# INJ0212AP1

High Speed Switching
Silicon P-channel MOSFET

## DESCRIPTION

INJ0210AP1 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.

・High drain current $I_D$=-2.5A

・$V_{th}$ is low, and drive by low voltage is possible. $V_{th}$=1.0～2.5V

・Low on Resistance. $R_{DS(on)}$=95mΩ(TYP).

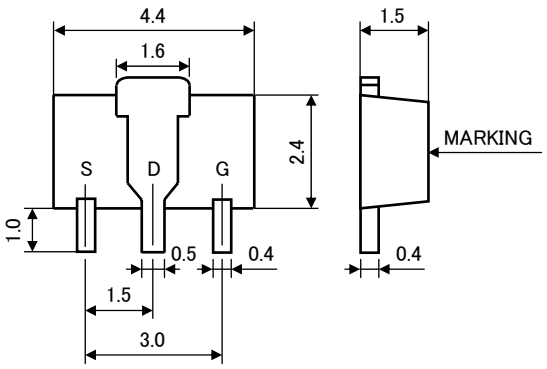
・High speed switching.

## APPLICATION

Switching

## OUTLINE DRAWING

UNIT:mm




TERMINAL CONNECTOR
S:SOURCE
D:DRAIN
G:GATE

JEITA:SC-62
JEDEC:SOT-89

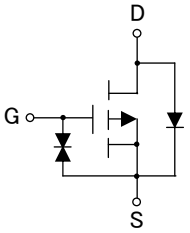
## MAXIMUM RATING (Ta=25℃)

| Symbol | Parameter | Rating | UNIT |
|---|---|---|---|
| VDSS | Drain-Source Voltage | -30 | V |
| VGSS | Gate-Source Voltage | ±20 | V |
| ID(DC) | Drain Current (DC) | -2.5 | A |
| IDP | Drain Current(Pulse) ※1 | -5 | A |
| PD | Total Power Dissipation | 750(※2) | mW |
| Tch | Channel Temperature | 150 | ℃ |
| Tstg | Storage Temperature | -55～+150 | ℃ |

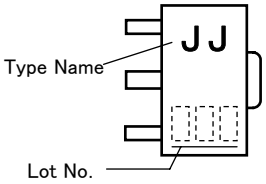
※1:Pw≦10μs, Duty cycle≦1%

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

## EQUIVALENT



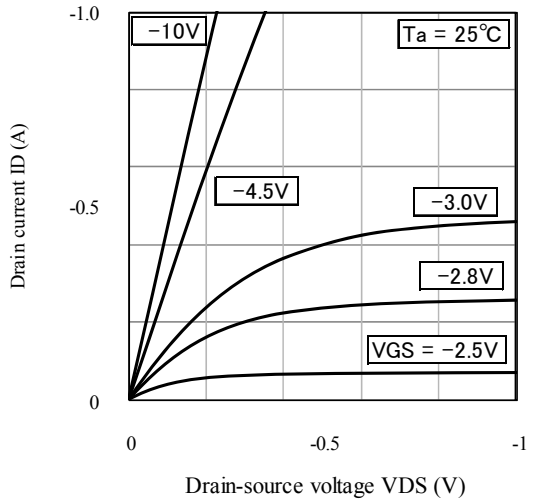

## MARKING



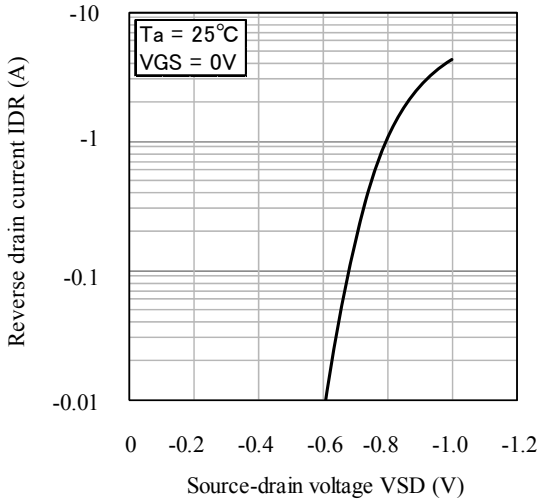

## ELECTRICAL CHARACTERISTICS (Ta=25℃)

| Parameter | Symbol | Test Condition | Limit | | | Unit |
|---|---|---|---|---|---|---|
| | | | MIN | TYP | MAX | |
| Drain-Source Breakdown Voltage | V(BR)DSS | ID=-100μA, VGS=0V | -30 | - | - | V |
| Gate-Source Leak Current | IGSS | VGS=±20V, ID=0A | - | - | ±10 | μA |
| Zero Gate Voltage Drain Current | IDSS | VDS=-30V, VGS=0V | - | - | -1 | μA |
| Gate Threshold Voltage | Vth | ID=-250μA, VDS=VGS | -1 | - | -2.5 | V |
| Forward Transfer Admittance | \|Yfs\| | VDS=-10V, ID=-1.2A | - | 3.0 | - | S |
| Static Drain-Source On-State Resistance | RDS(ON) | ID=-0.5A, VGS=-4.5V | - | 120 | - | mΩ |
| | | ID=-0.5A, VGS=-10V | - | 95 | - | |
| Input Capacitance | Ciss | VDS=-10V, VGS=0V, f=1MHz | - | 500 | - | pF |
| Output Capacitance | Coss | | - | 100 | - | |
| Switching Time | ton | VDD=-10V, ID=-2.5A, VGS=-0～-5V | - | 35 | - | ns |
| | toff | | - | 50 | - | |

