

# INJ0003AX SERIES

High speed switching  
Silicon P-channel MOSFET

## DESCRIPTION

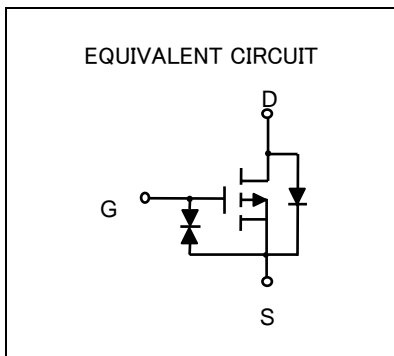
INJ0003AX is a Silicon P-channel MOSFET.  
This product is most suitable for low voltage use such as portable machinery, because of low voltage drive and low on resistance.

## 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=2Ω(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
INJ0003AT2	—	—	①: GATE ②: SOURCE ③: DRAIN
INJ0003AM1	SC-70	—	①: GATE ②: SOURCE ③: DRAIN
INJ0003AU1	SC-75A	—	①: GATE ②: SOURCE ③: DRAIN
INJ0003AC1	SC-59	Similar to TO-236	T TERMINAL CONNECTOR ①: GATE ②: SOURCE ③: DRAIN

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High speed switching  
Silicon P-channel MOSFET

## MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING				UNIT
		INJ0003AT2	INJ0003AU1	INJ0003AM1	INJ0003AC1	
V <sub>DSS</sub>	Drain-source voltage	-20				V
V <sub>GSS</sub>	Gate-source voltage	±8				V
I <sub>D</sub>	Drain current	-200				mA
P <sub>D</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

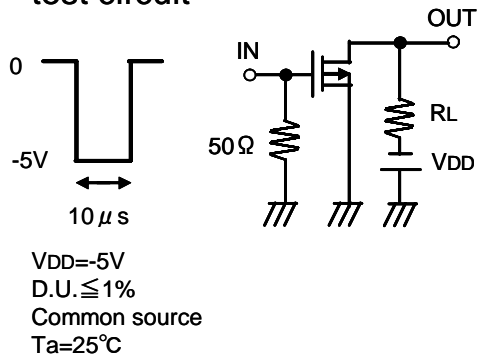
## ELECTRICAL CHARACTERISTICS (Ta=25°C)

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

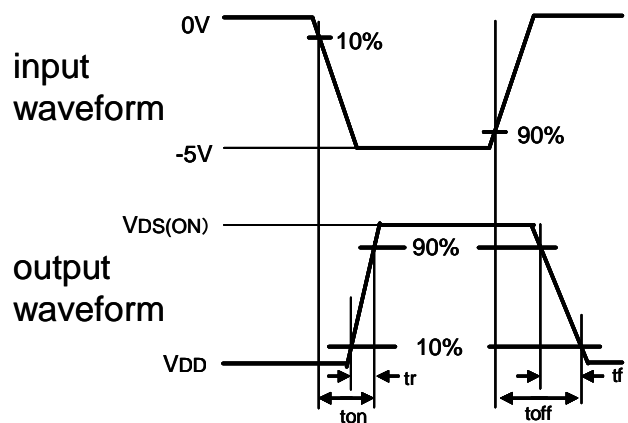
SYMBOL	PARAMETER	TEST CONDITION	LIMIT			UNIT											
			MIN	TYP	MAX												
V <sub>(BR)DSS</sub>	Drain-source breakdown voltage	I <sub>D</sub> = -100 μA, V <sub>GS</sub> = 0V	-20	-	-	V											
I <sub>GSS</sub>	Gate-source leak current	V <sub>GS</sub> = ±5V, V <sub>DS</sub> = 0V	-	-	±0.5	μA											
I <sub>DSS</sub>	Zero gate voltage drain current	V <sub>DS</sub> = -20V, 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	-	280	-	mS											
R <sub>DS(ON)</sub>	Static drain-source on-state resistance	I <sub>D</sub> = -100mA, V <sub>GS</sub> = -4.0V	-	2	-	Ω											
C <sub>iss</sub>	Input capacitance	V <sub>DS</sub> = -10V, V <sub>GS</sub> = 0V, f = 1MHz	-	37	-	pF											
C <sub>oss</sub>	Output capacitance	V <sub>DS</sub> = -10V, V <sub>GS</sub> = 0V, f = 1MHz	-	12	-	pF	t <sub>ON</sub>	Switching time	V <sub>DD</sub> = -5V, I <sub>D</sub> = -10mA V <sub>GS</sub> = 0 ~ -5V	-	16	-	ns	t <sub>OFF</sub>	-	110	-
t <sub>ON</sub>	Switching time	V <sub>DD</sub> = -5V, I <sub>D</sub> = -10mA V <sub>GS</sub> = 0 ~ -5V	-	16	-	ns											
t <sub>OFF</sub>			-	110	-												

