



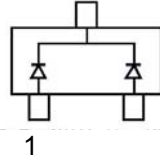
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-23 Plastic-Encapsulate DIODE

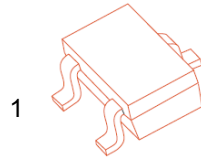
BAP64-05 PIN DIODE

FEATURES

- High voltage, current controlled
- RF resistor for RF attenuators and switches
- Low diode capacitance
- Low diode forward resistance
- Low series inductance
- For applications up to 3 GHz
- RF attenuators and switches



SOT-23



Marking: 5K

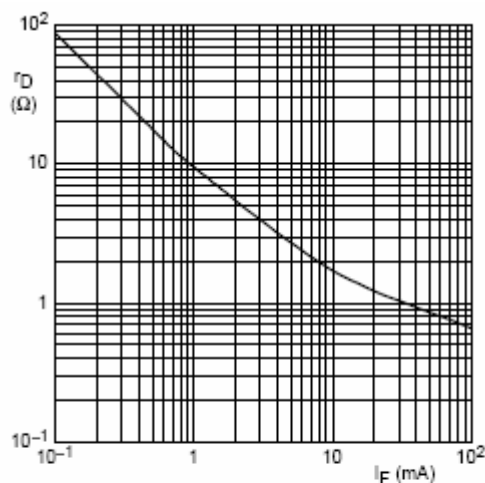
Maximum Ratings @T_A=25°C

Parameter	Symbol	Limits	Unit
Continuous reverse voltage	V _R	175	V
Continuous Forward Current	I _F	100	mA
Power Dissipation	P _D	2 50	mW
Thermal Resistance Junction to Ambient	R _{θJA}	500	°C/W
Junction temperature	T _j	150	°C
Storage temperature	T _{STG}	-65~+150	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

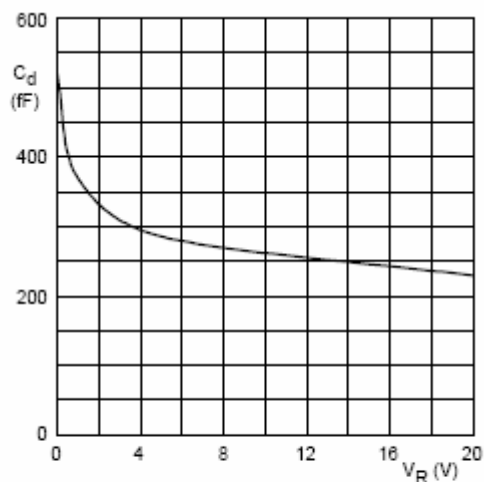
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Reverse voltage leakage current	I _R	V _R =175V V _R =20V			10 1	μA
Forward voltage	V _F	I _F =50mA			1.1	V
Diode capacitance	C _d	V _R =0, f=1MHz V _R =1V, f=1MHz V _R =20V, f=1MHz		0.52 0.37 0.23	0.35	pF
Diode forward resistance	r _D	I _F =0.5mA, f=100MHz I _F =1mA, f=100MHz I _F =10mA, f=100MHz I _F =100mA, f=100MHz		20 10 2 0.7	40 20 3.8 1.35	Ω
Charge carrier life time	τ _L	when switched from I _F = 10 mA to I _R = 6 mA; R _L = 100 Ω; measured at I _R =3mA		1.55		μS
Series inductance	L _S	I _F =100mA, f=100MHz		1.4		nH

Typical Characteristics



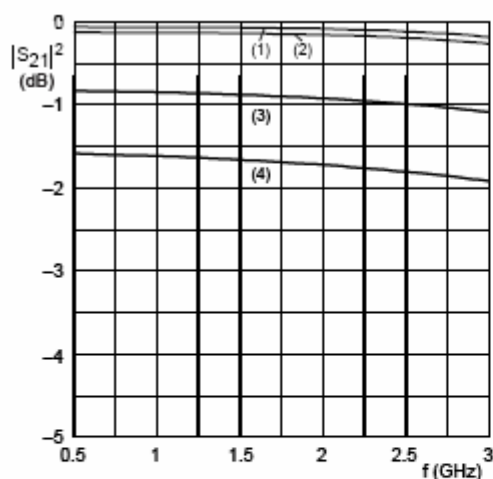
$f = 100 \text{ MHz}$; $T_J = 25^\circ\text{C}$.

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



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

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

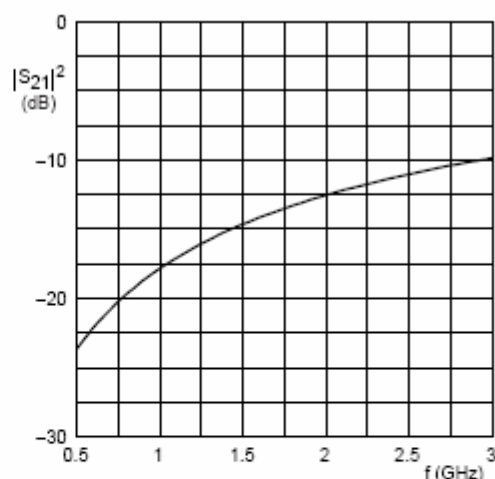


(1) $I_F = 100 \text{ mA}$. (3) $I_F = 1 \text{ mA}$.
(2) $I_F = 10 \text{ mA}$. (4) $I_F = 0.5 \text{ mA}$.

Diode inserted in series with a 50Ω stripline circuit and biased via the analyzer Tee network.

$T_{\text{amb}} = 25^\circ\text{C}$.

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



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

$T_{\text{amb}} = 25^\circ\text{C}$.

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