

INJ0001AX SERIES

High speed switching
Silicon P-channel MOSFET

DESCRIPTION

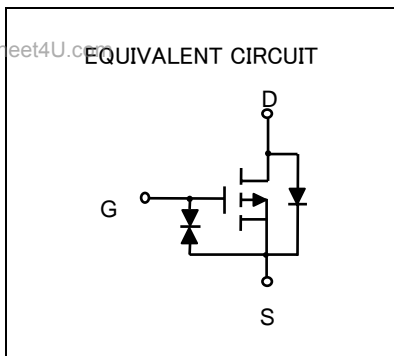
INJ0001AX is a Silicon P-channel MOSFET.
This product is most suitable for low voltage use such as portable machinery, because of low voltage drive and low on resistance.

FEATURE

- Input impedance is high, and not necessary to consider a drive electric current.
- Vth is low, and drive by low voltage is possible. Vth=-0.6~-1.2V
- Low on Resistance. Ron=7Ω(TYP)
- High speed switching.
- Small package for easy mounting.

APPLICATION

high speed switching, Analog switching



| OUTLINE DRAWING | | Unit: mm |
|--|---|----------|
| <p>INJ0001AT2</p> <p>JEITA, JEDEC: — ISAHAYA: T-USM</p> <p>TERMINAL CONNECTOR ①: GATE ②: SOURCE ③: DRAIN</p> | <p>INJ0001AM1</p> <p>JEITA: SC-70 JEDEC: —</p> <p>TERMINAL CONNECTOR ①: GATE ②: SOURCE ③: DRAIN</p> | |
| <p>INJ0001AU1</p> <p>JEITA: SC-75A JEDEC: —</p> <p>TERMINAL CONNECTOR ①: GATE ②: SOURCE ③: DRAIN</p> | <p>INJ0001AC1</p> <p>JEITA: SC-59 JEDEC: Similar to TO-236</p> <p>T TERMINAL CONNECTOR ①: GATE ②: SOURCE ③: DRAIN</p> | |

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MAXIMUM RATING (Ta=25°C)

| SYMBOL | PARAMETER | RATING | | | | UNIT |
|------------------|-----------------------------------|------------|------------|------------|------------|------|
| | | INJ0001AT2 | INJ0001AU1 | INJ0001AM1 | INJ0001AC1 | |
| V _{DSS} | Drain-source voltage | -50 | | | | V |
| V _{GSS} | Gate-source voltage | ±8 | | | | V |
| I _D | Drain current | -100 | | | | mA |
| P _D | Total power dissipation (Ta=25°C) | 125(※) | 150 | 200 | | mW |
| T _{ch} | Channel temperature | +125 | +150 | | | °C |
| T _{stg} | Range of Storage temperature | -55~+125 | -55~+150 | | | °C |

ELECTRICAL CHARACTERISTICS (Ta=25°C)

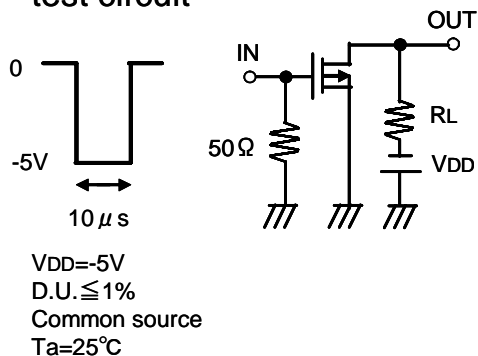
※package mounted on 9mm × 19mm × 1mm glass-epoxy substrate.

