

Specification

Part No.: 0805BB103KW101

0805BB (.080" x .050")

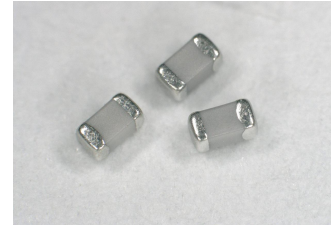
◆ Product Features

Typical Operating Frequency Range: 160KHz (-3dB) to 3GHz.

Insertion Loss: <0.25dB (typical value); rated voltage 100V;

Termination Type: Ni/Sn.

Nickel plated, Tin plated terminals.



◆ Product Application

Optoelectronics / High-Speed Data Transmission

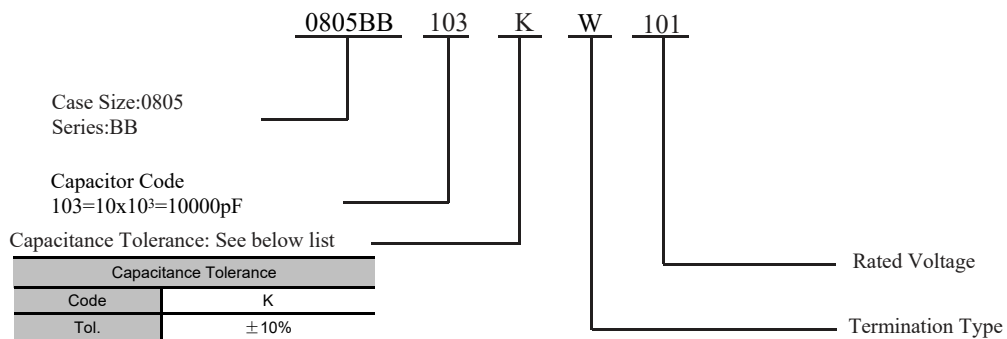
ROSA/TOSA (Receiver Optical Subassembly / Transmitter Optical Subassembly)

SONET (Synchronous Optical Networking)

Broadband Test Equipment

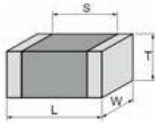
Broadband Microwave and Millimeter-Wave Amplifiers and Oscillator

◆ Part Numbering

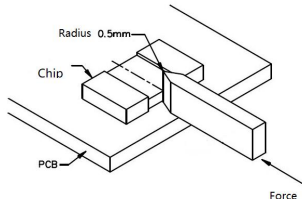


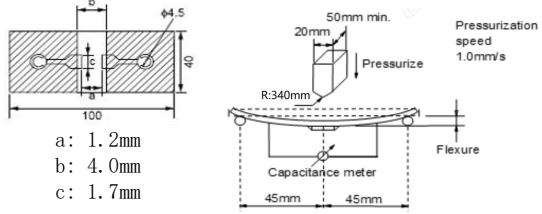
◆ 0805BB Termination Type and Dimensions

unit: inch (millimeter)

