Micro Commercial Components
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BAP64-05

General Purpose Pin Diodes 250mW

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Low diode capacitance
- Low diode forward resistance
- MARKING: 5K

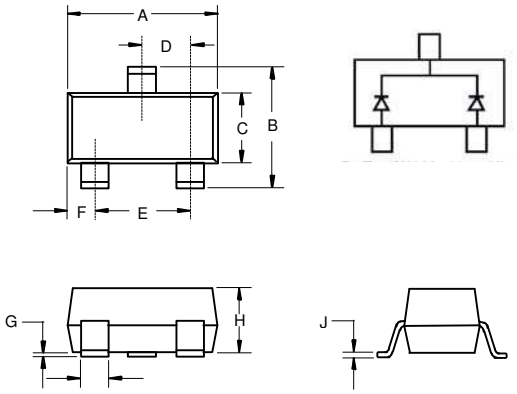
Maximum Ratings @25°C Unless Otherwise Specified

Parameter	Symbol	Limits	Unit
Continuous Reverse Voltage	V_R	175	V
Forward Current	I_F	100	mA
Power Dissipation(T_A=90°C)	P_D	250	mW
Junction and Storage temperature	T_j, P_{stg}	-65~+150	℃
Thermal Resistance Junction to Ambient	R_{thJA}	500	°C/W

Electrical Characteristics @ 25°C Unless Otherwise Specified

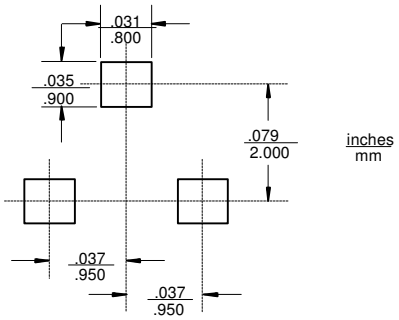
Parameter	Symbol	Min.	TYP	Max.	Unit	Conditions
Reverse Voltage Leakage Current	I_R			10	uA	V_R=175V
				1.0		V_R=20V
Forward voltage	V_F			1.1	V	I_F=50mA
Diode capacitance	C_{d1}		0.52		pF	V_R=0V,f=1MHz
	C_{d2}		0.37		pF	V_R=1V,f=1MHz
	C_{d3}		0.23	0.35	pF	V_R=20V,f=1MHz
Diode forward resistance	r_D		20	40	Ω	I_F=0.5mA, f=100MHz
	r_D		10	20	Ω	I_F=1mA , f=100MHz
	r_D		2	3.8	Ω	I_F=10mA , f=100MHz
	r_D		0.7	1.35	Ω	I_F=100mA , f=100MHz
Charge carrier life time	τ_L		1.55		μS	when switched from I_F=10mA to I_R=6mA; R_L=100Ω;measured at I_R=3mA
Series inductance	L_S		1.4		nH	I_F=100mA, f=100MHz

SOT-23

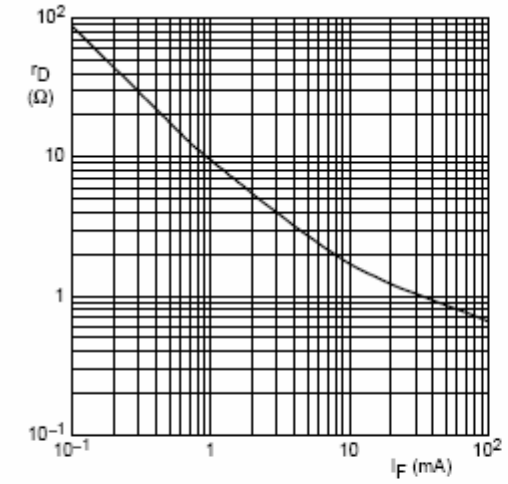


DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

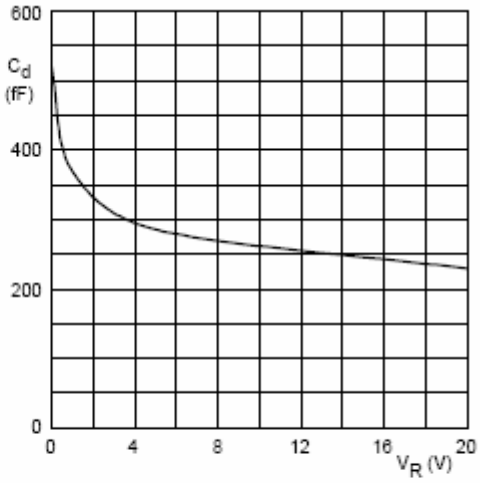


Typical Characteristics



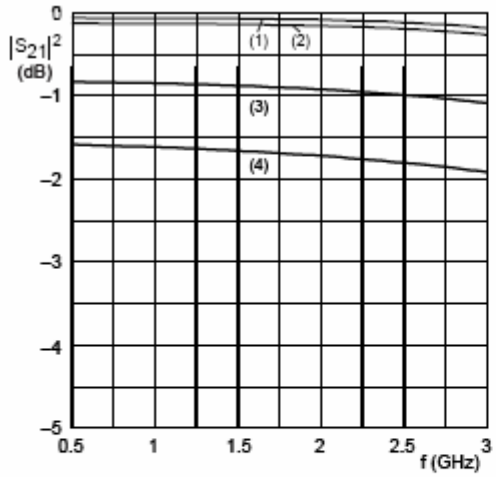
f = 100 MHz; T_j = 25 °C.

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



f = 1 MHz; T_j = 25 °C.

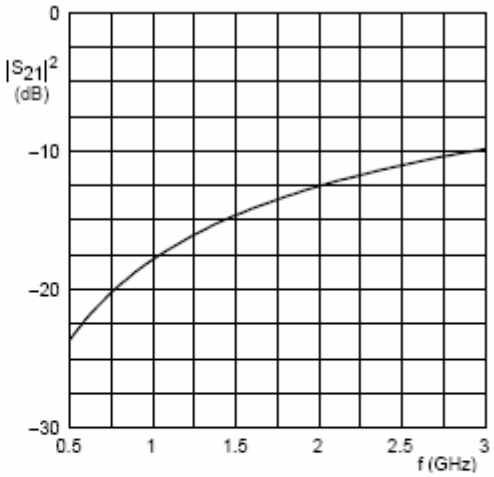
Diode capacitance as a function of reverse voltage; typical values.



(1) I_F = 100 mA.
(3) I_F = 1 mA.
!) I_F = 10 mA.
(4) I_F = 0.5 mA.

Diode inserted in series with a 50 Ω stripline circuit and biased via the analyzer Tee network.
T_{amb} = 25 °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 50 Ω stripline circuit.
T_{amb} = 25 °C.

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

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Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel

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