## Switching time test condition

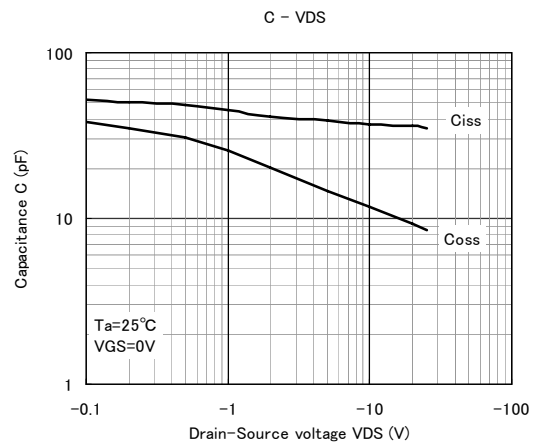
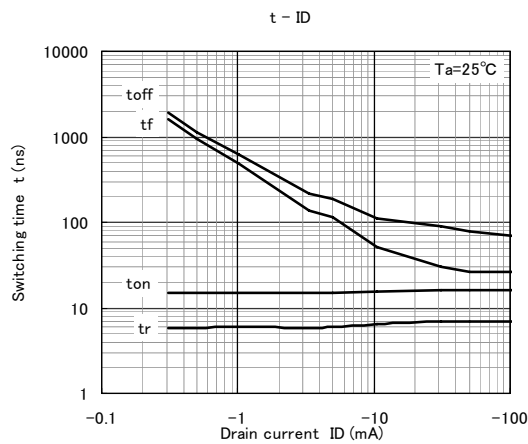
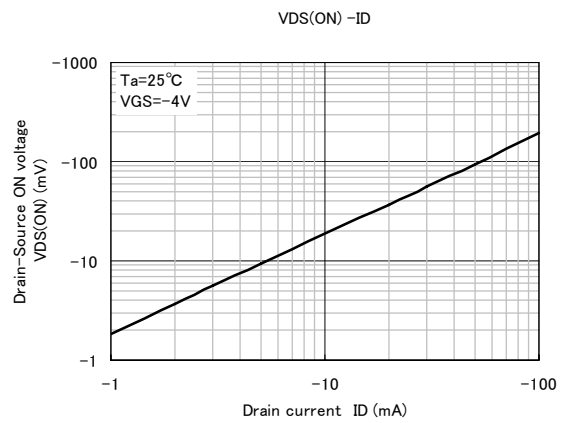
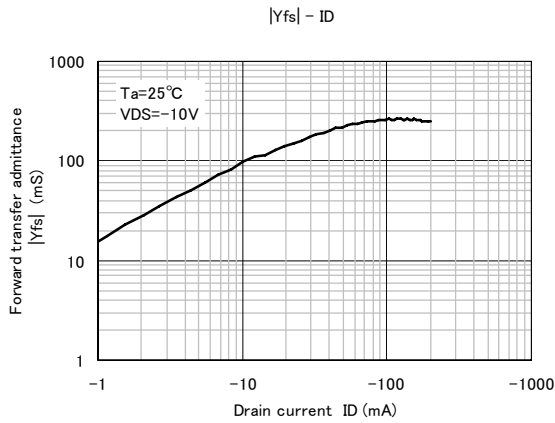
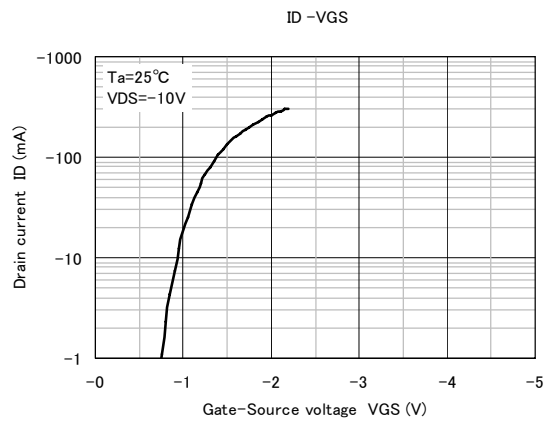
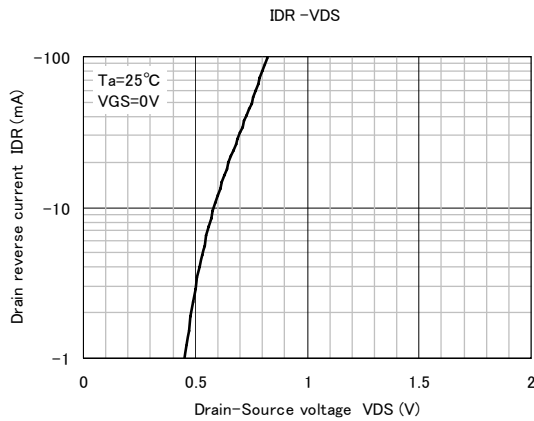
