

Switching diode

BAV70 / BAW56 / BAV99

*This product is available only outside of Japan.

●Application

Ultra high speed switching

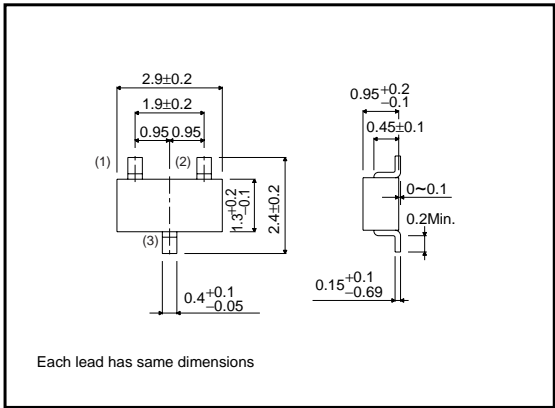
●Features

- 1) Small surface mounting type. (SSD3)
- 2) High speed. ($t_{rr}=1.5\text{ns Typ.}$)
- 3) Four types of circuit configurations are available.

●Construction

Silicon epitaxial planar

●External dimensions (Unit : mm)



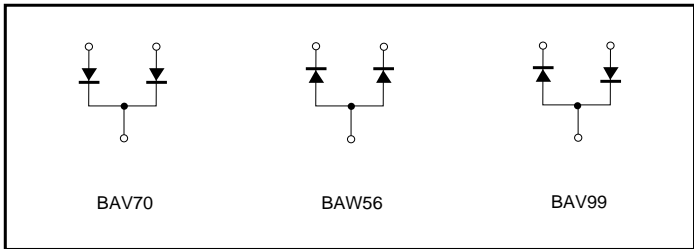
●Marking (Type No.)

| Product name | Type No. |
|--------------|----------|
| BAV70 | RA4 |
| BAW56 | RA1 |
| BAV99 | RA7 |

(Ex.) BAV70



●Equivalent circuits



Diodes

●Absolute maximum ratings (Ta=25°C)

| Type | Peak reverse voltage V _{RM} (V) | DC reverse voltage V _R (V) | Peak forward current I _{FM} (mA) | Mean rectifying current I _F (mA) | Surge current (1μs) I _{surge} (A) | Power dissipation (TOTAL) Pd (mW) | Junction temperature T _J (°C) | Storage temperature T _{stg} (°C) | P / N Type |
|-------|---|--|--|--|---|--------------------------------------|---|--|------------|
| BAV70 | 75 | 70 | 450 | 215 | 4 | 300 | 150 | -55 to +150 | N |
| BAW56 | 85 | 70 | 450 | 215 | 4 | 225 | 150 | -55 to +150 | P |
| BAV99 | 85 | 75 | 450 | 215 | 4 | 300 | 150 | -55 to +150 | N |

●Electrical characteristics (Ta=25°C)

| Type | Forward voltage | | Reverse current | | Capacitance between terminals | | | Reverse recovery time | | |
|-------|----------------------------|---------------------|-----------------------------|--------------------|-------------------------------|--------------------|---------|------------------------------|--------------------|---------------------|
| | V _F (V) Max. | Cond. | I _R (μA) Max. | Cond. | C _T (pF) Max. | Cond. | | t _{rr} (ns) Max. | Cond. | |
| | | I _F (mA) | | V _R (V) | | V _R (V) | f (MHz) | | V _R (V) | I _F (mA) |
| BAV70 | 1.25 | 150 | 2.5 | 70 | 1.5 | 0 | 1 | 4 | 10 | 10 |
| BAW56 | 1.25 | 150 | 1.0 | 75 | 2.0 | 0 | 1 | 4 | 10 | 10 |
| BAV99 | 1.25 | 150 | 1.0 | 75 | 1.5 | 0 | 1 | 4 | 10 | 10 |

●Electrical characteristic curves (Ta=25°C)

