BB179WT

UHF VARIABLE CAPACITANCE DIODE

FEATURES

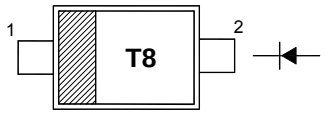
- Excellent linearity
- Excellent matching to 2 % DMA
- Ultra small plastic SMD package
- Low series resistance

APPLICATIONS

- Electronic tuning in VHF television tuners
- Voltage controlled oscillators (VCO)

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



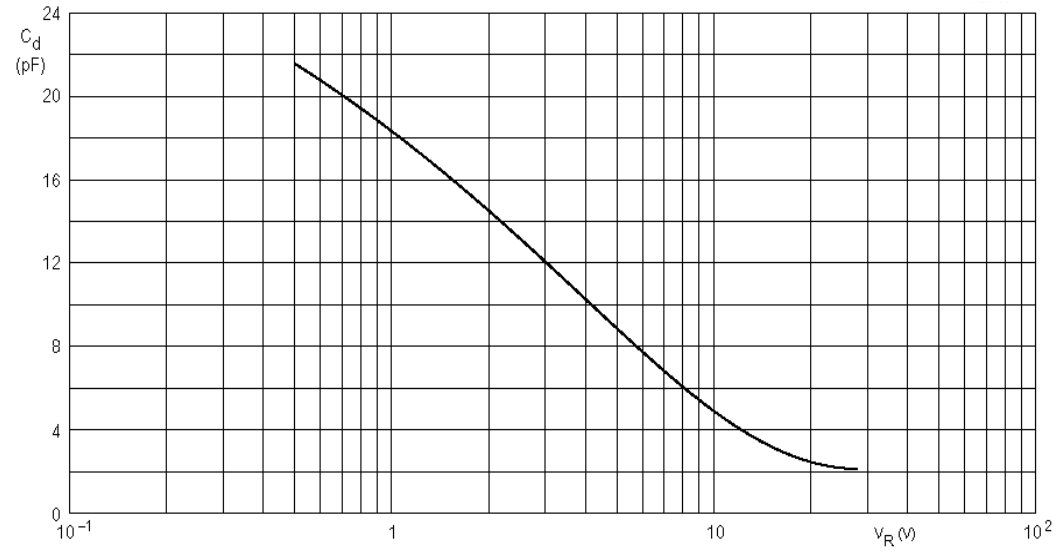
Top View
Marking Code: "**T8**"
Simplified outline SOD-523 and symbol

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	30	V
Peak Reverse Voltage (In Series with a 10 KΩ Resistor)	V_{RM}	35	V
Continuous Forward Current	I_F	20	mA
Operating Junction Temperature Range	T_j	- 55 to + 125	°C
Storage Temperature	T_{stg}	- 55 to + 150	°C

Electrical Characteristics (T_a = 25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Current at V_R = 30 V at V_R = 30 V, T_j = 85 °C	I_R	- -	- -	10 200	nA
Diode Capacitance at V_R = 1 V, f = 1 MHz at V_R = 28 V, f = 1 MHz	C_d	18.22 1.951	- -	21.26 2.225	pF
Capacitance Ratio at f = 1 MHz	$C_{d(1V)}/C_{d(2V)}$	-	1.27	-	-
Capacitance Ratio at f = 1 MHz	$C_{d(1V)}/C_{d(28V)}$	8.45	-	10.9	-
Capacitance Ratio at f = 1 MHz	$C_{d(25V)}/C_{d(28V)}$	-	1.05	-	-
Capacitance Matching at V_R = 1 V to 28 V; in a sequence of 15 diodes (gliding)	$\Delta C_d/C_d$	-	-	2	%
Series Resistance at f = 470 MHz, V_R is the value at which C_d = 9 pF	r_s	-	0.6	0.75	Ω



f = 1 MHz; T_j = 25 °C.

Fig.2 Diode capacitance as a function of reverse voltage; typical values.

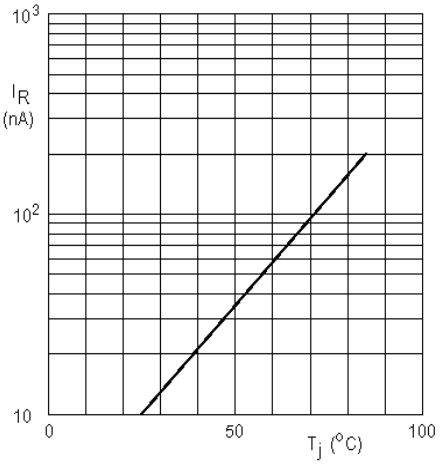
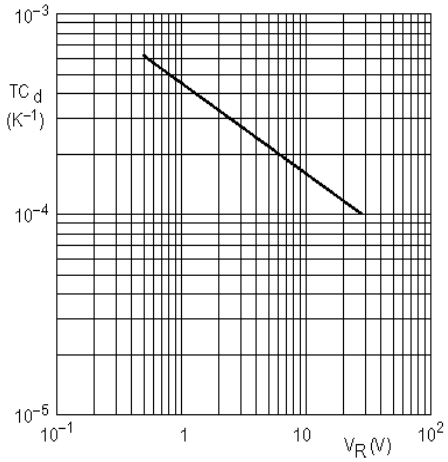


Fig.3 Reverse current as a function of junction temperature; maximum values.

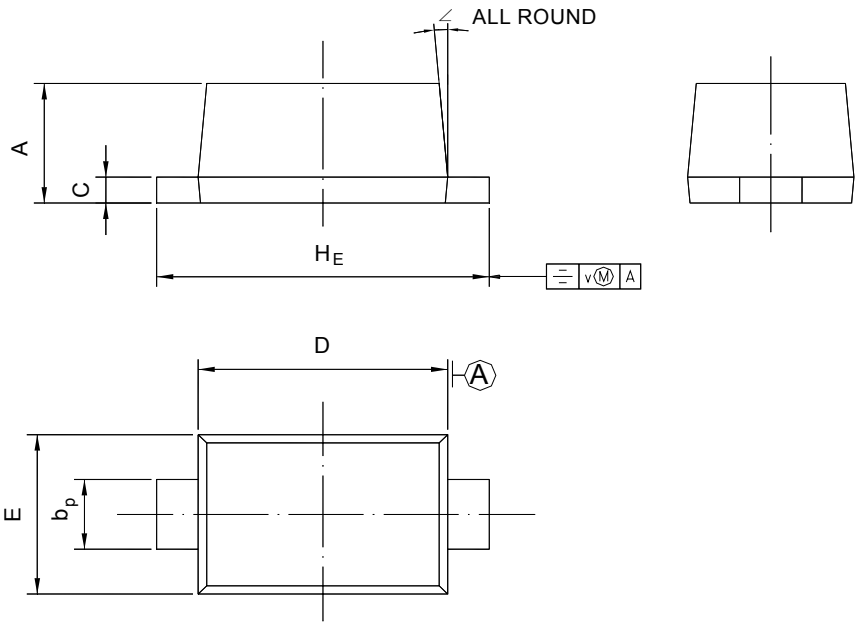


T_j = 0 to 85 °C.

Fig.4 Temperature coefficient of diode capacitance as a function of reverse voltage; typical values.

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SOD-523**



UNIT	A	b_p	C	D	E	H_E	V	∠
mm	0.70 0.60	0.4 0.3	0.135 0.100	1.25 1.15	0.85 0.75	1.7 1.5	0.1	5°