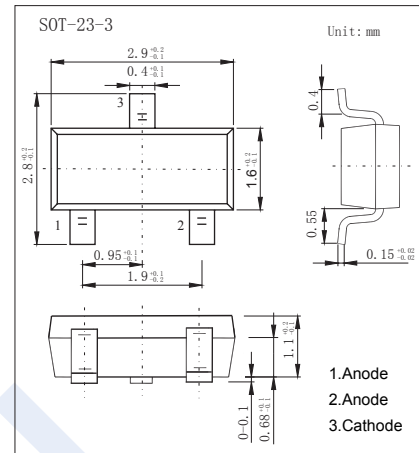
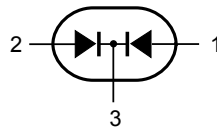


Switching Diodes

BAV170 (KAV170)

■ Features

- Switching time: typ. 0.8 us
- Continuous reverse voltage:75V (max)
- Repetitive peak reverse voltage:85V (max)
- Repetitive peak forward current:500mA (max)

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Repetitive Peak Reverse Voltage	V_{RM}	85	V
Continuous Reverse Voltage	V_R	75	
Forward Current - Single Diode Loaded; - Double Diode Loaded;	I_F	215 125	mA
Peak Forward Surge Current	I_{FM}	500	
Non-Repetitive Peak Forward Current	I_{FSM}	$t_p=1\mu\text{s}$ 4	A
		$t_p=1\text{ms}$ 1	
		$t_p=1\text{s}$ 0.5	
Power Dissipation	P_d	250	mW
Thermal Resistance from Junction to Ambient	$R_{th\ j-a}$	500	$^\circ\text{C}/\text{W}$
Thermal Resistance from Junction to Tie-Point	$R_{th\ j-tp}$	360	
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-65 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V_R	$I_R=100\ \mu\text{A}$	75			V
Forward voltage	V_{F1}	$I_F=1\ \text{mA}$			0.9	
	V_{F2}	$I_F=10\ \text{mA}$			1	
	V_{F3}	$I_F=50\ \text{mA}$			1.1	
	V_{F4}	$I_F=150\ \text{mA}$			1.25	
Reverse voltage leakage current	I_{R1}	$V_R=75\ \text{V}$			5	nA
		$V_R=75\ \text{V}, T_J=150^\circ\text{C}$			80	
Diode capacitance	C_d	$V_R=0\ \text{V}, f=1\ \text{MHz}$		2		pF
Reverse recovery time	t_{rr}	$I_F=I_R=10\ \text{mA}, I_{rr}=0.1I_R, R_L=100\ \Omega$			3	us

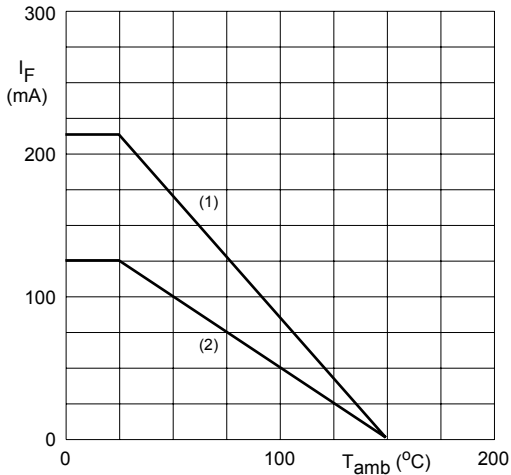
■ Marking

Marking	JX*
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Switching Diodes

BAV170 (KAV170)

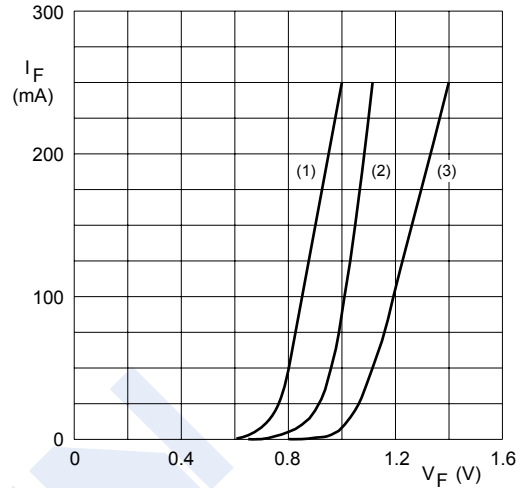
■ Typical Characteristics



Device mounted on a FR4 printed-circuit board.