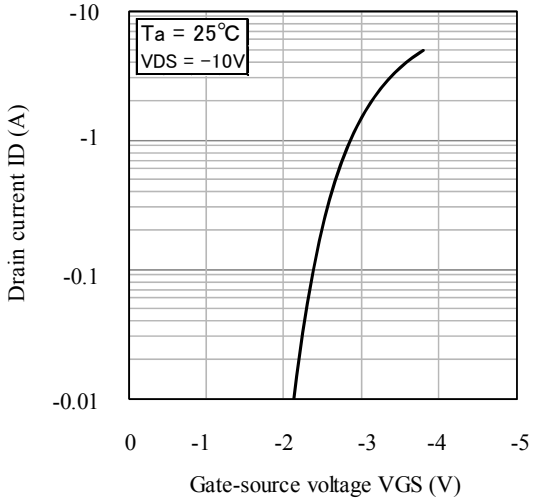
ID - VDS



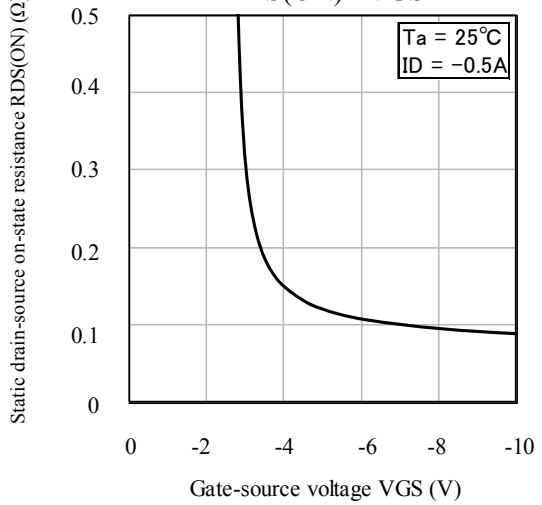

IDR - VSD



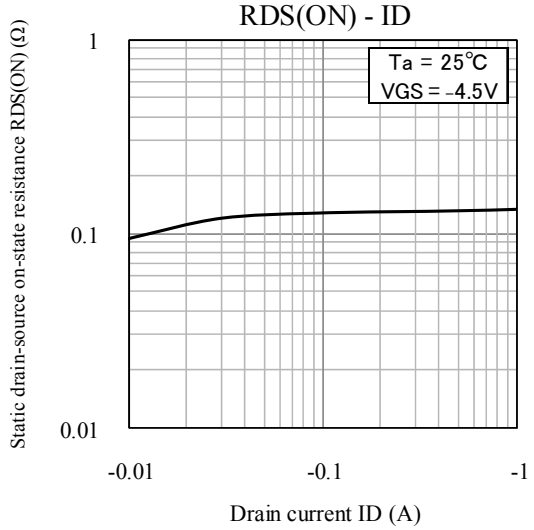

ID - VGS



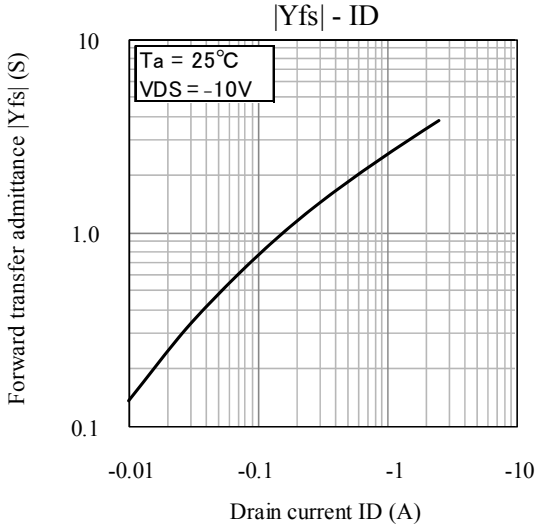

RDS(ON) - VGS

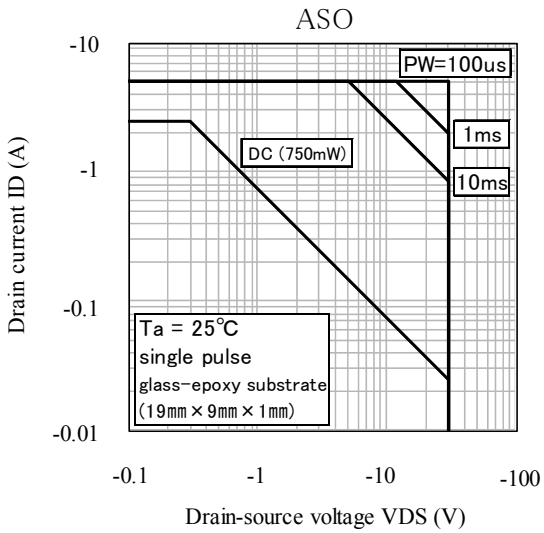


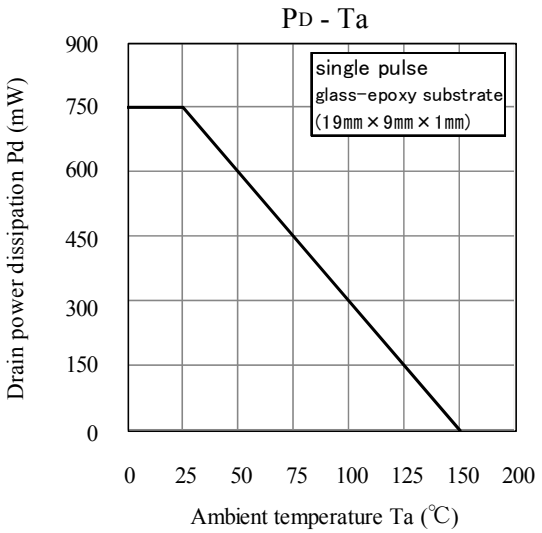

