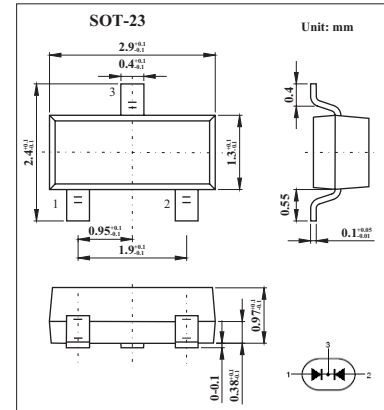


High-Speed Double Diode

KAV70(BAV70)



■ Features

- Small plastic SMD package
- High switching speed: max.4 ns
- Repetitive peak forward current: max. 450 mA

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Repetitive peak reverse voltage	VRRM	85	V
Continuous reverse voltage	VR	75	V
Continuous forward current (single diode loaded *) (double diode loaded *)	IF	215 125	mA
Repetitive peak forward current	IFRM	450	mA
Non-repetitive peak forward current (Tj = 25 °C) t=1us	IFSM	4	A
t = 1ms		1	
t = 1s		0.5	
power dissipation (Tamb = 25 °C) *	PD	250	mW
thermal resistance from junction to tie-point	Rth j-tp	360	K/W
thermal resistance from junction to ambient *	Rth j-a	500	K/W
Storage temperature	Tstg	-65 to +150	°C
Junction temperature	Tj	150	°C

* Device mounted on an FR4 printed-circuit board.

■ Electrical Characteristics Ta = 25°C

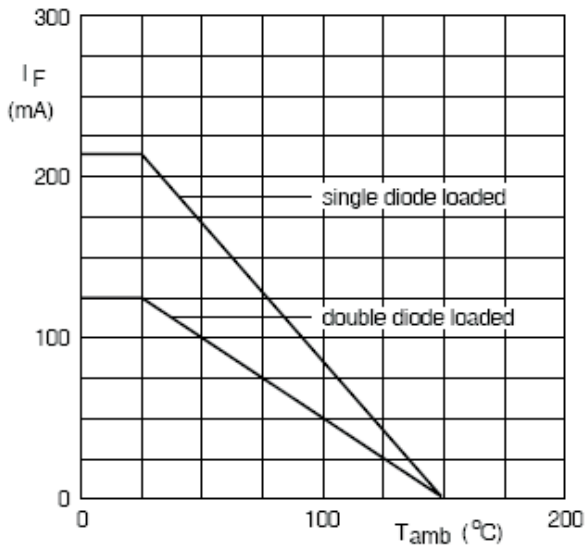
Parameter	Symbol	Conditions	Max	Unit
Forward voltage	VF	IF = 1 mA	715	mV
		IF = 10 mA	855	mV
		IF = 50 mA	1	V
		IF = 150 mA	1.25	
Reverse current	IR	VR = 25 V	30	nA
		VR = 75 V	2.5	μA
		VR = 25 V; Tj = 150 °C	60	μA
		VR = 75 V; Tj = 150 °C	100	μA
Diode capacitance	Cd	f = 1 MHz; VR = 0 V;	1.5	pF
Reverse recovery time	trr	when switched from IF = 10 mA to IR = 10 mA; RL = 100 Ω; measured at IR = 1 mA;	4	ns
forward recovery voltage	Vfr	when switched from IF = 10 mA; tr = 20 ns;	1.75	V

■ Marking

Marking	A4
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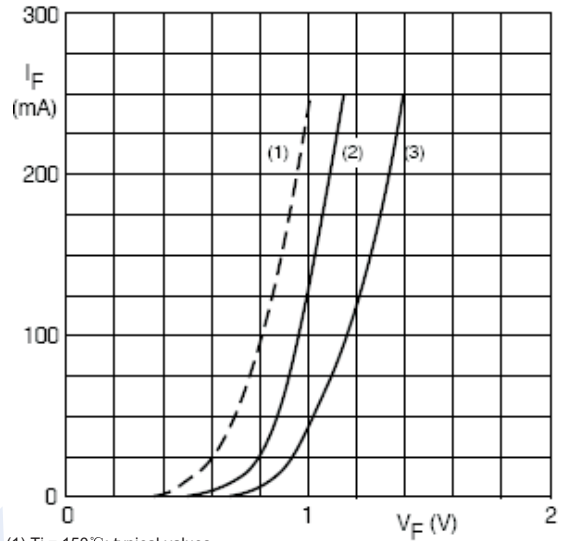
KAV70(BAV70)

■ Typical Characteristics



Device mounted on an FR4 printed-circuit board.

Fig.1 Maximum permissible continuous forward current as a function of ambient temperature.

