# MC911

## FOR HIGH SPEED SWITCHING APPLICATION SILICON EPITAXIAL TYPE(COMMON ANODE)

## DESCRIPTION

Mitsubishi MC911 is a small outline plastic seal type silicon epitaxial type double diode,especially designed for high speed switching application.

Due to the small pin capacitance, short switching time (reverse recovery time),it is most suitable for high speed switching application and limitted,clipper application.

## FEATURE

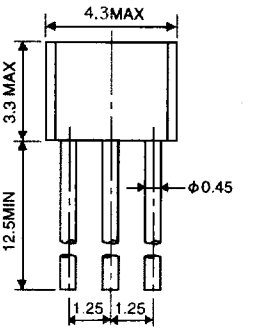
- Small pin capacitance
- Quick switching time
- Good two elements characteristics
- Small outline package for mounting

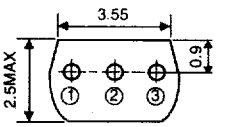
## APPLICATION

For general high speed switching of audio machine,VCR.

## OUTLINE DRAWING

Unit:mm



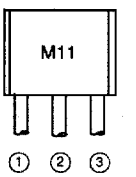

TERMINAL CONNECTOR

①: CATHODE 1
②: ANODE(COMMON)
③: CATHODE 2

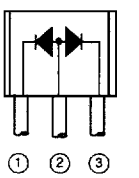
EIAJ : —
JEDEC : —

Note)
The dimension without tolerance represent central value.

## MARKING




## INTERNAL CONNECTION




## MAXIMUM RATINGS (Ta=25℃)

| Symbol | Parameter | Ratings | Unit |
|---|---|---|---|
| $V_{RM}$ | Peak reverse voltage | 75 | V |
| $V_R$ | DC reverse voltage | 50 | V |
| $I_{FSM}$ | Surge current(1 μs) | 4 | A |
| $I_{FM}$ | Peak forward current | 300 | mA |
| $I_O$ | Average rectification current | 100 | mA |
| $P_T$ | Total allowable dissipation(Ta=25℃) | 300 | mW |
| $T_j$ | Junction temperature | +125 | ℃ |
| $T_{stg}$ | Storage temperature | -55 to +125 | ℃ |

## ELECTRICAL CHARACTERISTICS (Ta=25℃)

| Symbol | Parameter | Test conditions | Limits | | | Unit |
|---|---|---|---|---|---|---|
| | | | Min | Typ | Max | |
| $V_{F1}$ | Forward voltage | $I_F$ =10mA | | 0.77 | 0.9 | V |
| $V_{F2}$ | Forward voltage | $I_F$ =50mA | | 0.90 | 1.0 | V |
| $V_{F3}$ | Forward voltage | $I_F$ =100mA | | 0.95 | 1.2 | V |
| $I_R$ | Reverse current | $V_R$ =50V | | | 0.1 | μA |
| $C_t$ | Pin capacitance | $V_R$ =0,f=1MHz | | 2.8 | 4.0 | pF |
| $t_{rr}$ | Reverse recovery time | (Refer to test circuit) | | | 4.0 | ns |

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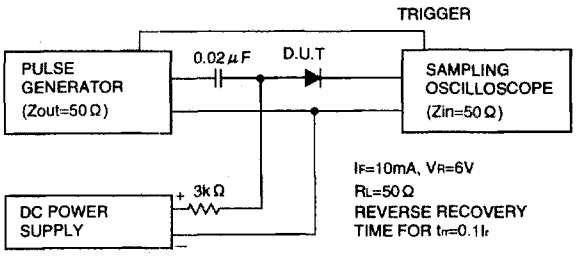
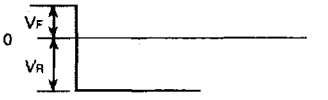
## SILICON EPITAXIAL TYPE(COMMON ANODE)

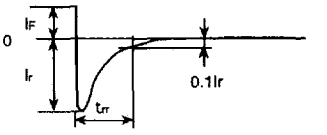
### REVERSE RECOVERY TIME($t_{rr}$)TEST CIRCUIT




●INPUT VOLTAGE WAVE FORM

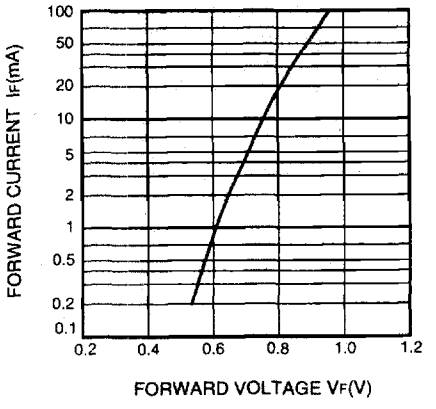



●CURRENT WAVE FORM IN DIODE

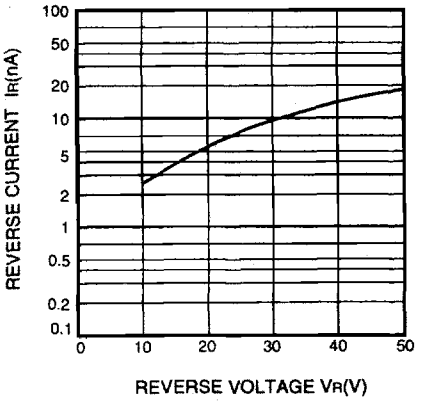



### TYPICAL CHARACTERISTICS

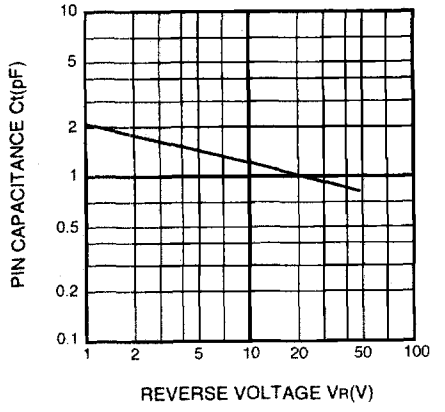
**FORWARD CURRENT VS.FORWARD VOLTAGE**



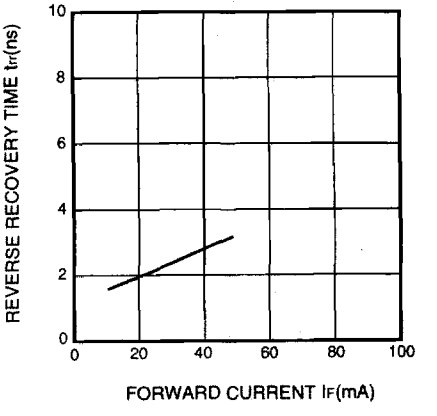

**REVERSE CURRENT VS.REVERSE VOLTAGE**




**PIN CAPACITANCE VS. REVERSE VOLTAGE**




**REVERSE RECOVERY TIME VS. FORWARD CURRENT**






MITSUBISHI ELECTRIC