	DATASHEET	Part No.
	Amotech Broadband Capacitor	ABCUA50S02X104KNDG

CUSTOMER :


DATA SHEET

Product Name : Amotech Broadband Capacitor

Part No : ABCUA50S02X104KNDG

Revision Date : 2020/12/08

Customer Code :

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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	50	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 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 N : Sn plating over Nickel barrier
- (10) Packaging specification : Paper Taping (ø180mm Reel)
- (11) Application G : General

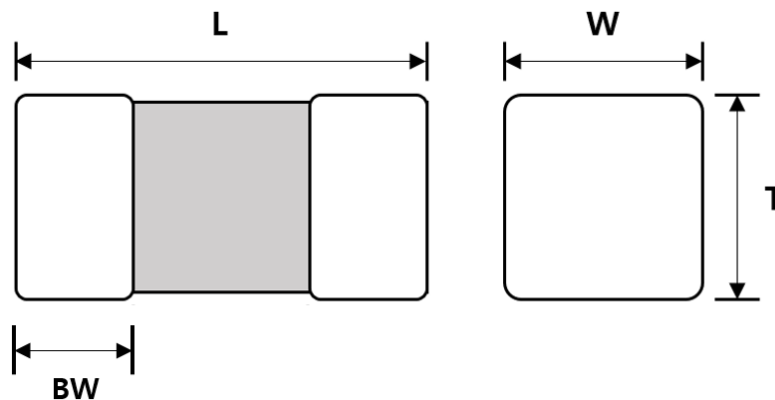
3. Specifications

3.1 Electrical characteristics

Part number	ABCUA50S02X104KNDG
DC Rated voltage	50 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

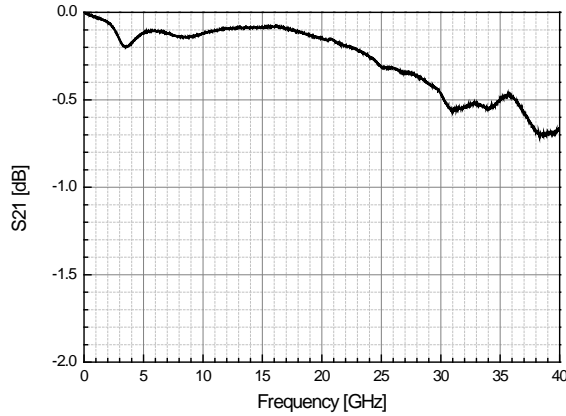
■ Mechanical dimension



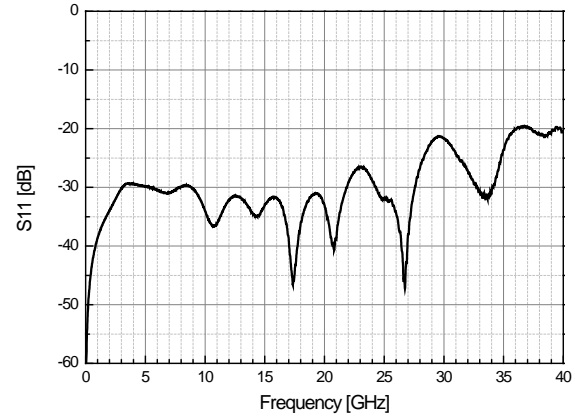
	L	W	T	BW
Size (mm)	1.0 ±0.1	0.5 ±0.1	0.5 ±0.1	0.25 ±0.1

3.3. Typical performance data

■ **Insertion Loss (S21)**

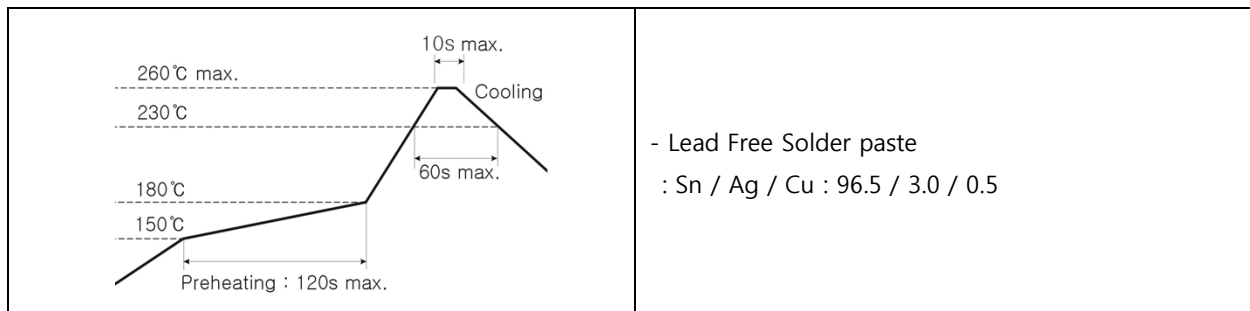


■ **Return Loss (S11)**



* 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.