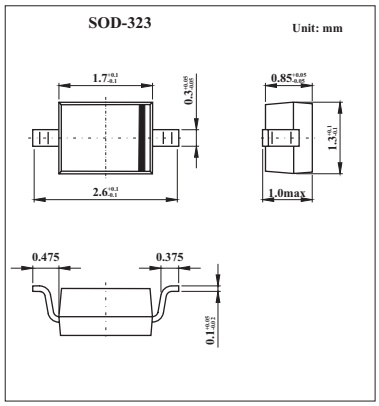
General Purpose PIN Diode

KAP50-03(BAP50-03)



■ Features

- Low diode capacitance.
- Low diode forward resistance.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Continuous reverse voltage	V_R	50	V
Continuous forward current	I_F	50	mA
Total power dissipation Ts = 90℃	P_{tot}	500	mW
Storage temperature	T_{stg}	-65 to +150	℃
Junction temperature	T_j	150	℃
Thermal resistance from junction to soldering point	Rth j-s	85	K/W

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Forward voltage	V_F	I_F = 50 mA		0.95	1.1	V
Reverse voltage	V_R	I_R = 10 μA	50			V
Reverse current	I_R	V_R = 50 V			100	nA
Diode capacitance	Cd	V_R = 0; f = 1 MHz		0.4		pF
		V_R = 1 V; f = 1 MHz		0.3	0.55	pF
		V_R = 5 V; f = 1 MHz		0.2	0.35	pF
Diode forward resistance	r_D	I_F = 0.5 mA; f = 100 MHz		25	40	Ω
		I_F = 1 mA; f = 100 MHz		14	25	Ω
		I_F = 10 mA; f = 100 MHz		3	5	Ω

■ Marking

Marking	A5

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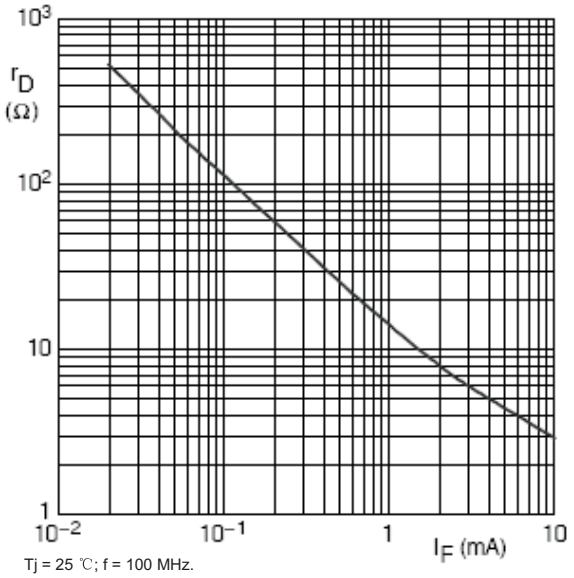
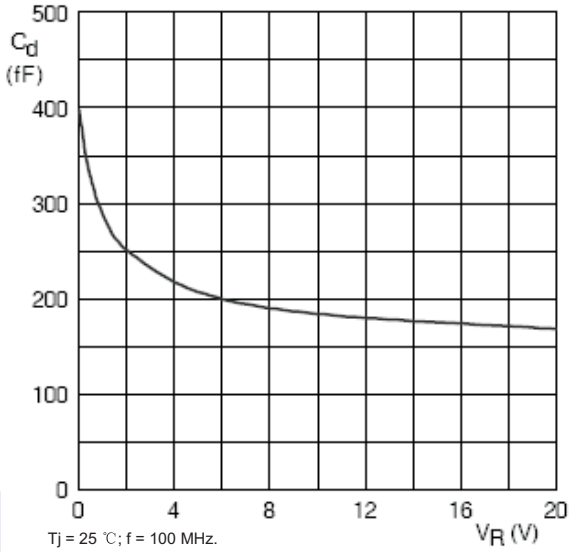
■ Typical Characteristics



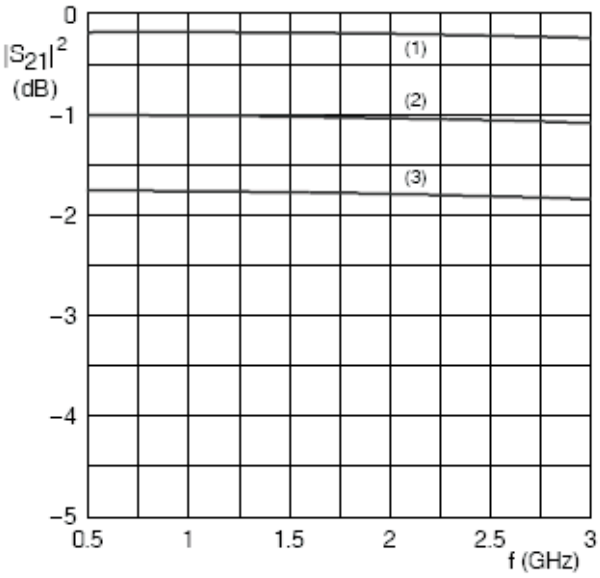
Tj = 25 ℃; f = 100 MHz.

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



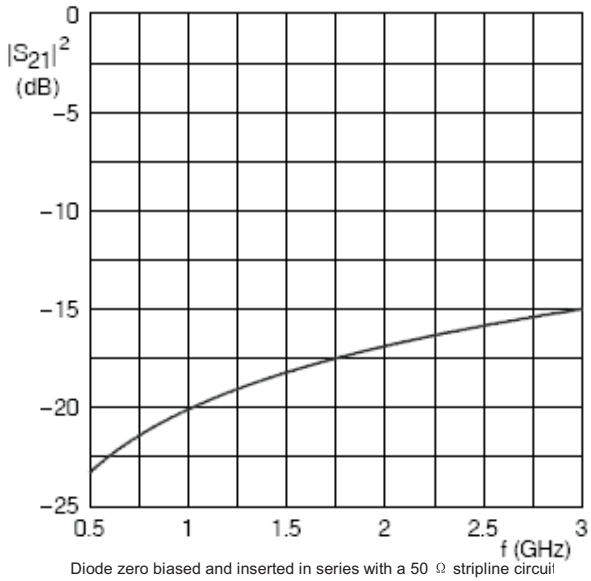
Tj = 25 ℃; f = 100 MHz.

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



(1) IF = 10 mA. (2) IF = 1 mA. (3) IF = 0.5 mA.
Diode inserted in series with a 50 Ω stripline circuit and biased via t
analyzer Tee network.
Tamb = 25 □C.

Fig.3 Insertion loss (|S21|2) of the diode as a function of frequency; typical values.



Diode zero biased and inserted in series with a 50 Ω stripline circuit

Tamb = 25℃.

Fig.4 Isolation (|S21|2) of the diode as a function of frequency; typical values.