

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

FEATURES

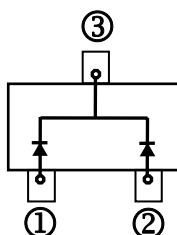
- Low diode capacitance
- Low diode forward resistance
- Low series inductance
- High voltage, current controlled
- RF resistor for RF attenuators and switches
- For applications up to 3 GHz
- RF attenuators and switches

PACKAGING INFORMATION

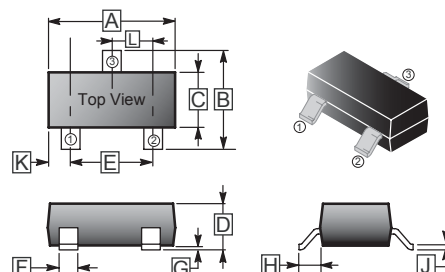
Weight: 0.0078 g (Approximate)

MARKING CODE

5K



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			

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

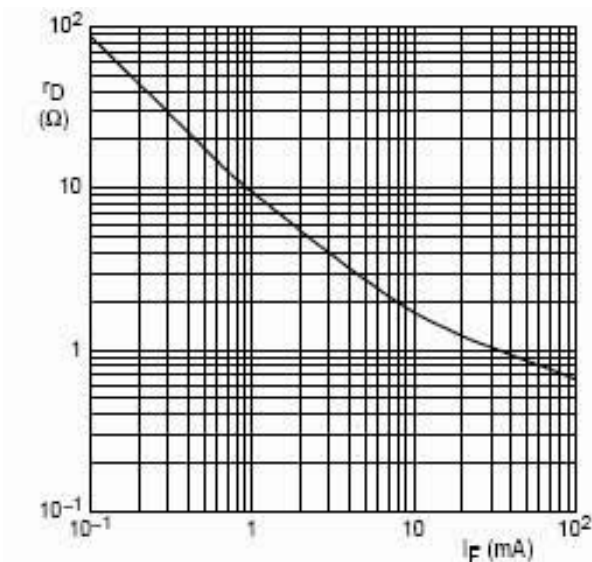
Parameter	Symbol	Ratings	Unit
Continuous Reverse Voltage	V_R	175	V
Continuous Forward Current	I_F	100	mA
Power Dissipation	P_D	250	mW
Junction, Storage Temperature	T_J, T_{STG}	150, -65 ~ +150	°C

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 1	μA	$V_R = 175 \text{ V}$ $V_R = 20 \text{ V}$
Diode Capacitance	C_D	-	0.52	-	pF	$V_R = 0, f = 1 \text{ MHz}$
		-	0.37	-		$V_R = 1 \text{ V}, f = 1 \text{ MHz}$
		-	0.23	0.35		$V_R = 20 \text{ V}, f = 1 \text{ MHz}$
Diode Forward Resistance	r_D	-	20	40	Ω	$I_F = 0.5 \text{ mA}, f = 100 \text{ MHz}$
		-	10	20		$I_F = 1 \text{ mA}, f = 100 \text{ MHz}$
		-	2	3.8		$I_F = 10 \text{ mA}, f = 100 \text{ MHz}$
		-	0.7	1.35		$I_F = 100 \text{ mA}, f = 100 \text{ MHz}$
Charge Carrier Life Time	t_L	-	1.55	-	μS	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	

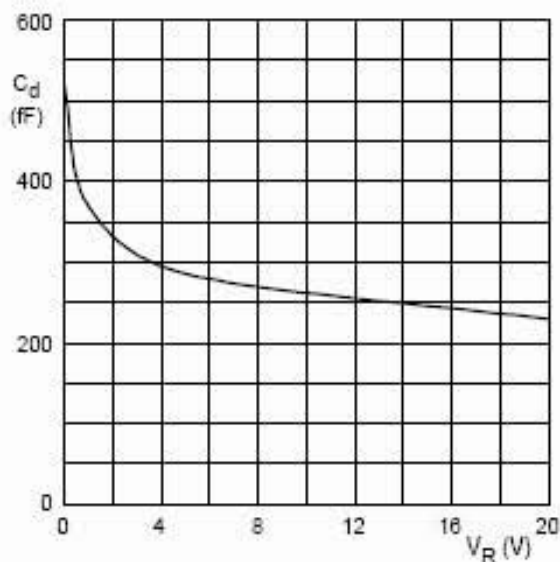
RATINGS AND CHARACTERISTIC CURVES

BAP64-05



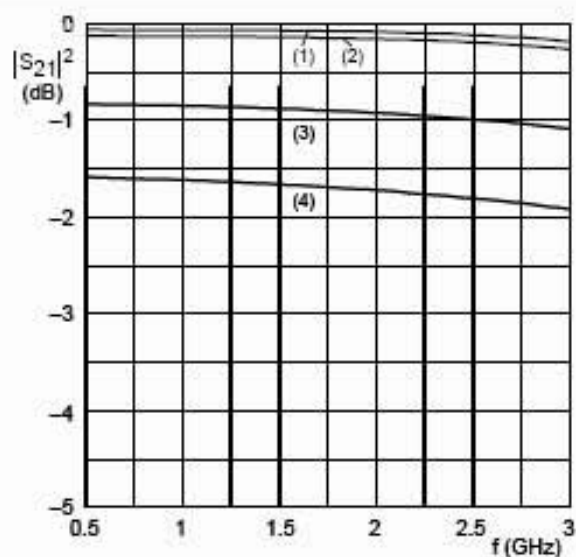
$f = 100 \text{ MHz}; T_J = 25^\circ\text{C}.$

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.

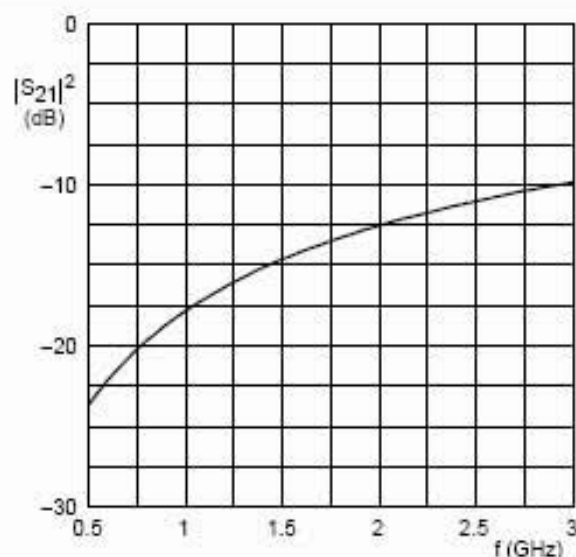


- (1) $I_F = 100 \text{ mA}$ (3) $I_F = 1 \text{ mA}$
(2) $I_F = 10 \text{ mA}$ (4) $I_F = 0.5 \text{ mA}$

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.