

VHF VARIABLE CAPACITANCE DIODE

The BB219 is a silicon variable capacitance diode in a hermetically sealed glass envelope (SOD-80) and intended for electronic tuning in VHF television tuners for C.A.T.V. applications. The SOD-80 envelope is suitable for surface mounting.

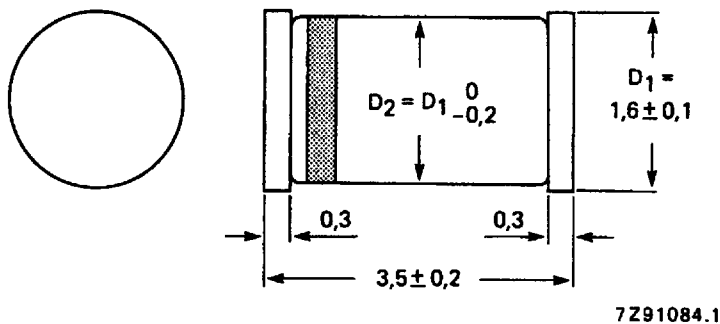
QUICK REFERENCE DATA

Reverse voltage, peak value	V_{RM}	max.	30 V
Reverse current $V_R = 28 \text{ V}$	I_R	<	10 nA
Diode capacitance at $f = 1 \text{ MHz}$ $V_R = 1 \text{ V}$ $V_R = 28 \text{ V}$	C_d	>	31 pF 2,6 to 3,2 pF
Capacitance ratio at $f = 1 \text{ MHz}$	$\frac{C_d(V_R = 1 \text{ V})}{C_d(V_R = 28 \text{ V})}$		12 to 15
Series resistance at $f = 100 \text{ MHz}$ V_R is that value at which $C_d = 30 \text{ pF}$	r_s	typ. <	0,7 Ω 0,9 Ω

MECHANICAL DATA

Dimensions in mm

Fig. 1 SOD-80.



The cathode is indicated by a white band on the body.

RATINGS

Limiting values in accordance with the Absolute Maximum System (IEC 134)

Reverse voltage, peak value	V_{RM}	max.	30 V
Forward current (DC)	I_F	max.	20 mA
Storage temperature	T_{stg}		-55 to +150 °C
Operating junction temperature	T_j	max.	100 °C

THERMAL RESISTANCE

From junction to ambient in free air	$R_{th\ j-a}$	=	0,6 K/mW
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CHARACTERISTICS $T_{amb} = 25\text{ °C}$ unless otherwise specified

Reverse current

 $V_R = 28\text{ V}$ $V_R = 28\text{ V}; T_{amb} = 85\text{ °C}$

I_R	<	10 nA
	<	200 nA

Diode capacitance at $f = 0,5\text{ MHz}$ $V_R = 1\text{ V}$ $V_R = 28\text{ V}$

C_d	>	31 pF
C_d		2,6 to 3,2 pF

Capacitance ratio at $f = 1\text{ MHz}$

$\frac{C_d(V_R = 1\text{ V})}{C_d(V_R = 28\text{ V})}$		12 to 15
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Series resistance

at $f = 100\text{ MHz}$ and at that valueof V_R at which $C_d = 30\text{ pF}$

r_s	typ.	0,7 Ω
	<	0,9 Ω

Tolerance of capacitance difference

between two diodes at $V_R = 1\text{ to }28\text{ V}$

$\frac{\Delta C}{C}$	<	2,5 %
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