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|  | DATASHEET | Part No. |
| | Amotech Broadband Capacitor | ABCUA16S02X104KNDG |

CUSTOMER :


DATA SHEET

Product Name : Amotech Broadband Capacitor

Part No : ABCUA16S02X104KNDG

Revision Date : 2020/12/08

Customer Code :

| | |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
|  | Address : 380, NAMDONGSEO-RO, NAMDONG-GU INCHEON, 21629 KOREA (AMOTECH. CO., LTD) |
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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

| ABC | U | A | 16 | S | 02X | 104 | K | N | D | G |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |

- (1) Series name
- (2) Design code
- (3) Internal code
- (4) Rated Voltage 16 : 16V
- (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 N : Sn plating over Nickel barrier
- (10) Packaging specification : Paper Taping (ø180mm Reel)
- (11) Application G : General

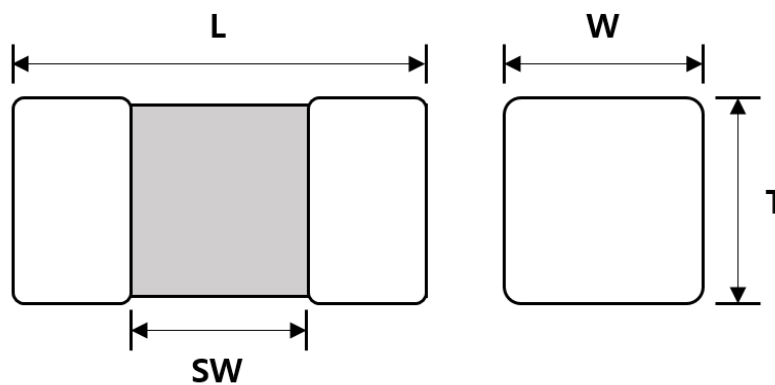
3. Specifications

3.1 Electrical characteristics

| | |
|-----------------------------------------------------|-------------------------------------------------|
| Part number | ABCUA16S02X104KNDG |
| DC Rated voltage | 16 V dc |
| Capacitance & Tolerance | 100nF ±10% |
| Dielectric Withstanding Voltage | 250% of rated voltage for 5sec. |
| Insulation Resistance | 10 ⁹ Ω min. @+25°C, DC rated voltage |
| Temperature Coefficient of Capacitance (TCC) | 15 % @ -55 ~ +125°C |
| Typical operating frequency range | 16 kHz (-3dB point) to 40 GHz + |

3.2 Mechanical dimension

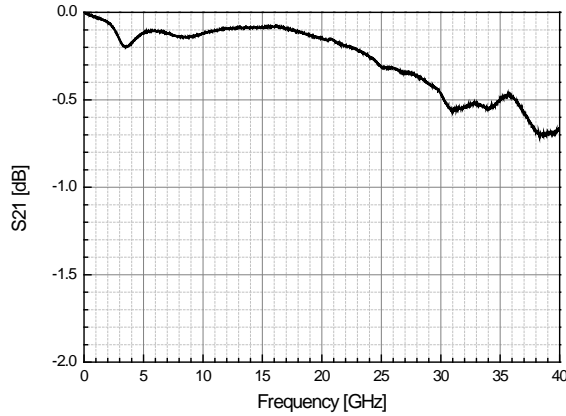
■ Mechanical dimension



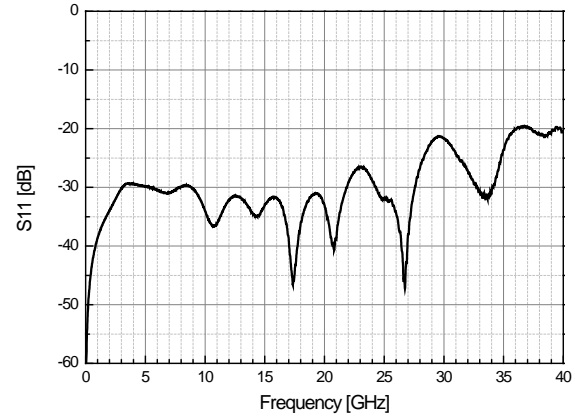
| | L | W | T | SW |
|-----------|----------|----------|----------|-----------|
| Size (mm) | 1.0 ±0.1 | 0.5 ±0.1 | 0.5 ±0.1 | 0.25 ±0.1 |

3.3. Typical performance data

■ **Insertion Loss (S21)**

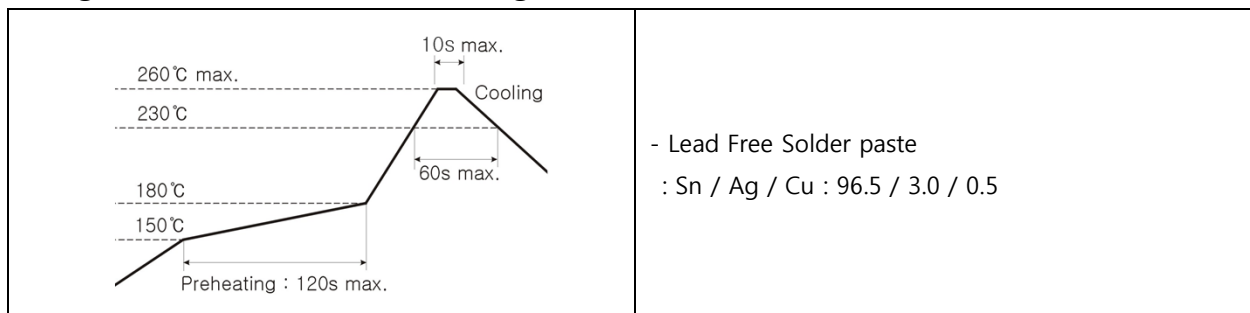


■ **Return Loss (S11)**



* 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.