

〈SMALL-SIGNAL DIODE〉

MC2848

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

DESCRIPTION

MC2848 is a super mini package 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 limiter, clipper application.

FEATURE

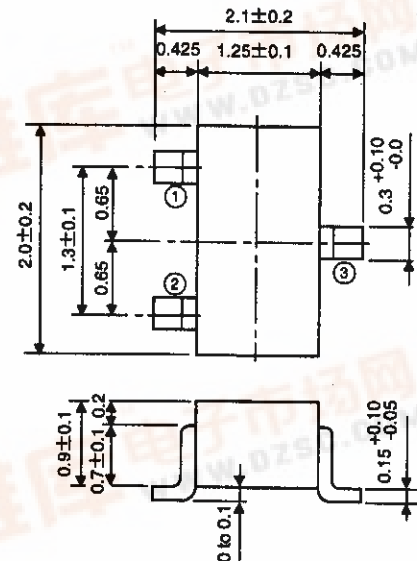
- Small pin capacitance
- Quick switching time
- Good two elements characteristics
- Small outline package for mounting
- High voltage
- Double and super mini package for mounting

APPLICATION

For general high speed switching of audio machine, VCR.

OUTLINE DRAWING

Unit:mm

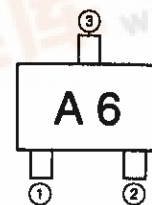


TERMINAL CONNECTOR

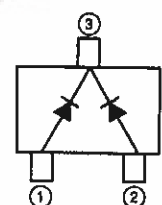
- ①: ANODE 1
 - ②: ANODE 2
 - ③: CATHODE(COMMON)
- EIAJ: SC-70

Note)
The dimension without tolerance represent central value.

MARKING



INTERNAL CONNECTION



MAXIMUM RATINGS (Ta=25°C)

| Symbol | Parameter | Ratings | Unit |
|--------|--------------------------------------|-------------|------|
| VRM | Peak reverse voltage | 75 | V |
| VR | DC reverse voltage | 50 | V |
| IFSM | Surge current(1 μs) | 4 | A |
| IFM | Peak forward current | 300 | mA |
| IO | Average rectification current | 100 | mA |
| PT | Total allowable dissipation(Ta=25°C) | 150 | mW |
| Tj | Junction temperature | +125 | °C |
| Tstg | Storage temperature | -55 to +125 | °C |

ELECTRICAL CHARACTERISTICS (Ta=25°C)

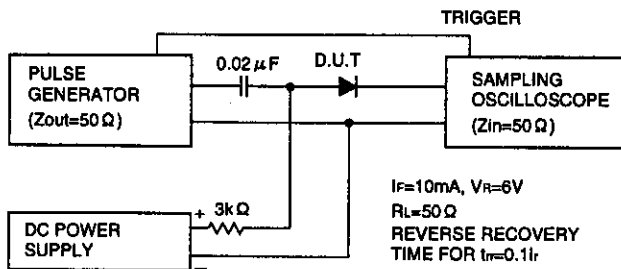
| Symbol | Parameter | Test conditions | Limits | | | Unit |
|--------|-----------------------|-------------------------|--------|------|-----|------|
| | | | Min | Typ | Max | |
| VF1 | Forward voltage | IF=10mA | | 0.72 | 0.9 | V |
| VF2 | Forward voltage | IF=50mA | | 0.85 | 1.0 | V |
| VF3 | Forward voltage | IF=100mA | | 0.90 | 1.2 | V |
| IR | Reverse current | VR=50V | | | 0.1 | μA |
| Ci | Pin capacitance | VR=0, f=1MHz | | 1.3 | 4.0 | pF |
| trr | Reverse recovery time | (Refer to test circuit) | | | 3.0 | ns |

(SMALL-SIGNAL DIODE)

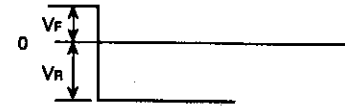
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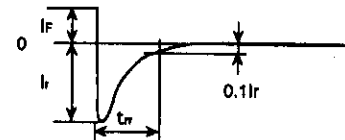
REVERSE RECOVERY TIME(t_{rr})TEST CIRCUIT



● INPUT VOLTAGE WAVE FORM

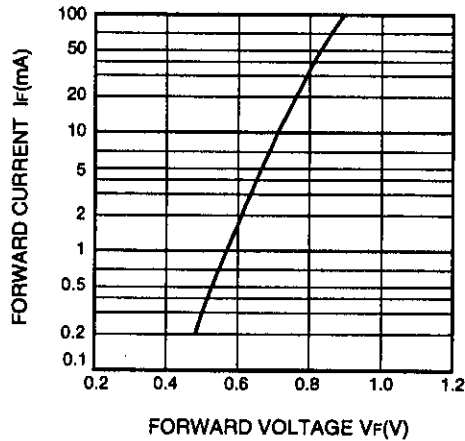


● CURRENT WAVE FORM IN DIODE

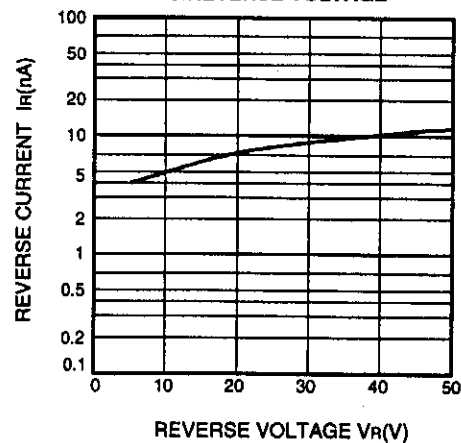


TYPICAL CHARACTERISTICS

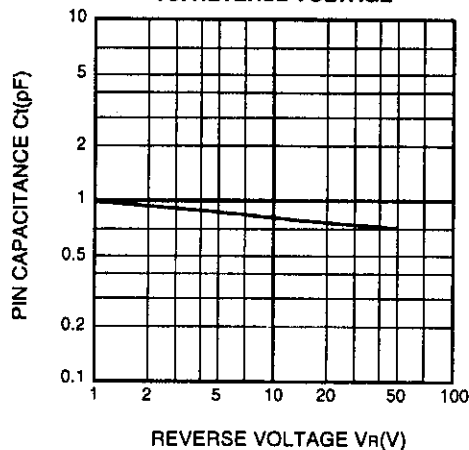
**FORWARD CURRENT
VS. FORWARD VOLTAGE**



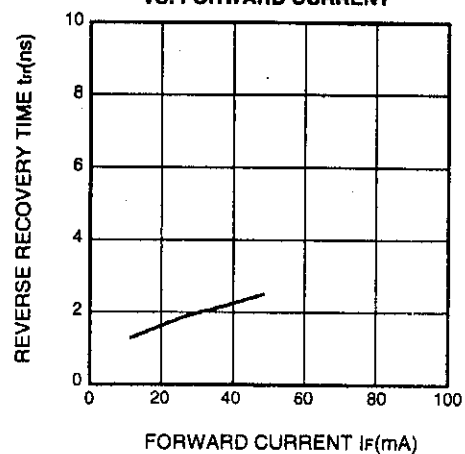
**REVERSE CURRENT
VS. REVERSE VOLTAGE**



**PIN CAPACITANCE
VS. REVERSE VOLTAGE**



**REVERSE RECOVERY TIME
VS. FORWARD CURRENT**





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