

INJ0011AM1-TH50

High Speed Switching
Silicon P-channel MOSFET

AEC-Q101 COMPLIANCE

DESCRIPTION

INJ0011AM1 is a Silicon P-channel MOSFET.

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

FEATURE

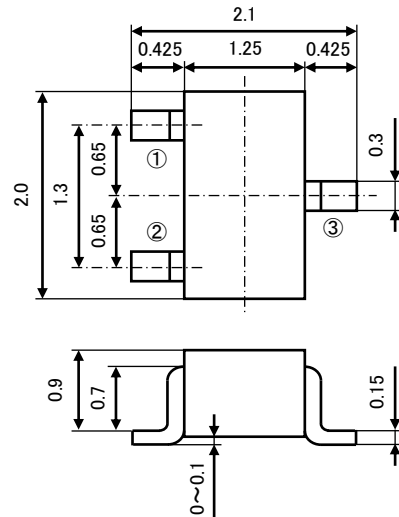
- Input impedance is high, and not necessary to consider a drive electric current.
- Drive voltage -4V
- Low on Resistance.
 $R_{DS(ON)}=7.0\ \Omega$ (TYP) @ $I_D=-100\text{mA}$, $V_{GS}=-4.0\text{V}$
 $R_{DS(ON)}=4.8\ \Omega$ (TYP) @ $I_D=-100\text{mA}$, $V_{GS}=-10\text{V}$
- High speed switching.
- Small package for easy mounting.

APPLICATION

High speed switching , Analog switching

OUTLINE DRAWING

UNIT: mm



TERMINAL

CONNECTOR JEITA: SC-70

①: GATE JEDEC: -

②: SOURCE

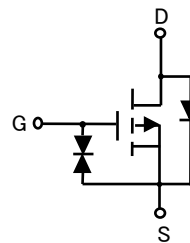
③: DRAIN

MAXIMUM RATING (Ta=25°C)

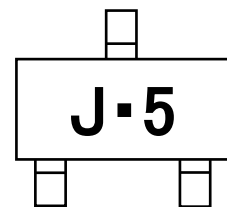
| SYMBOL | PARAMETER | RATING | UNIT |
|--------|------------------------------|----------|------|
| VDSS | Drain-source voltage | -50 | V |
| VGSS | Gate-source voltage | ±20 | V |
| ID | Drain current(DC) | -100 | mA |
| IDP | Drain current(Pulse) ※1 | -400 | mA |
| PD | Total power dissipation | 200 | mW |
| Tch | Channel temperature | +150 | °C |
| Tstg | Range of Storage temperature | -55~+150 | °C |

