

	<b>DATASHEET</b>	<b>Part No.</b>
	<b>Amotech Broadband Capacitor</b>	<b>ABCUA50S02X104KGDG</b>

CUSTOMER :


# DATA SHEET

**Product Name : Amotech Broadband Capacitor**

**Part No : ABCUA50S02X104KGDG**

**Revision Date : 2020/12/08**

**Customer Code :**

	<b>Address : 380, NAMDONGSEO-RO, NAMDONG-GU INCHEON, 21629 KOREA (AMOTECH. CO., LTD)</b>
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## 1. Parts description

### 1.1. Overview

The ABCU series is abbreviation of Amotech broadband Capacitor. We provide extremely low insertion loss and excellent return loss in 40GHz.

### 1.2. Features

- 0402 inch (1.0x0.5mm)
- Operating Frequency : 16kHz ~ 40GHz +
- Low insertion loss
- RoHS Compliant

### 1.3. Application

- Broadband Microwave / millimeter-wave
- Broadband Test Equipment
- Optoelectronics / High Speed Data for optical module

## 2. Model and Lot Number description

### 2.1. Model

<b>ABC</b>	<b>U</b>	<b>A</b>	<b>50</b>	<b>S</b>	<b>02X</b>	<b>104</b>	<b>K</b>	<b>G</b>	<b>D</b>	<b>G</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>	<b>(8)</b>	<b>(9)</b>	<b>(10)</b>	<b>(11)</b>

- (1) Series name
- (2) Design code
- (3) Internal code
- (4) Rated Voltage 50 : 50V
- (5) Material Code S : internal code
- (6) Chip size, 02X : 0402inch (1.0 x 0.5 x 0.5 mm)
- (7) Capacitance 104 : 100nF
- (8) Capacitance tolerance K : ± 10%
- (9) Plating G : Au plating over Nickel barrier
- (10) Packaging specification : Paper Taping (ø180mm Reel)
- (11) Application G : General

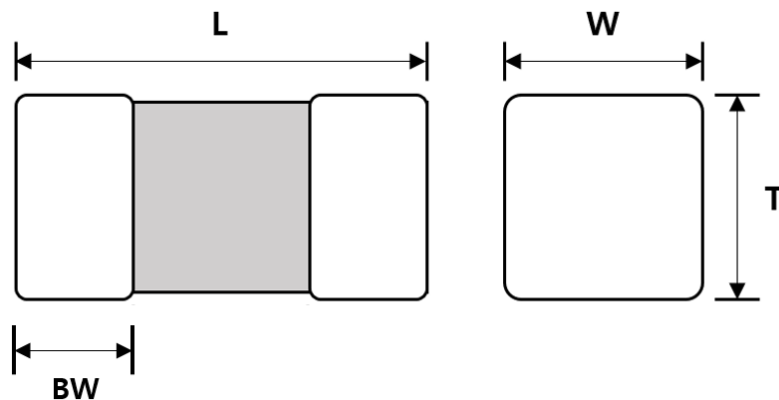
### 3. Specifications

#### 3.1 Electrical characteristics

<b>Part number</b>	ABCUA50S02X104KGDG
<b>DC Rated voltage</b>	50 V dc
<b>Capacitance &amp; Tolerance</b>	100nF ±10%
<b>Dielectric Withstanding Voltage</b>	250% of rated voltage for 5sec.
<b>Insulation Resistance</b>	10 <sup>9</sup> Ω min. @+25°C, DC rated voltage
<b>Temperature Coefficient of Capacitance (TCC)</b>	15 % @ -55 ~ +125°C
<b>Typical operating frequency range</b>	16 kHz (-3dB point) to 40 GHz +

#### 3.2 Mechanical dimension

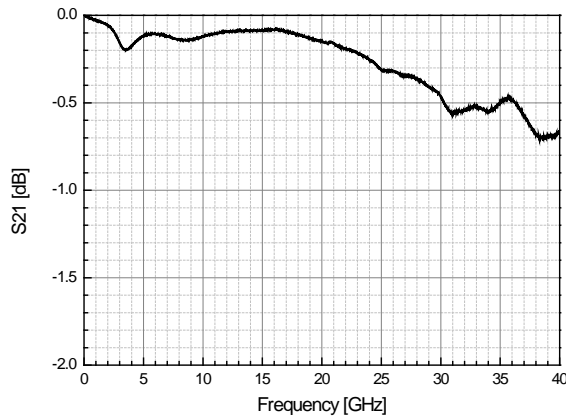
■ Mechanical dimension



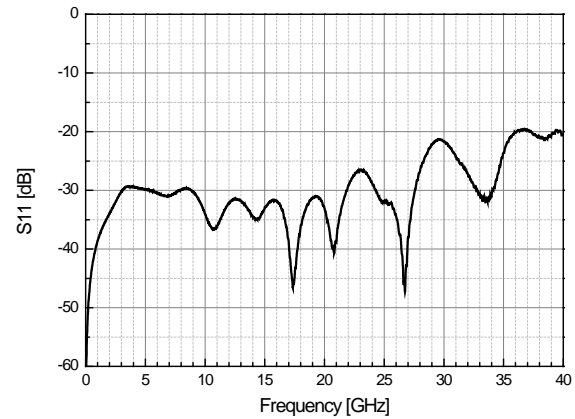
	L	W	T	BW
Size (mm)	1.0 ±0.1	0.5 ±0.1	0.5 ±0.1	0.25 ±0.1

### 3.3. Typical performance data

#### ■ Insertion Loss (S21)

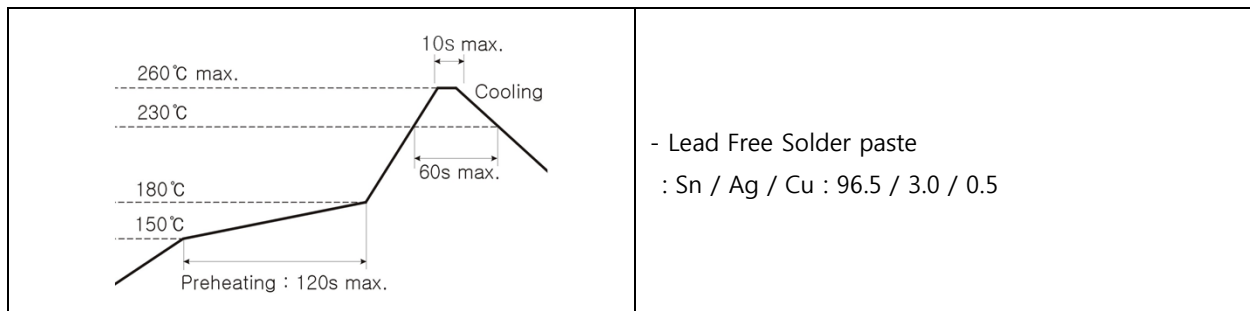


#### ■ Return Loss (S11)



\* EV board (ABC 02X E01): Rogers 4003C, thickness : 0.2 mm

### 4. Soldering condition (Reflow soldering)



Follow the recommended soldering conditions to avoid degradation of performance .

- This product is designed for reflow soldering only. Do not use flow soldering.
- Use non-activated flux. (Max. Cl content less than 0.2%)
- Reflow cycle times should be done less than 3 times.

### 5. Caution

- 1) Storage environment: 5~40°C temperature, 20~70% humidity (MSL Level 1)
- 2) Do not use in high temperature/high humidity and a corrosive atmosphere like sulfide, chloride gas, which could damage the solderability.
- 3) Do not expose to mechanical shock to avoid crack.