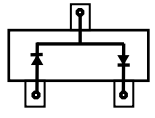
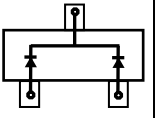
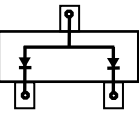


RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

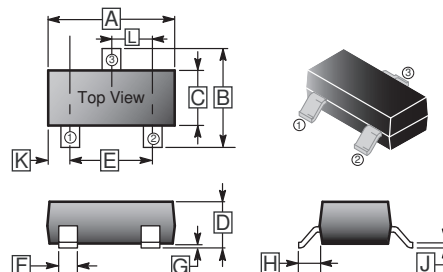
## FEATURES

- Low diode capacitance
- Low series inductance
- High voltage, current controlled
- RF resistor for RF attenuators and switches
- RF attenuators and switches

## MARKING CODE

Part Name	BAP64W-04	BAP64W-05	BAP64W-06
Marking	4K	5K	6K
Circuit			

## SOT-23



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.80	3.04	G	0.09	0.18
B	2.10	2.55	H	0.45	0.60
C	1.20	1.40	J	0.08	0.177
D	0.89	1.15	K	0.6 REF.	
E	1.80	2.00	L	0.89	1.02
F	0.30	0.50			

## PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-23	3K	7 inch

## MAXIMUM RATINGS (at Ta = 25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Continuous Reverse Voltage	$V_R$	175	V
Continuous Forward Current	$I_F$	100	mA
Power Dissipation	$P_D$	250	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	°C / W
Junction, Storage Temperature	$T_J, T_{STG}$	150, -55 ~ +150	°C

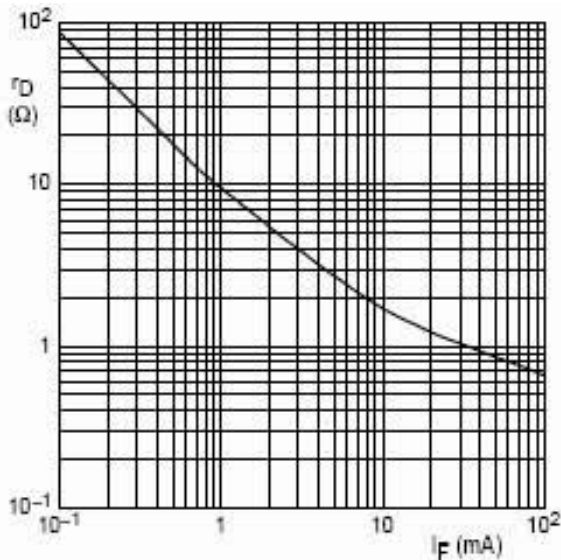
## ELECTRICAL CHARACTERISTICS (at Ta = 25°C unless otherwise specified)

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Forward Voltage	$V_F$	-	-	1.1	V	$I_F = 50\text{mA}$
Reverse Voltage Leakage Current	$I_R$	-	-	10	$\mu\text{A}$	$V_R = 175\text{V}$
		-	-	1		$V_R = 20\text{V}$
Diode Capacitance	$C_D$	-	0.52	-	$\text{pF}$	$V_R = 0, f = 1\text{MHz}$
		-	-	0.5		$V_R = 1\text{V}, f = 1\text{MHz}$
		-	-	0.35		$V_R = 20\text{V}, f = 1\text{MHz}$
Diode Forward Resistance <sup>1</sup>	$r_D$	-	-	40	$\Omega$	$I_F = 0.5\text{mA}, f = 100\text{MHz}$
		-	-	20		$I_F = 1\text{mA}, f = 100\text{MHz}$
		-	-	3.8		$I_F = 10\text{mA}, f = 100\text{MHz}$
		-	-	1.35		$I_F = 100\text{mA}, f = 100\text{MHz}$
Charge Carrier Life Time	$t_L$	-	1.55	-	$\mu\text{S}$	When switched from $I_F = 10\text{mA}$ to $I_R = 6\text{mA}$ ; $R_L = 100\Omega$ ; measured at $I_R = 3\text{mA}$
Series Inductance	$L_S$	-	1.4	-	nH	$I_F = 10\text{mA}, f = 100\text{MHz}$