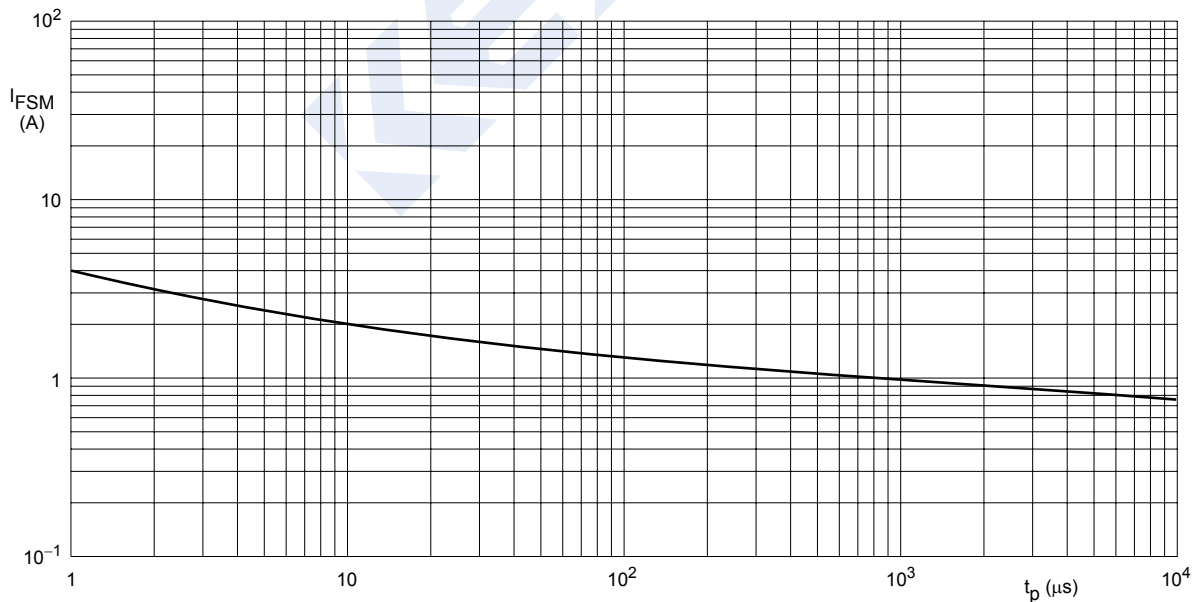
- (1) Single diode loaded.
- (2) Double diode loaded.

Fig.2 Maximum permissible continuous forward current as a function of ambient temperature.



- (1) $T_j = 150$ °C; typical values.
- (2) $T_j = 25$ °C; typical values.
- (3) $T_j = 25$ °C; maximum values.

Fig.3 Forward current as a function of forward voltage; per diode.



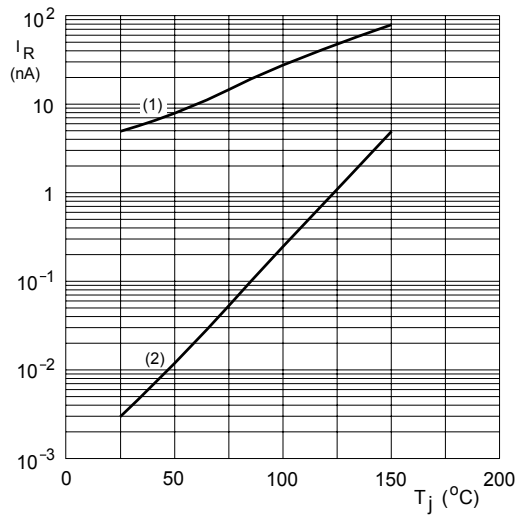
Based on square wave currents; $T_j = 25$ °C prior to surge.

Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration per diode.

Switching Diodes

BAV170 (KAV170)

■ Typical Characteristics

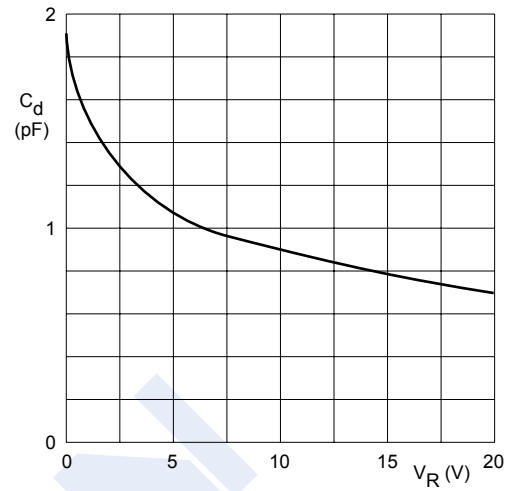


$V_R = 75 \text{ V}$.

(1) Maximum values.

(2) Typical values.

Fig.5 Reverse current as a function of junction temperature; per diode.



$f = 1 \text{ MHz}$; $T_j = 25 \text{ }^{\circ}\text{C}$.

Fig.6 Diode capacitance as a function of reverse voltage; per diode; typical values.