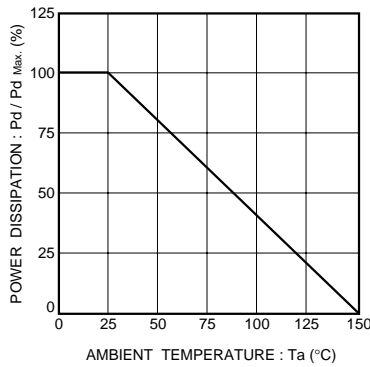


Fig.1 Power attenuation curve

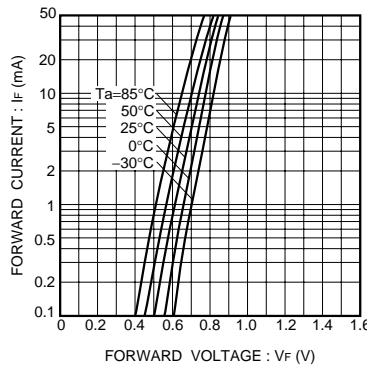


Fig.2 Forward characteristics (P Type)

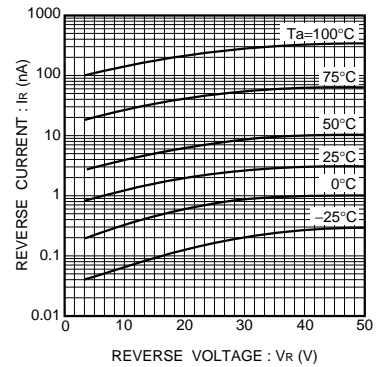


Fig.3 Reverse characteristics (P Type)

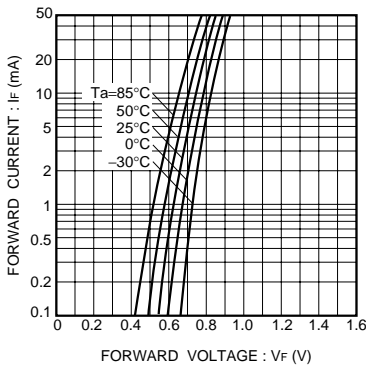


Fig.4 Forward characteristics (N Type)

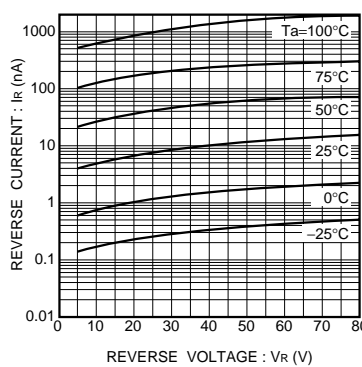


Fig.5 Reverse characteristics (N Type)

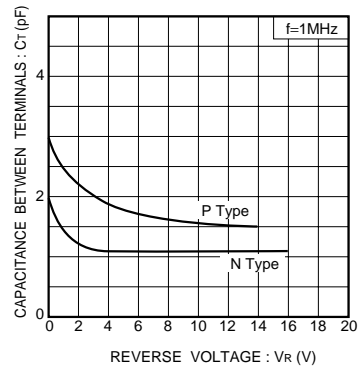


Fig.6 Capacitance between terminals characteristics

Diodes

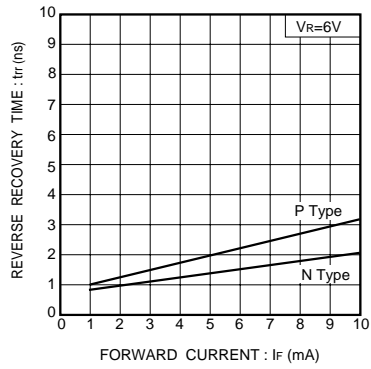


Fig.7 Reverse recovery time

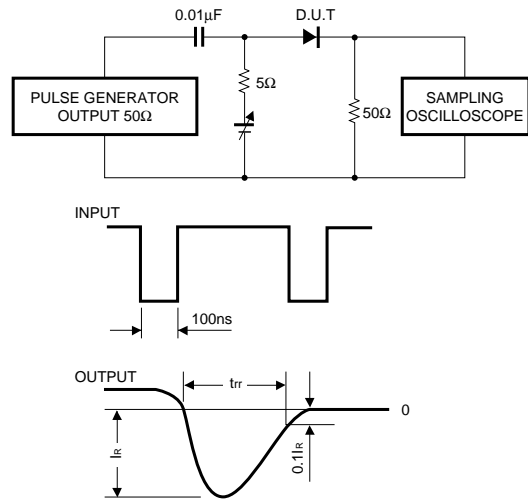


Fig.8 Reverse recovery time (t_{rr}) measurement circuit

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