※1: Pw ≤ 10 μs, Duty cycle ≤ 1%

EQUIVALENT CIRCUIT



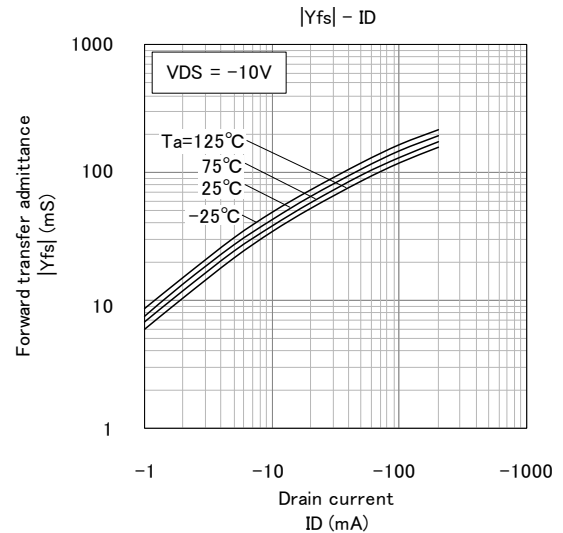
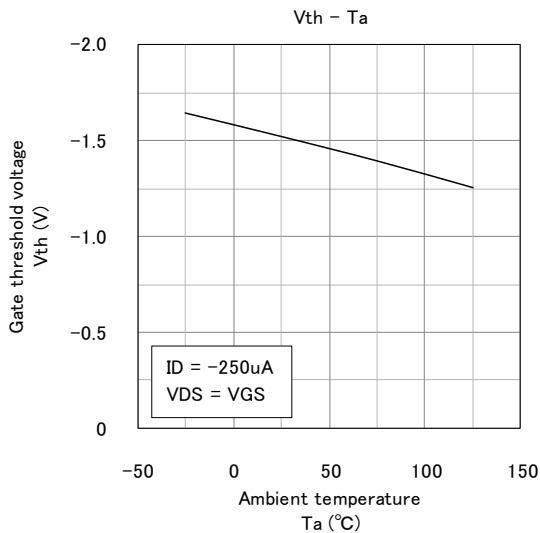
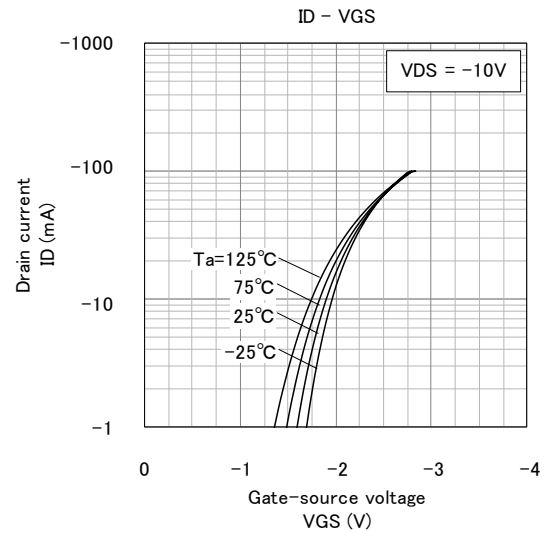
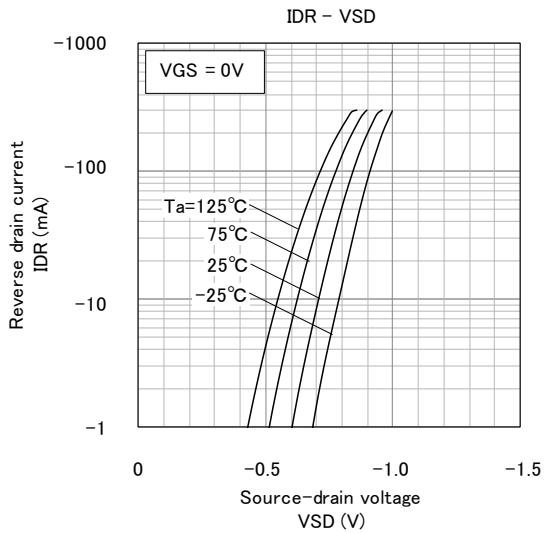
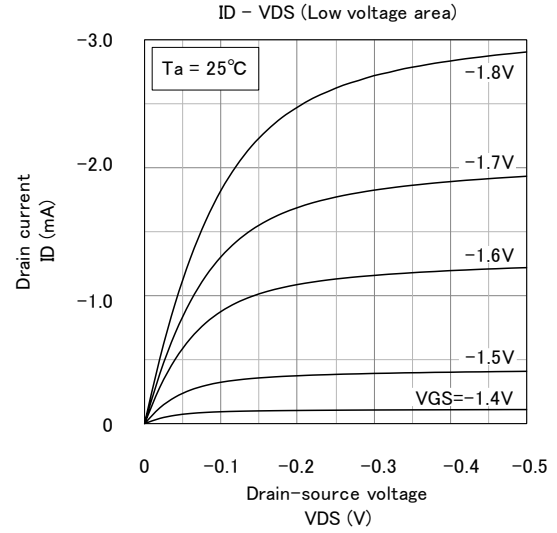
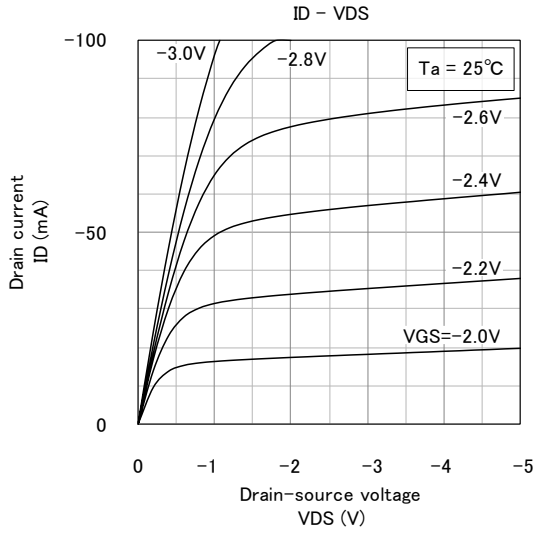
MARKING



