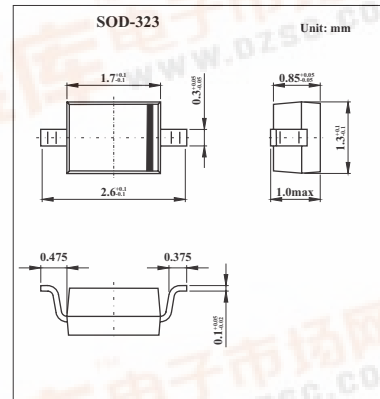


SMD Type Diodes

General Purpose PIN Diode
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 _R	50	V
Continuous forward current	I _F	50	mA
Total power dissipation Ts = 90°C	P _{tot}	500	mW
Storage temperature	T _{stg}	-65 to +150	°C
Junction temperature	T _j	150	°C
Thermal resistance from junction to soldering point	R _{th j-s}	85	K/W

Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	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	C _d	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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KAP50-03(BAP50-03)

■ Typical Characteristics

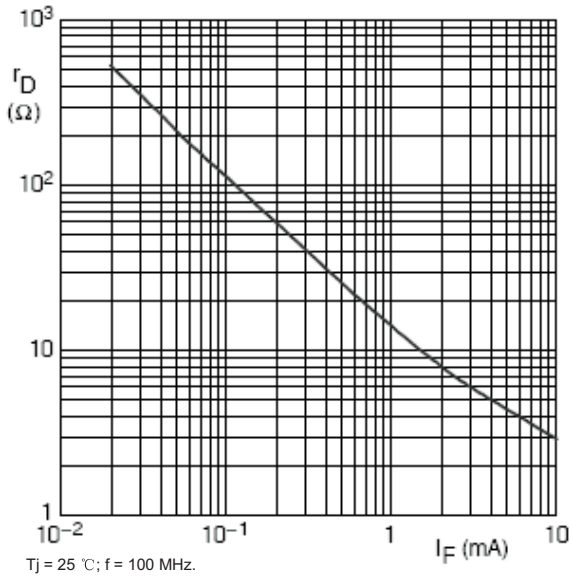


Fig.1 Forward resistance as a function of forward current; typical values.

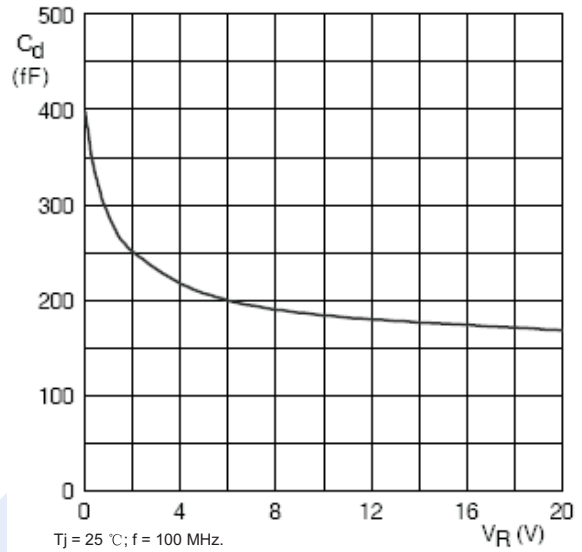
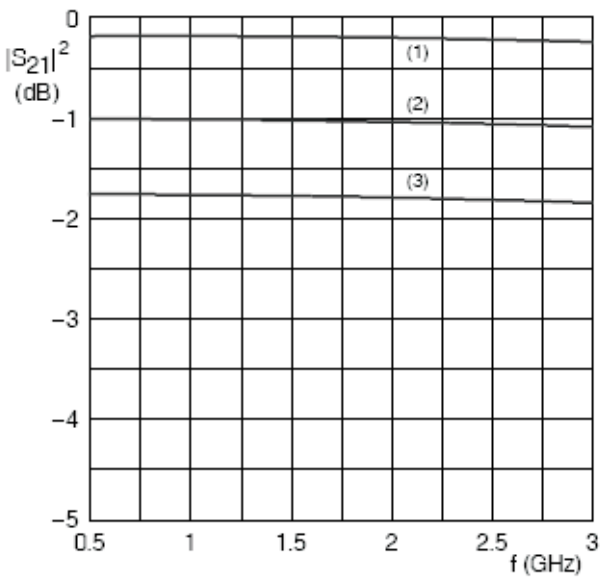
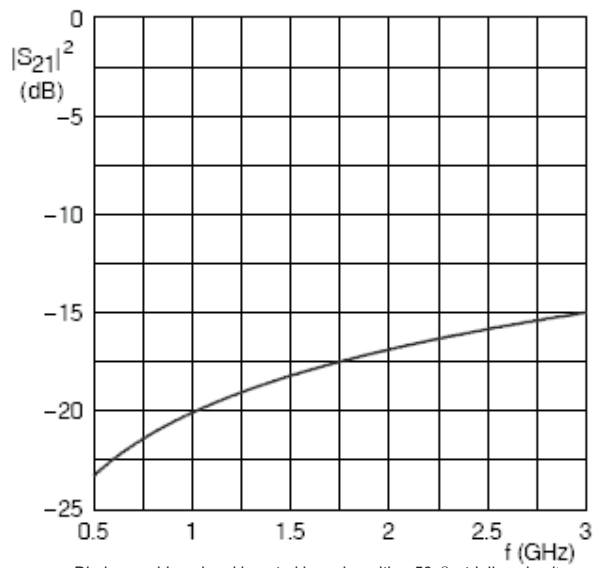


Fig.2 Diode capacitance as a function of reverse voltage; typical values.



(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 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.



Diode zero biased and inserted in series with a $50 \ \Omega$ stripline circuit
 $T_{amb} = 25 \text{ }^\circ\text{C}$.

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