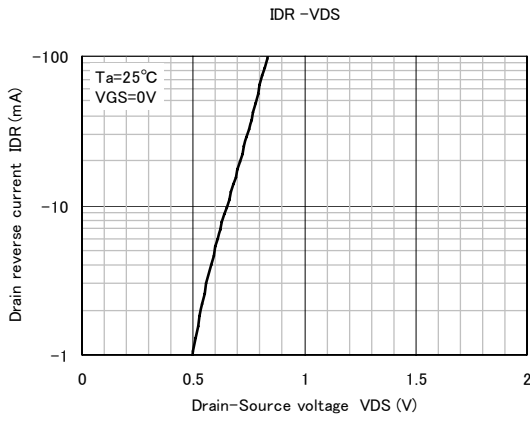
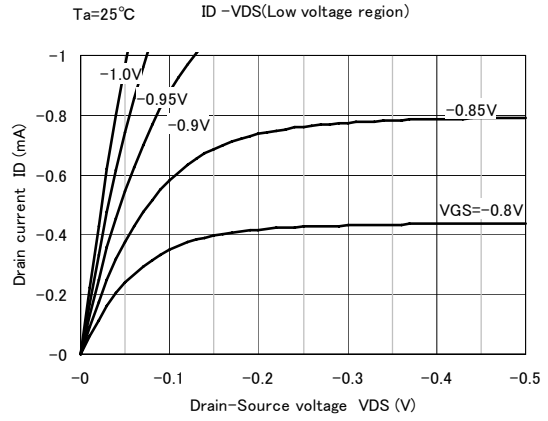
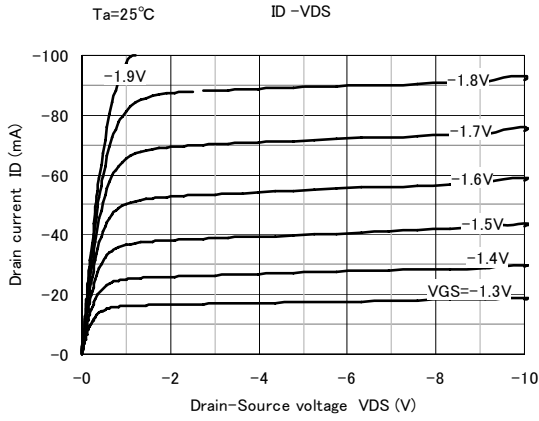
### input waveform



### output waveform



# TYPICAL CHARACTERISTICS





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