RDS(ON) - ID

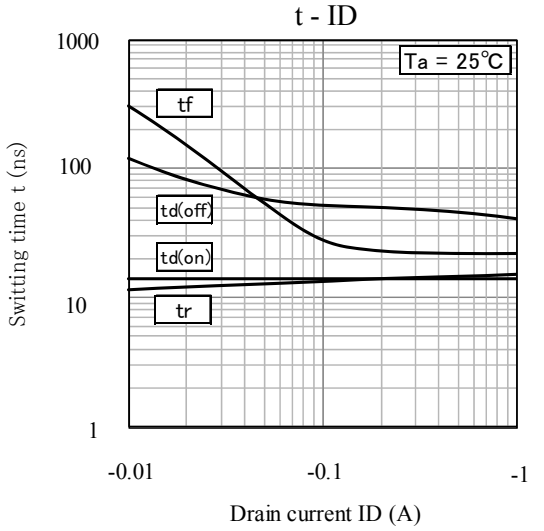


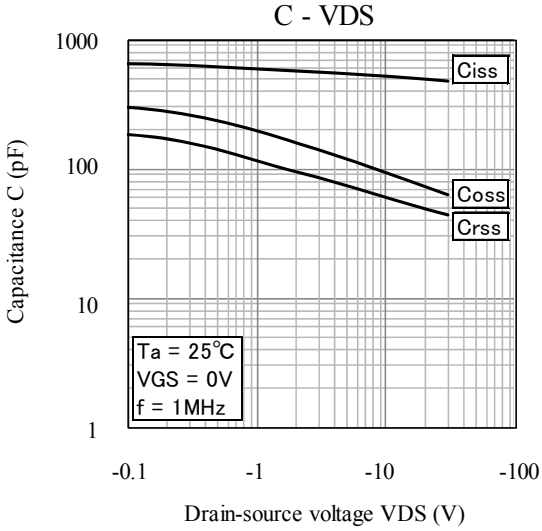

|Yfs| - ID



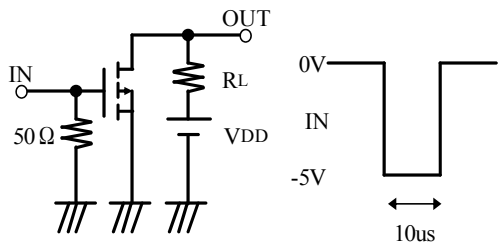


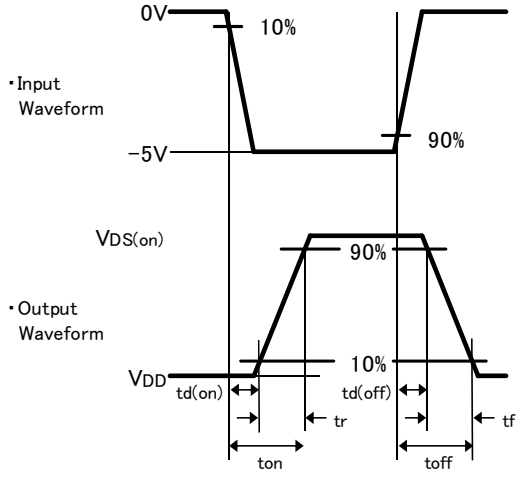




Test circuit




Duty ≦ 1%
VDD = 30V
Common source
Ta = 25℃



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