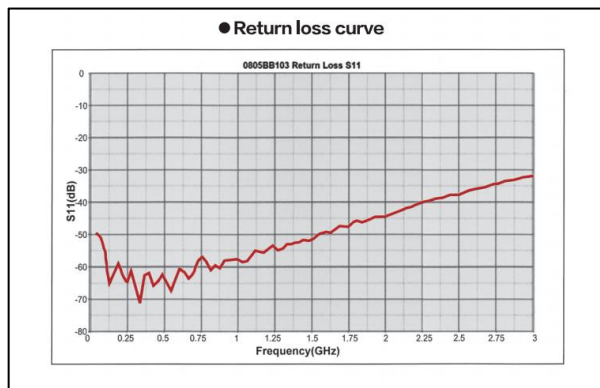
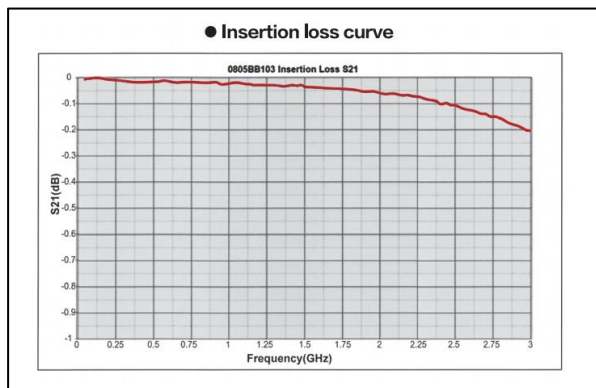
Series	Term. Code	Type/ Outlines	Capacitor Dimensions				Plated Material
			Length L	Width W	Thickness T	S	
0805BB	W		.080 $\pm$.006 (2.03 $\pm$ 0.15)	.050 $\pm$.006 (1.27 $\pm$ 0.15)	.040 (1.02) Max	.044 (1.12) min	100%Sn over Nickel Plating , RoHS Compliant

◆ **Reliability Test Conditions.**

No.	Item	Specification	Test method												
1	Operating temperature	-55℃~125℃													
2	Appearance	No defects or abnormality	Visual inspection: ×10 microscope.												
3	Dimensions	See the previous page	Caliper inspection												
4	Capacitance	Shall be within the applicable tolerance specified.	Test frequency: C≤1000pF: 1MHz±10% C>1000pF: 1KHz±10% Test voltage: 1.0±0.2Vrms												
5	D.F	DF≤10%													
6	Insulation resistance	≥50GΩ	Voltage: DC Rated Voltage												
7	Dielectric withstanding voltage (DWV)	Shall be no evidence of breakdown or visible evidence of arcing or damage.	Test Voltage: 250% of the rated voltage Applied Time: 5 s Charge/discharge current: 50mA max.												
8	Temperature coefficient	Capacitance change is no more than ±15%.	The capacitance change should be measured after 5 min. at each specified temp. stage. Capacitance value as a reference is the value in step 3. <table><tr><td>step</td><td>temperature (℃)</td></tr><tr><td>1</td><td>25±2</td></tr><tr><td>2</td><td>-55±3</td></tr><tr><td>3</td><td>25±2</td></tr><tr><td>4</td><td>125±3</td></tr><tr><td>5</td><td>25±2</td></tr></table> $TC = \frac{C_x - C_3}{C_3 \times \Delta T} \times 100(\%)$	step	temperature (℃)	1	25±2	2	-55±3	3	25±2	4	125±3	5	25±2
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2	-55±3														
3	25±2														
4	125±3														
5	25±2														
9	Adhesive Strength of Termination	No removal of the terminations or other defect should occur.	Pressurizing force:10.0^{+1.0}₀N Test time: 10±1 sec. 												