Note:

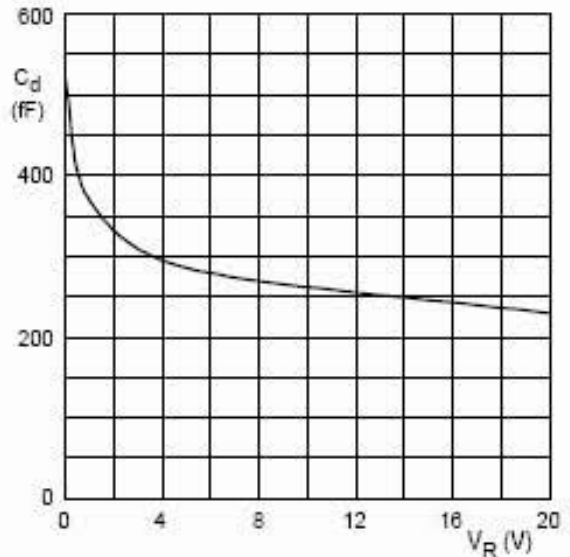
1. Guaranteed on AQL basis: inspection level S4, AQL 1.0.

**RATINGS AND CHARACTERISTIC CURVES**



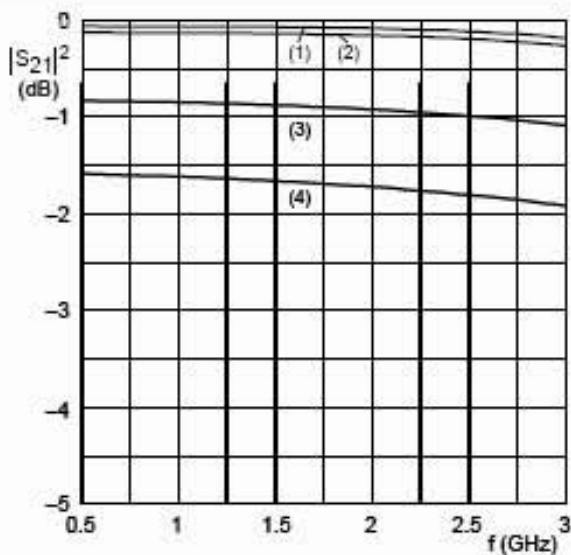
$f = 100 \text{ MHz}; T_j = 25 \text{ }^\circ\text{C}.$

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



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

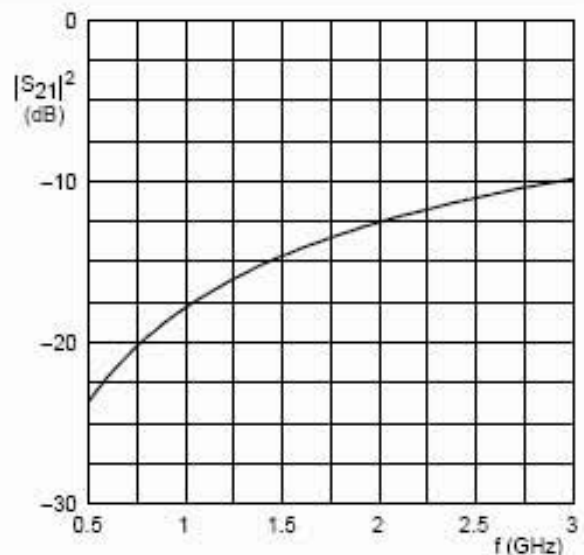
Diode capacitance as a function of reverse voltage; typical values.



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

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

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



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

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