

### SMALL SIGNAL SWITCHING DIODES

VOLTAGE RANGE: 50-200 V

CURRENT: 250 mA

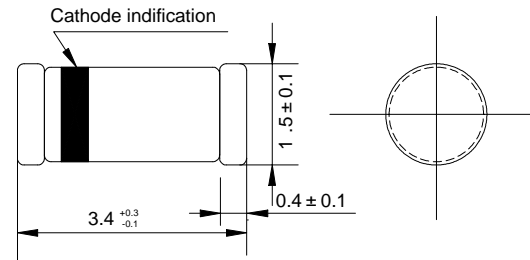
#### FEATURES

- Silicon epitaxial planar diode
- High speed switching diode
- 500 mW power dissipation

#### MECHANICAL DATA

- Case: MINI-MELF,glass case
- Polarity: Color band denotes cathode
- Weight: Approx 0.031 grams

#### MINI-MELF



Dimensions in millimeters

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

### ABSOLUTE MAXIMUM RATINGS AND THERMAL RESISTANCE

		BAV100	BAV101	BAV102	BAV103	Unit
Reverse voltage	$V_R$	50	100	150	200	V
Repetitive peak reverse voltage	$V_{RRM}$	60	120	200	250	V
Forward current	$I_{(AV)}$	0.25				A
Forward surge current $t_p=1s$	$I_{FSM}$	1.0				A
Power dissipation	$P_V$	500				mW
Thermal resistance junction to ambient	$R_{\theta JA}$	500 <sup>1)</sup>				K/W
Thermal resistance junction to lead	$R_{\theta JL}$	350				K/W
Junction temperature	$T_j$	175				
Storage temperature range	$T_{STG}$	- 65 --- + 175				

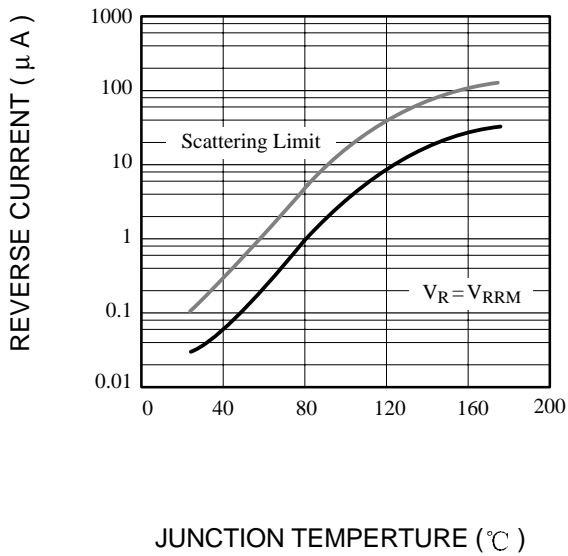
<sup>1)</sup> Device mounted on PC board 50mm×50mm×1.6mm .

## ELECTRICAL CHARACTERISTICS

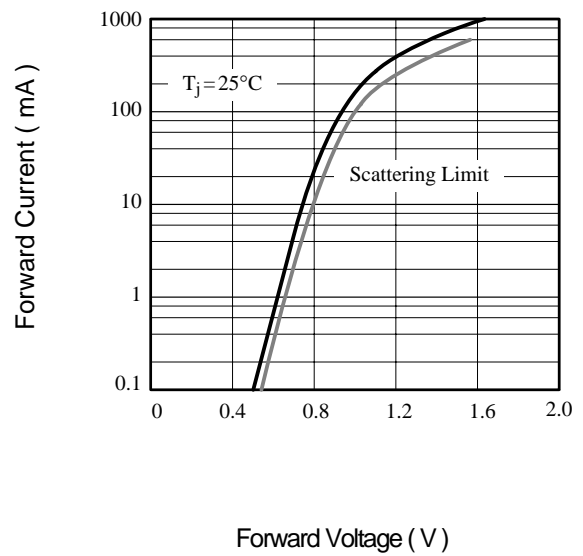
Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=100\text{mA}$	$V_F$	-	-	1	V
Reverse current	$V_R=50\text{V}, T_J=25$ BAV100	$I_R$	-	-	100	n A
	$V_R=50\text{V}, T_J=100$ BAV100		-	-	15	$\mu$ A
	$V_R=100\text{V}, T_J=25$ BAV101		-	-	100	n A
	$V_R=100\text{V}, T_J=100$ BAV101		-	-	15	$\mu$ A
	$V_R=150\text{V}, T_J=25$ BAV102		-	-	100	n A
	$V_R=150\text{V}, T_J=100$ BAV102		-	-	15	$\mu$ A
	$V_R=200\text{V}, T_J=25$ BAV103		-	-	100	n A
	$V_R=200\text{V}, T_J=100$ BAV103		-	-	15	$\mu$ A
Breakdown voltage	$I_R=100\text{mA}, t_p/T=0.01, t_p=0.3\text{ms}$ BAV100	$V_{(BR)}$	60	-	-	V
			120	-	-	V
			200	-	-	V
			250	-	-	V
Diode capacitance	$V_R=0, f=1\text{MHz}$	$C_D$	-	1.5	-	pF
Differential forward resistance	$I_F=10\text{mA}$	$r_f$	-	5	-	$\Omega$
Reverse recovery time	$I_F=I_R=30\text{mA}, i_R=3\text{mA}, R_L=100\Omega$	$t_{rr}$	-	-	50	ns

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**FIG 1. REVERSE CURRENT VS. JUNCTION TEMPERATURE**



**FIG 2. FORWARD CURRENT VS. FORWARD VOLTAGE**



**FIG 3. DIFFERENTIAL FORWARD RESISTANCE  
VS. FORWARD CURRENT**