| SYMBOL | PARAMETER | TEST CONDITION | LIMIT | | | UNIT |
|----------------------|---|---|-------|-----|------|------|
| | | | MIN | TYP | MAX | |
| V _{(BR)DSS} | Drain-source breakdown voltage | I _D =-100 μA, V _{GS} =0V | -50 | - | - | V |
| I _{GSS} | Gate-source leak current | V _{GS} =±5V, V _{DS} =0V | - | - | ±0.5 | μA |
| I _{DSS} | Zero gate voltage drain current | V _{DS} =-50V, V _{GS} =0V | - | - | -1.0 | μA |
| V _{th} | Gate threshold voltage | I _D =-250 μA, V _{DS} =V _{GS} | -0.6 | - | -1.2 | V |
| Y _{fs} | Forward transfer admittance | V _{DS} =-10V, I _D =-0.1A | - | 220 | - | mS |
| R _{DS(ON)} | Static drain-source on-state resistance | I _D =-100mA, V _{GS} =-4.0V | - | 7 | - | Ω |
| C _{iss} | Input capacitance | V _{DS} =-10V, V _{GS} =0V, f=1MHz | - | 28 | - | pF |
| C _{oss} | Output capacitance | V _{DS} =-10V, V _{GS} =0V, f=1MHz | - | 5.2 | - | pF |
| t _{ON} | Switching time | V _{DD} =-5V, I _D =-10mA | - | 13 | - | ns |
| t _{OFF} | | V _{GS} =0~-5V | - | 135 | - | |