ELECTRICAL CHARACTERISTICS (Ta=25°C)

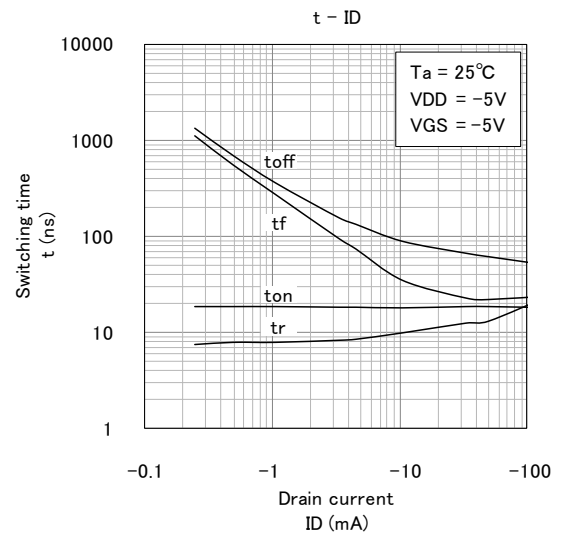
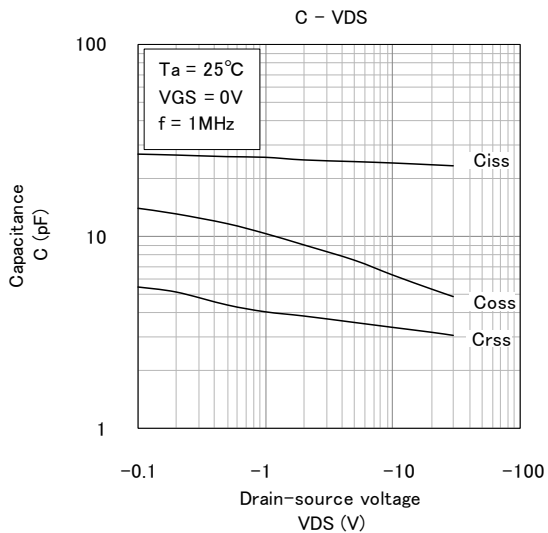
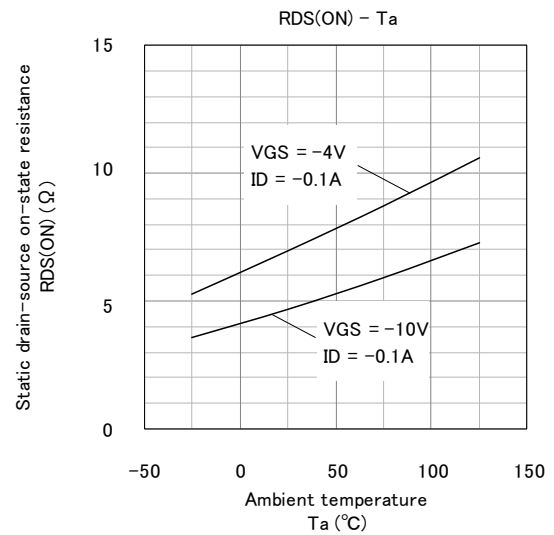
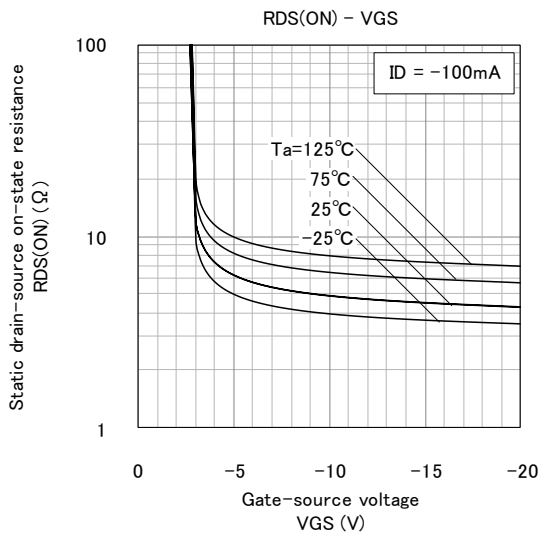
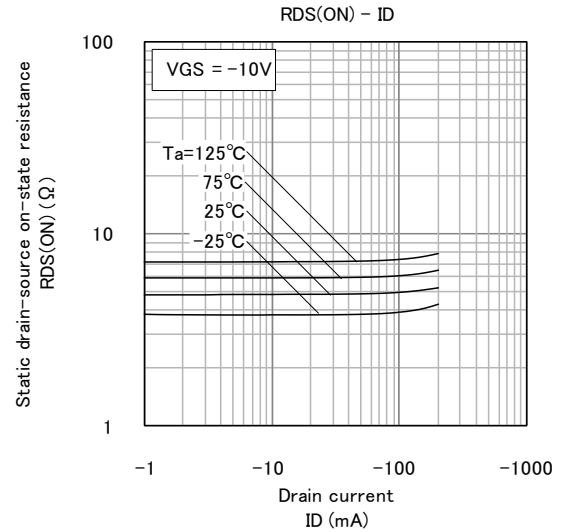
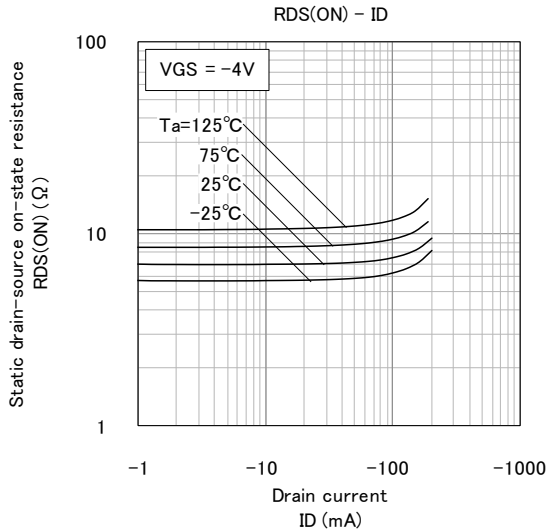
| PARAMETER | SYMBOL | TEST CONDITION | LIMIT | | | UNIT |
|---|----------|---|-------|-----|------|------|
| | | | MIN | TYP | MAX | |
| Drain-source breakdown voltage | V(BR)DSS | $I_D=-100\ \mu\text{A}$, $V_{GS}=0\text{V}$ | -50 | - | - | V |
| Gate-source leak current | IGSS | $V_{GS}=\pm 20\text{V}$, $V_{DS}=0\text{V}$ | - | - | ±1.0 | μA |
| Zero gate voltage drain current | IDSS | $V_{DS}=-50\text{V}$, $V_{GS}=0\text{V}$ | - | - | -1.0 | μA |
| Gate threshold voltage | Vth | $I_D=-250\ \mu\text{A}$, $V_{DS}=V_{GS}$ | -1.0 | - | -2.0 | V |
| Forward transfer admittance | Yfs | $V_{DS}=-10\text{V}$, $I_D=-100\text{mA}$ | - | 145 | - | mS |
| Static drain-source on-state resistance | RDS(ON) | $I_D=-100\text{mA}$, $V_{GS}=-4.0\text{V}$ | - | 7.0 | - | Ω |
| | | $I_D=-100\text{mA}$, $V_{GS}=-10\text{V}$ | - | 4.8 | - | |
| Input capacitance | Ciss | $V_{DS}=-10\text{V}$, $V_{GS}=0\text{V}$, $f=1\text{MHz}$ | - | 25 | - | pF |
| Output capacitance | Coss | | - | 6.0 | - | pF |
| Switching time | ton | $V_{DD}=-5\text{V}$, $I_D=-10\text{mA}$ | - | 35 | - | ns |
| | toff | $V_{GS}=0\sim 5\text{V}$ | - | 90 | - | ns |

