



BB174

VHF Variable Capacitance Diode

Features

- Excellent linearity
- Ultra small SMD plastic package
- Low series resistance: $r_s=0.6\Omega$ (typ)

Applications

- Frequency modulation in FM MP3/MP4
- FM and AFC in communication set

Marking:CF



SOD-523

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Limit	Unit
Reverse Voltage	V_R	30	V
Forward Current	I_F	20	mA
Junction Temperature	T_J	125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+125	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$)

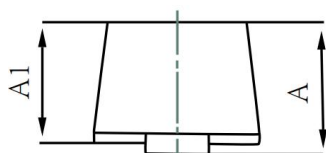
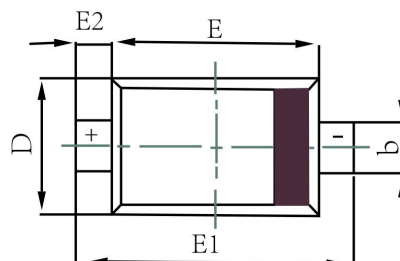
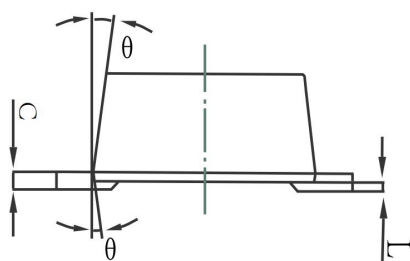
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Revers Voltage	V_R	$I_R=10\mu\text{A}$	30			V
Reverse Current	I_R	$V_R=30\text{V}$			50	nA
Forward Voltage	V_F	$I_F=10\text{mA}$			1.1	V
Capacitance	C_{1V}	$V_R=1\text{V}, f=1\text{MHz}$	18.2		21.3	pF
Capacitance	C_{28V}	$V_R=28\text{V}, f=1\text{MHz}$	1.95	2.1	2.23	pF
Capacitance Ratio	C_{1V}/C_{28V}	$V_R=1\text{V}, f=1\text{MHz}$	8.45	9	10.9	
Series Resistance	r_s	$C_d=9\text{pf}, f=470\text{MHz}$		0.6	0.75	Ω



Package Information

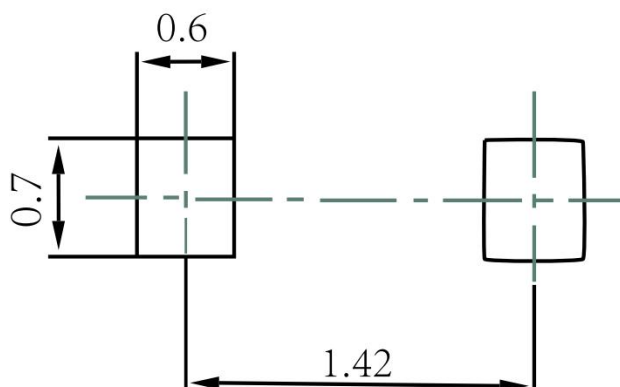
SOD-523

Dimensions in mm



Unit	A	A1	b	c	D	E	E1	E2	L	θ
Max.	0.77	0.70	0.35	0.15	0.85	1.30	1.70	0.20	0.07	7°
Min.	0.51	0.50	0.25	0.08	0.75	1.10	1.50	REF.	0.01	REF.

Suggested Pad Layout





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