No.	Item	Specification	Test method															
10	Substrate Bending test	Appearance: No cracking shall occur. $\Delta C/C: \pm 12.5\%$	Mounting method: Reflow solder the capacitor on the test substrate. Pressurization Method: Shown as below. Flexure 1mm. Holding Time $5 \pm 1s$ 															
11	Solderability of termination	Shall be at least 95 percent covered with a smooth solder coating.	Immerse the capacitor in a eutectic solution requirement temperature $245 \pm 2^{\circ}C$ for 2 ± 0.5 seconds. Capacitor shall be immersed to a depth of 10mm.															
12	Resistance to soldering Heat	Appearance: No evidence of mechanical damage or delamination or exposed. Cap change: within $\pm 12.5\%$; D.F: To meet initial requirement. IR($25^{\circ}C$): To meet initial requirement.	Preheat for 1 minute at $150^{\circ}C$ to $180^{\circ}C$ before immerse the capacitor in a eutectic solution at $260 \pm 5^{\circ}C$ for 10 ± 1 seconds. Capacitor shall be immersed to a depth of 10mm. And following a 24 ± 2 hours cooling period.															
13	Temperature Cycle	Appearance: No evidence of mechanical damage . Cap change: within $\pm 10\%$.. D.F: To meet initial requirement. IR($25^{\circ}C$): No less than 30% initial requirement. DWV: To meet initial requirement.	Perform the 5 cycles according to the four heat treatments listed in the following table. Set it for 24 ± 2 hours at room temperature. <table><tr><th>step</th><th>Temperature($^{\circ}C$)</th><th>Time(Min)</th></tr><tr><td>1</td><td>-55(-3~0)</td><td>≥ 30</td></tr><tr><td>2</td><td>25 ± 10</td><td>≤ 5</td></tr><tr><td>3</td><td>$125(0 \sim +3)$</td><td>≥ 30</td></tr><tr><td>4</td><td>25 ± 10</td><td>≤ 5</td></tr></table>	step	Temperature($^{\circ}C$)	Time(Min)	1	-55(-3~0)	≥ 30	2	25 ± 10	≤ 5	3	$125(0 \sim +3)$	≥ 30	4	25 ± 10	≤ 5
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14	Humidity, steady state	Appearance: No evidence of mechanical damage . Cap change: within $\pm 12.5\%$ IR($25^{\circ}C$) $\geq 100M\Omega$ D.F $\leq 12.5\%$	With 1.5 Volts D.C. applied while subjected to an environment of $85^{\circ}C$ with 85% relative humidity for 240 hours minimum. Removed and sit 3.5 ± 0.5 hours at room temperature.															
15	High Temperature Load (Life)	Appearance: No evidence of mechanical damage . Cap change: within : $\pm 12.5\%$; D.F: $\leq 12.5\%$. IR: $\geq 100M\Omega$	Test Voltage: 150% of the rated voltage The charge/discharge current is less than 50mA. Temperature: $125^{\circ}C$; Time: 1000h. Measurement: Set it for 48 hours at room temperature, then measure.															

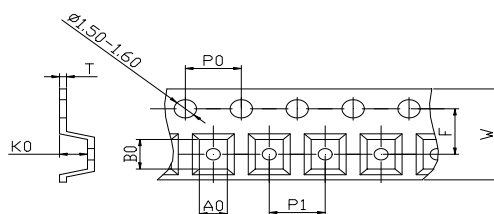
◆ 0805BB Performance Curve



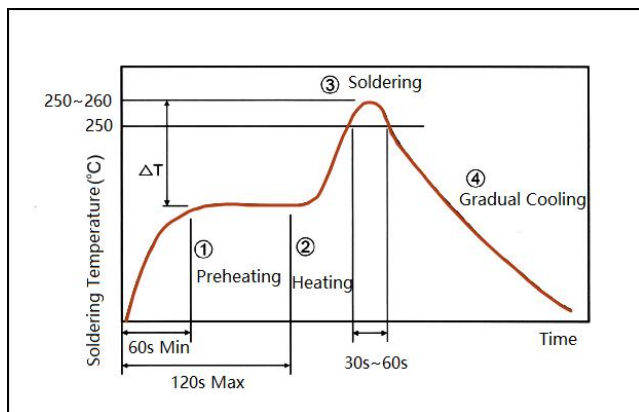
◆ Tape & Reel Specifications

EIA	A0	B0	K0	W	P0	P1	T	F	Qty/reel	Tape Material
0805	1.40	2.20	1.20	8.00	4.00	4.00	0.22	3.50	3000	Plastic

Unit: mm



◆ Recommended soldering conditions



$\Delta T \leq 190^{\circ}\text{C}$;
Maximum temperature: $255^{\circ}\text{C} \pm 5^{\circ}\text{C}$;
Heating rate: $\leq 4^{\circ}\text{C/s}$.

◆ Recommended Land Dimensions

EIA	A(mm)	B(mm)	C(mm)
0805	1.0	0.8	1.3