TYPICAL CHARACTERISTICS



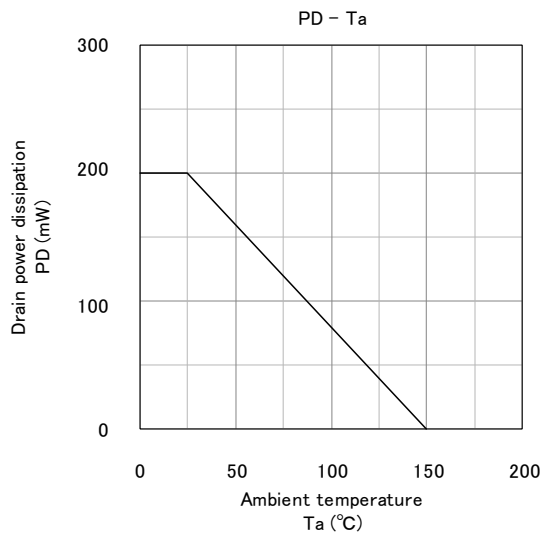
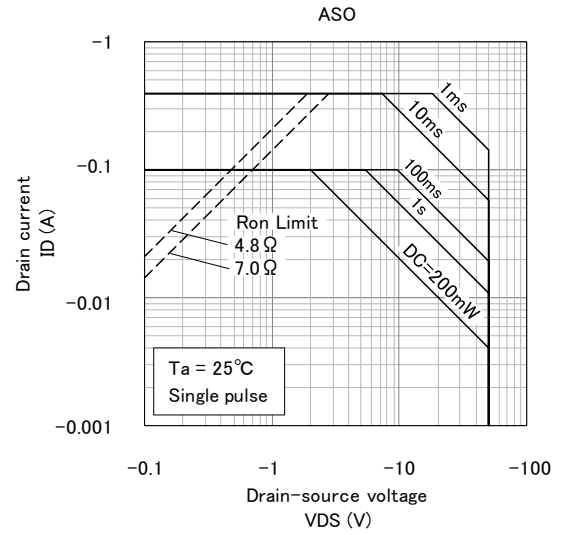
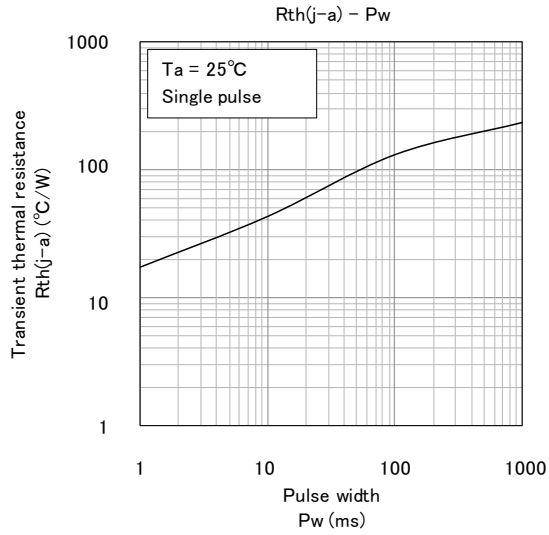
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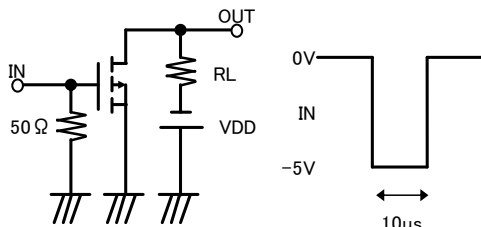


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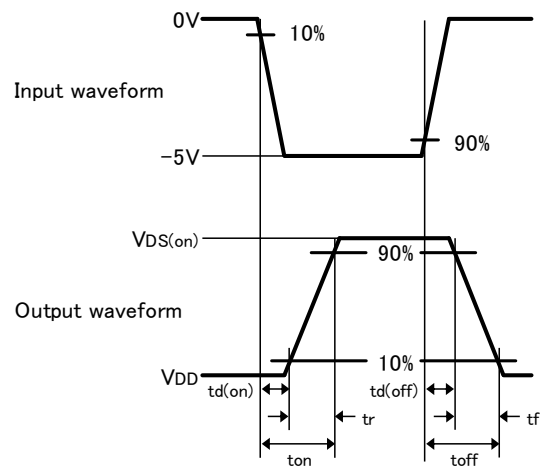
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Switching time test condition



Duty $\leq 1\%$
Input: $t_r, t_f < 10\text{ns}$
VDD = -5V
Common source
 $T_a = 25^{\circ}\text{C}$



Keep safety first in your circuit designs!

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