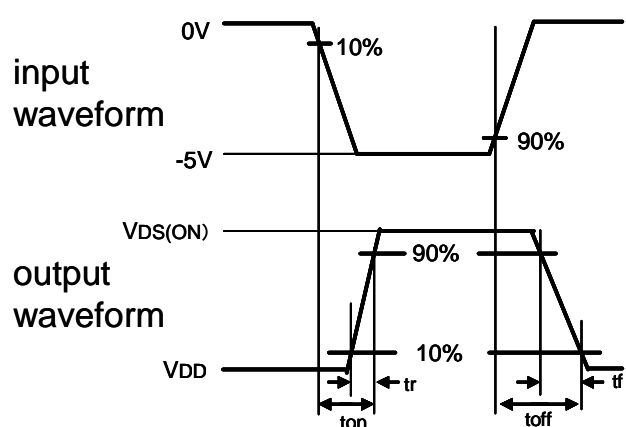
Switching time test condition

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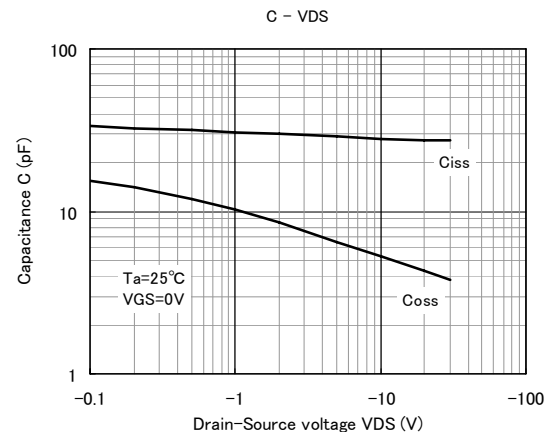
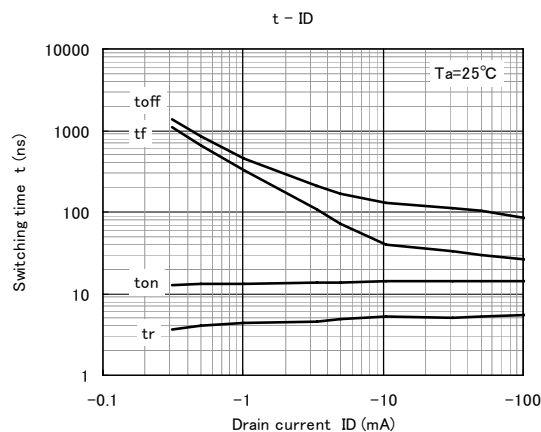
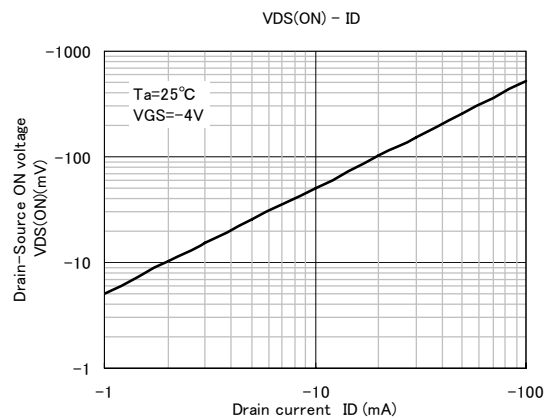
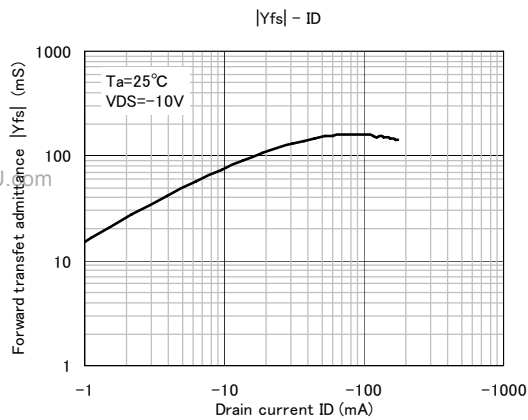
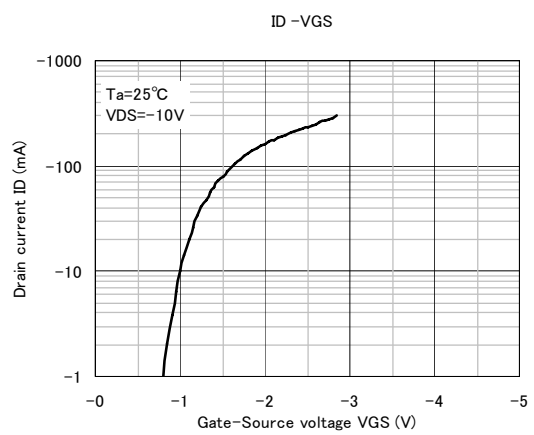
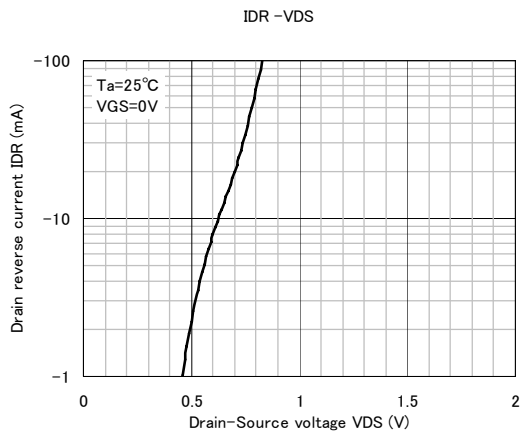
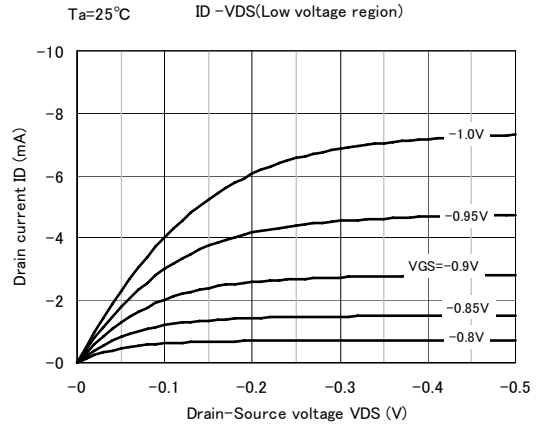
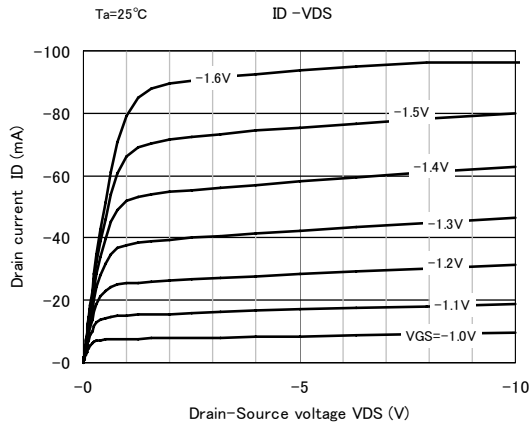
test circuit



input waveform



TYPICAL CHARACTERISTICS





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