



## BAP64-05

### General Purpose Pin Diodes 250mW

### Features

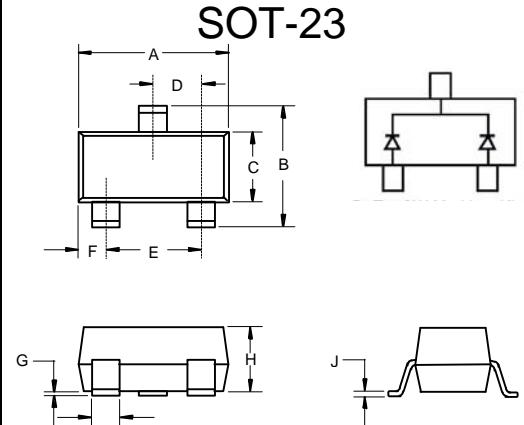
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Low diode capacitance
- Low diode forward resistance
- MARKING: 5K

Maximum Ratings @ 25°C Unless Otherwise Specified

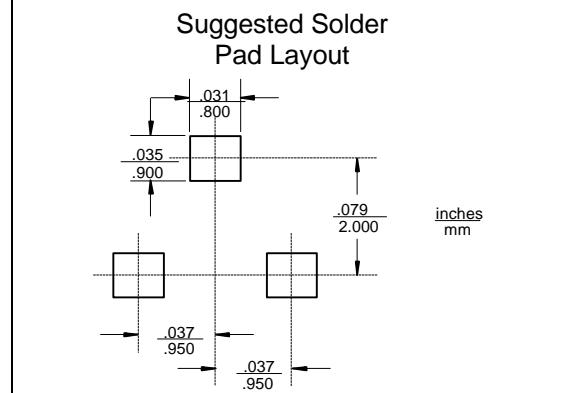
Parameter	Symbol	Limits	Unit
Continuous Reverse Voltage	$V_R$	175	V
Forward Current	$I_F$	100	mA
Power Dissipation( $T_A=90^\circ\text{C}$ )	$P_D$	250	mW
Junction and Storage temperature	$T_j, P_{\text{stg}}$	-65~+150	°C
Thermal Resistance Junction to Ambient	$R_{\text{thJA}}$	500	°C/W

### Electrical Characteristics @ 25°C Unless Otherwise Specified

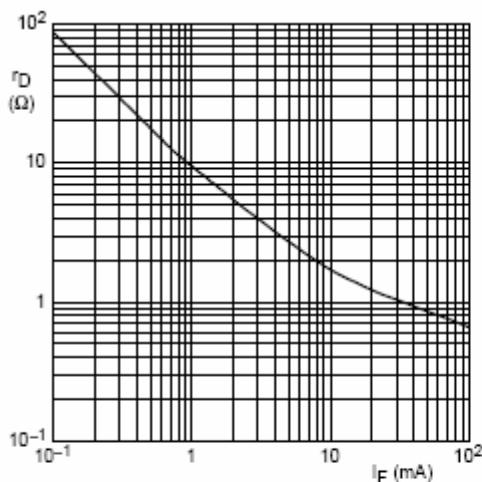
Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Reverse Voltage	$I_R$			10	uA	$V_R=175\text{V}$
Leakage Current				1.0		$V_R=20\text{V}$
Forward voltage	$V_F$			1.1	V	$I_F=50\text{mA}$
Diode capacitance	$C_{d1}$		0.52		pF	$V_R=0\text{V}, f=1\text{MHz}$
	$C_{d2}$		0.37		pF	$V_R=1\text{V}, f=1\text{MHz}$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



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
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	

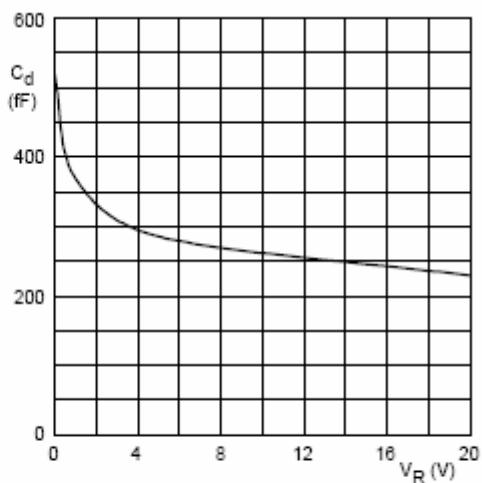


## Typical Characteristics



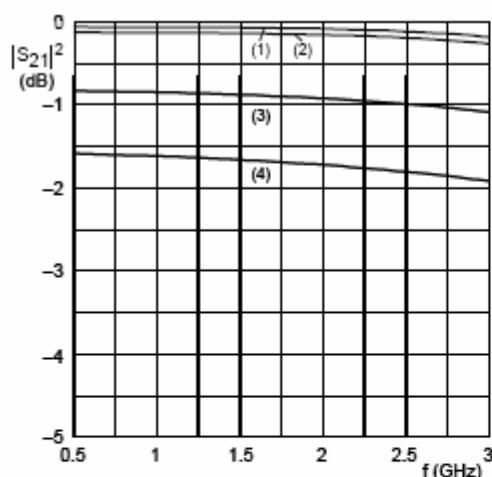
$f = 100 \text{ MHz}; T_j = 25^\circ \text{C}.$

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.

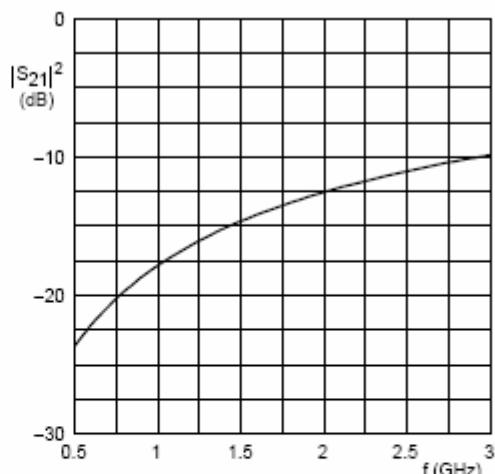


(1)  $I_F = 100 \text{ mA}$ . (3)  $I_F = 1 \text{ mA}$ .  
 (2)  $I_F = 10 \text{ mA}$ . (4)  $I_F = 0.5 \text{ mA}$ .

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

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

<sup>TM</sup>

Micro Commercial Components

## Ordering Information

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

### \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages.

### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

[www.mccsemi.com](http://www.mccsemi.com)