

Switching diode

BAV70 / BAW56 / BAV99 / BAS16

*This product is available only outside of Japan.

●Applications

Ultra high speed switching

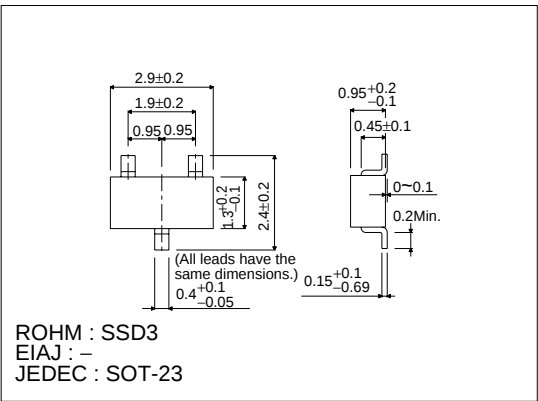
●Features

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

●Construction

Silicon epitaxial planar

●External dimensions (Units : mm)



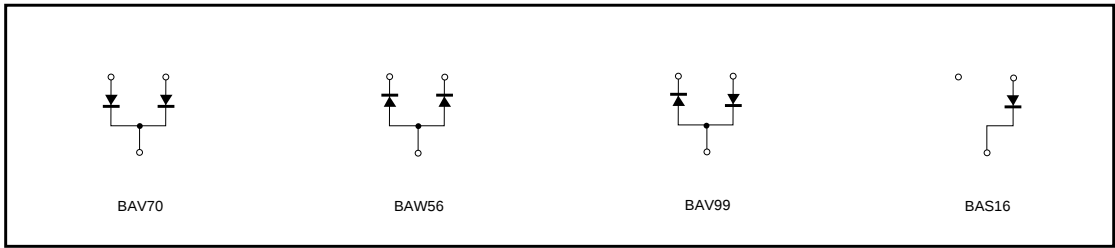
●Marking (Type No.)

Product name	Type No.	Product name	Type No.
BAV70	RA4	BAV99	RA7
BAW56	RA1	BAS16	RA6

(Ex.) BAV70



●Circuit



BAV70 / BAW56 / BAV99 / BAS16

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 _o (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	—	4	300	150	−55~+150	N
BAW56	85	70	450	—	4	225	150	−55~+150	P
BAV99	85	75	450	—	4	300	150	−55~+150	N
BAS16 *	85	75	500	—	4	300	150	−55~+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
BAS16	1.25	150	1.0	75	2.0	0	1	6	10	10

●Electrical characteristic curves (Ta = 25°C)

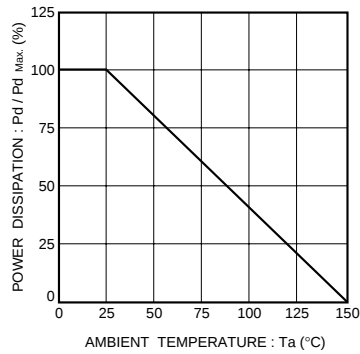


Fig. 1 Power attenuation curve

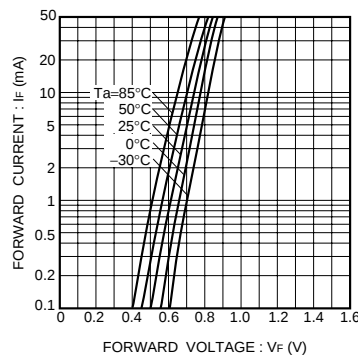


Fig. 2 Forward current vs. forward voltage (P Type)

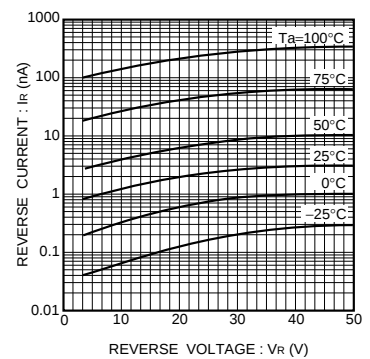


Fig. 3 Reverse current vs. reverse voltage (P Type)

Diodes

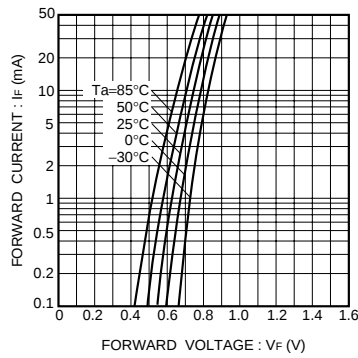


Fig. 4 Forward current vs. forward voltage (N Type)

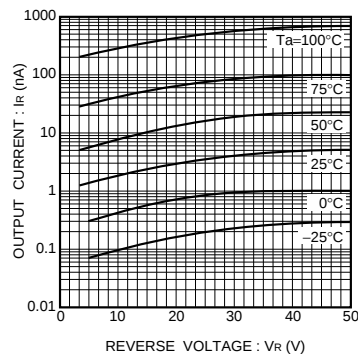


Fig. 5 Reverse current vs. reverse voltage (N Type)

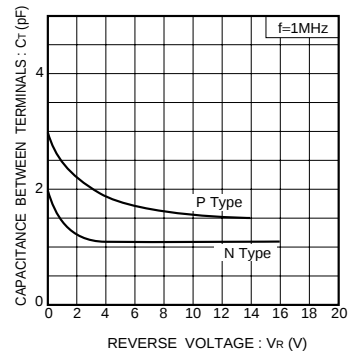


Fig. 6 Capacitance between terminals vs. reverse voltage

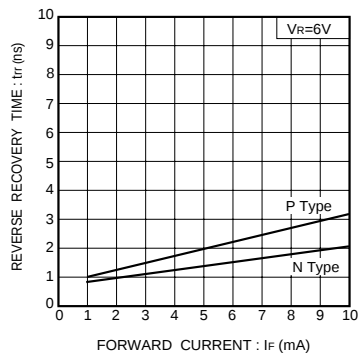


Fig. 7 Reverse recovery time vs. forward current

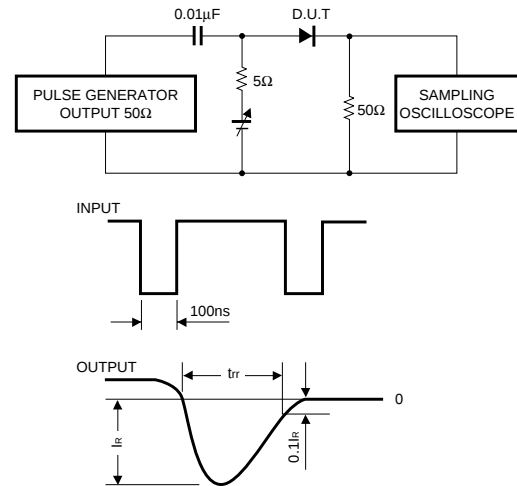


Fig. 8 Reverse recovery time (t_{rr}) measurement circuit