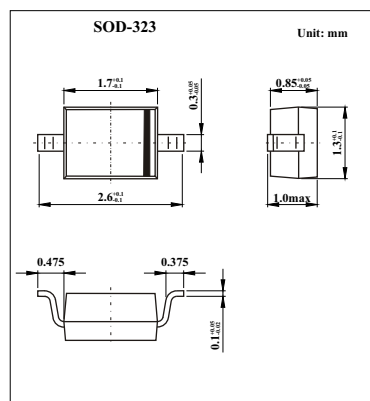


# KAP50-03(BAP50-03)

## ■ Features

- Low diode capacitance.
- Low diode forward resistance.



## ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Continuous reverse voltage	V <sub>R</sub>	50	V
Continuous forward current	I <sub>F</sub>	50	mA
Total power dissipation Ts = 90°C	P <sub>tot</sub>	500	mW
Storage temperature	T <sub>stg</sub>	-65 to +150	°C
Junction temperature	T <sub>j</sub>	150	°C
Thermal resistance from junction to soldering point	R <sub>th j-s</sub>	85	K/W

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Forward voltage	V <sub>F</sub>	I <sub>F</sub> = 50 mA		0.95	1.1	V
Reverse voltage	V <sub>R</sub>	I <sub>R</sub> = 10 μA	50			V
Reverse current	I <sub>R</sub>	V <sub>R</sub> = 50 V			100	nA
Diode capacitance	C <sub>d</sub>	V <sub>R</sub> = 0; f = 1 MHz		0.4		pF
		V <sub>R</sub> = 1 V; f = 1 MHz		0.3	0.55	pF
		V <sub>R</sub> = 5 V; f = 1 MHz		0.2	0.35	pF
Diode forward resistance	r <sub>D</sub>	I <sub>F</sub> = 0.5 mA; f = 100 MHz		25	40	Ω
		I <sub>F</sub> = 1 mA; f = 100 MHz		14	25	Ω
		I <sub>F</sub> = 10 mA; f = 100 MHz		3	5	Ω

## ■ Marking

Marking	A8
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**KAP50-03(BAP50-03)**

■ Typical Characteristics

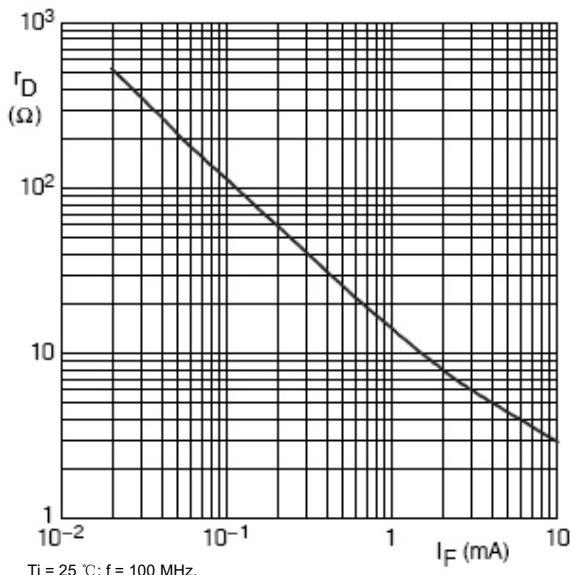


Fig.1 Forward resistance as a function of forward current; typical values.

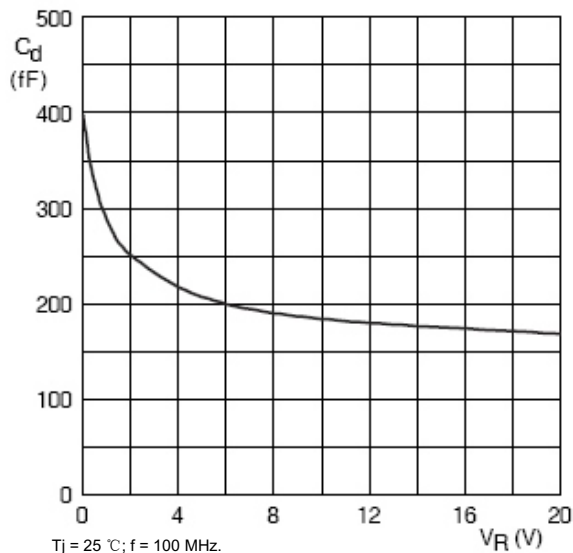
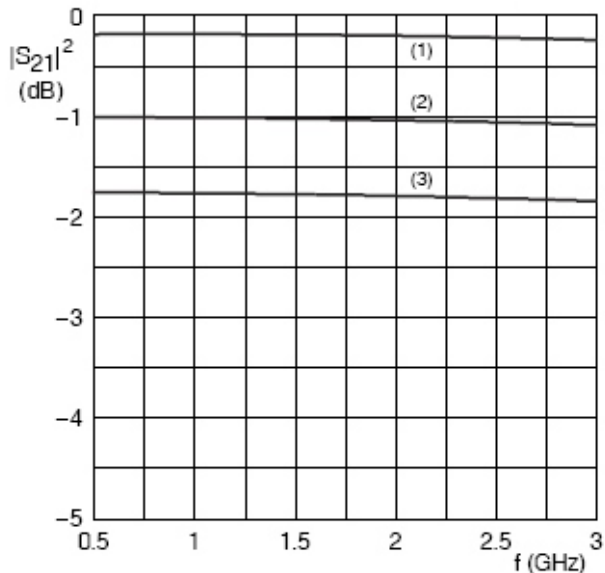


Fig.2 Diode capacitance as a function of reverse voltage; typical values.



(1)  $I_F = 10 \text{ mA}$ . (2)  $I_F = 1 \text{ mA}$ . (3)  $I_F = 0.5 \text{ mA}$ .  
Diode inserted in series with a  $50 \ \Omega$  stripline circuit and biased via a analyzer Tee network.  
 $T_{amb} = 25 \text{ }^\circ\text{C}$ .

Fig.3 Insertion loss ( $|S_{21}|^2$ ) of the diode as a function of frequency; typical values.

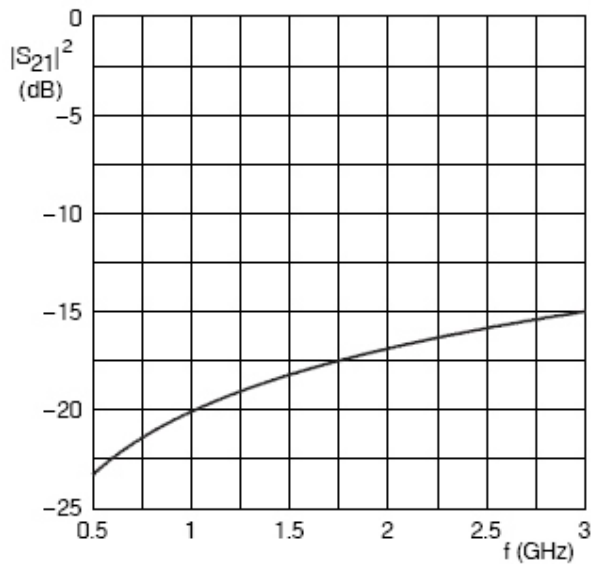


Fig.4 Isolation ( $|S_{21}|^2$ ) of the diode as a function of frequency; typical values.