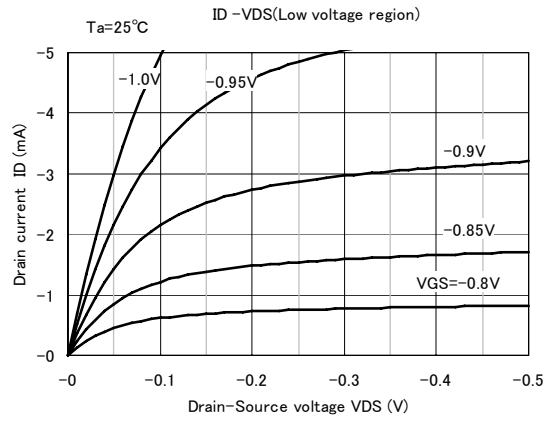
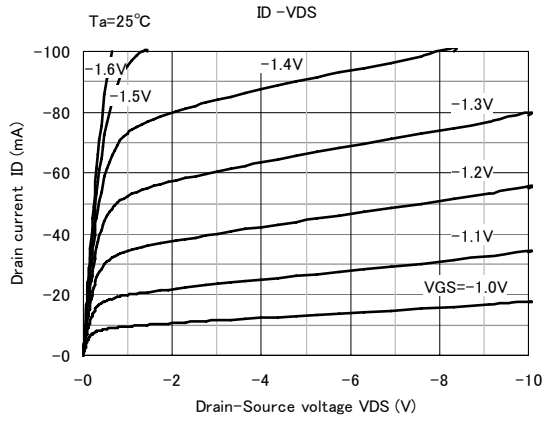
### test circuit



### input waveform



# TYPICAL CHARACTERISTICS





*Marketing division, Marketing planning department*

6-41 Tsukuba, Isahaya, Nagasaki, 854-0065 Japan

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