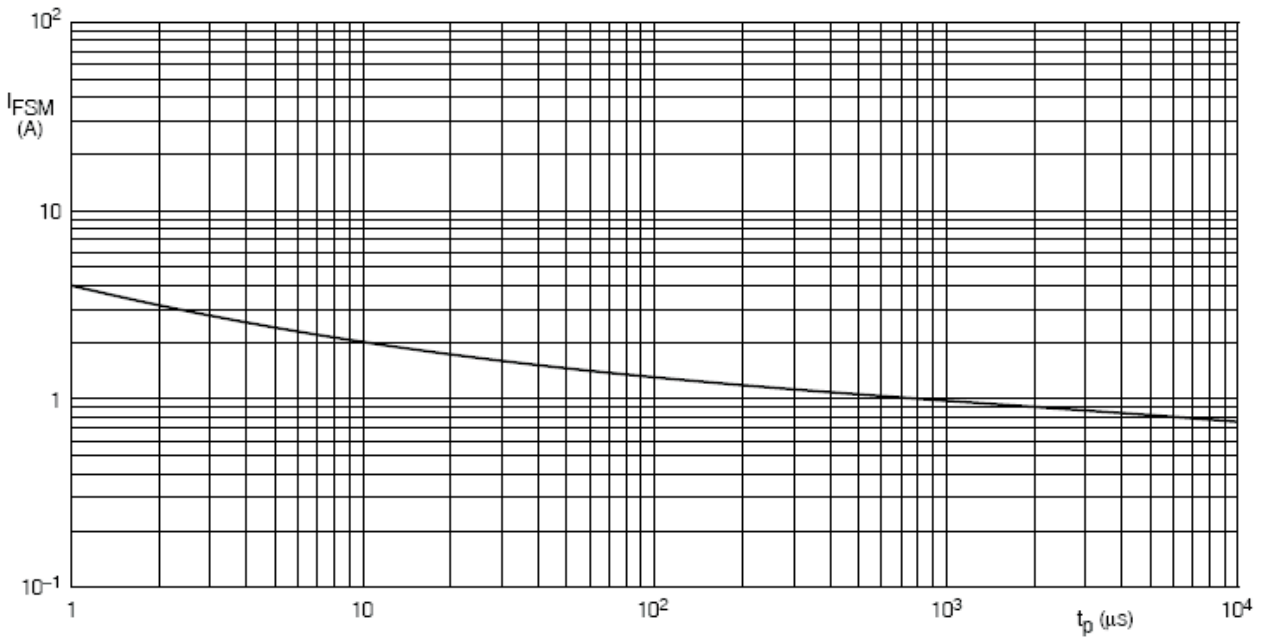


(1) $T_j = 150^\circ\text{C}$; typical values.

(2) $T_j = 25^\circ\text{C}$; typical values.

(3) $T_j = 25^\circ\text{C}$; maximum values.

Fig.2 Forward current as a function of forward voltage.



Based on square wave currents.

$T_j = 25^\circ\text{C}$ prior to surge.

Fig.3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

KAV70(BAV70)

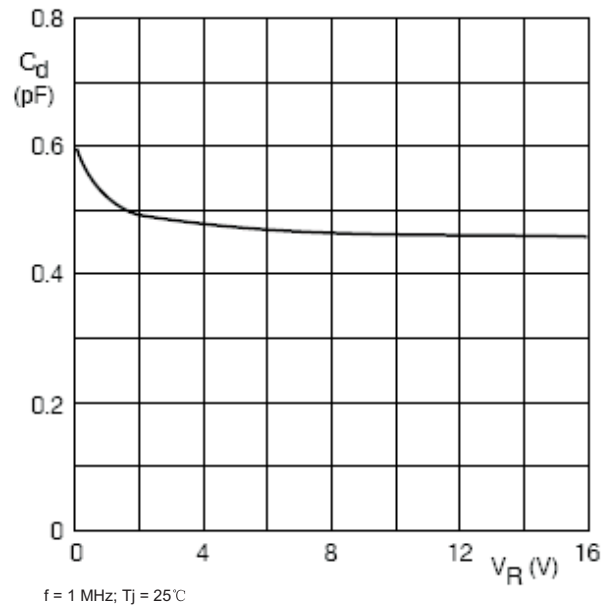
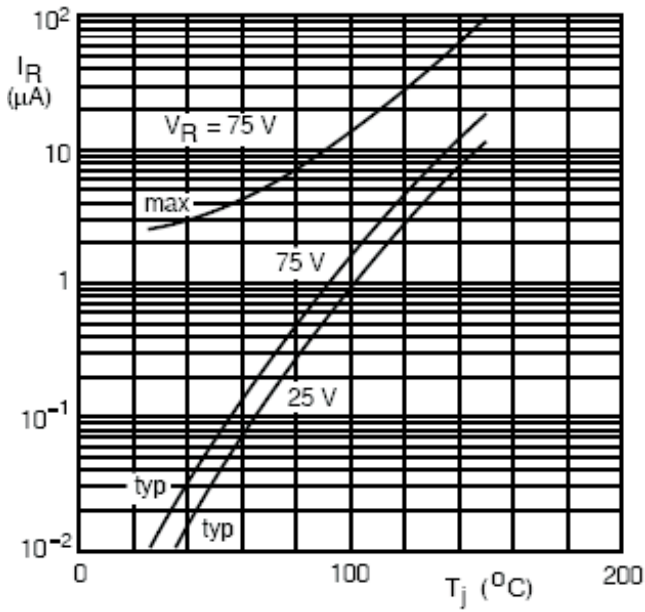


Fig.4 Reverse current as a function of junction temperature.

Fig.5 Diode capacitance as a function of reverse voltage; typical values.