
	DATASHEET	Part No.
	Amotech Feedthru Capacitor	AFC50S06E184SPL

CUSTOMER :

DATA SHEET

Product Name	: Amotech Feedthru Capacitor
Part No	: AFC 50S 06E 184S PL
Revision Date	: 2019/11/04
Customer Code	:

	Address : AMOTECH. CO. LTD., 17-2 ,JAMWON-DONG, SEOCHO-GU, SEOUL,KOREA
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1. Parts description

1.1. Overview

The AFC series has a filter with feed-thru structure for EMI protection, and mainly has the function of blocking EMI noise in power circuits.

1.2. Features

- Low ESL/ESR
- Broad band frequency characteristics
- Ceramic multilayer type SMD component
- RoHS compliance
- MSL LEVEL 1

1.3. Application

- EMI Suppression
- Broadband I/O Filtering
- Vcc Line Conditioning

2. Model and Lot Number description

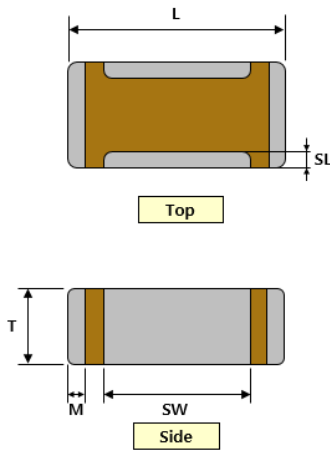
2.1. Model

<u>AFC</u>	<u>50</u>	<u>S</u>	<u>06E</u>	<u>184</u>	<u>S</u>	<u>P</u>	<u>L</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

- (1) Series name
- (2) Rated Voltage 50 : 50V
- (3) Material Code S : X7R
- (4) Chip size, 06E : 1806 (4.5 x 1.6 x 1.0 mm)
- (5) Capacitance 184 : 180nF
- (6) Capacitance tolerance : +50%, -20%
- (7) For Power Line
- (8) Packaging specification

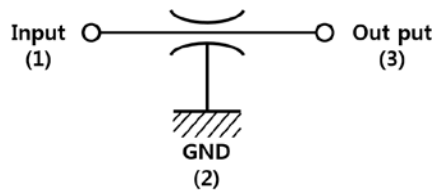
3. Style and Dimension

3.1. Style and Dimension



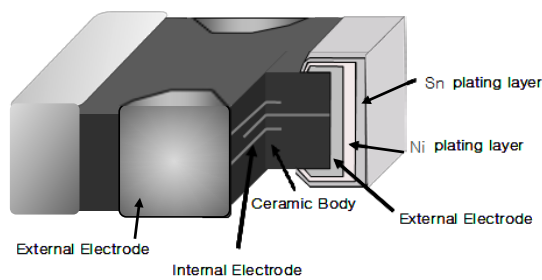
Size (mm)	
L	4.5±0.30
W	1.6±0.30
T	1.0±0.30
M	<i>0.3±0.20</i>
SW	<i>2.8±0.20</i>
SL	0.3+0.30/-0.2

3.2. Equivalent circuit



※ No Polarity & Directionality

4. Structure and materials



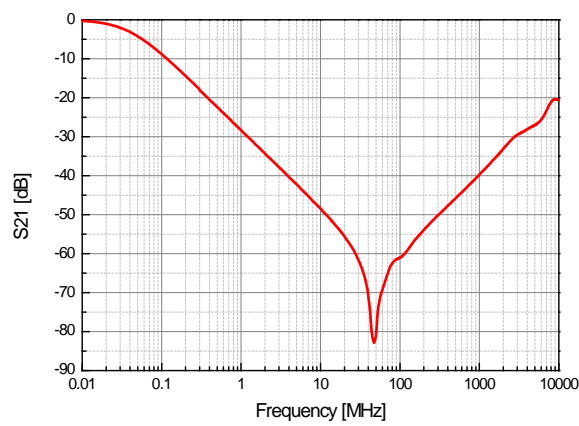
Item	Material
Ceramic Body	BaTiO ₃
Internal electrode	Ni
External electrode	Cu – Ni – Sn
Plating layer	Ni ≥ 2 μm, Sn ≥ 3 μm

5. Specification

5.1. Specification

Part No.	Capacitance	Tolerance	DC Rated Voltage	DC Rated Current	DC Resistance	Insulation Resistance
	(μ F)	(%)	(V)	(A)	($m\Omega$)	($M\Omega$)
AFC 50S 06E 184S PL	0.18	20	50	6	Max. 10	Min. 1000

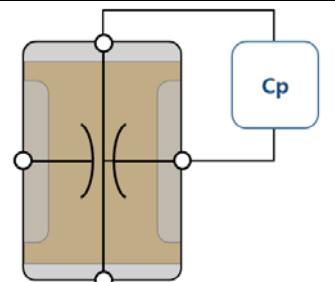
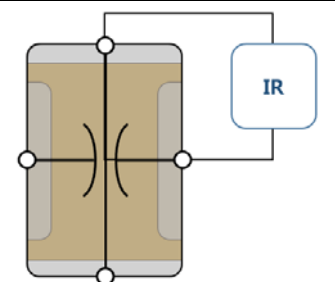
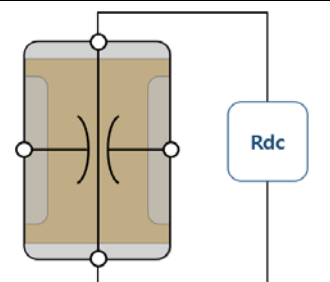
5.1.1. Frequency characteristics



5.2. Temperature range

- 1) Operating temperature range: -55 ~ +125°C
- 2) Storage temperature range: -55 ~ +125°C

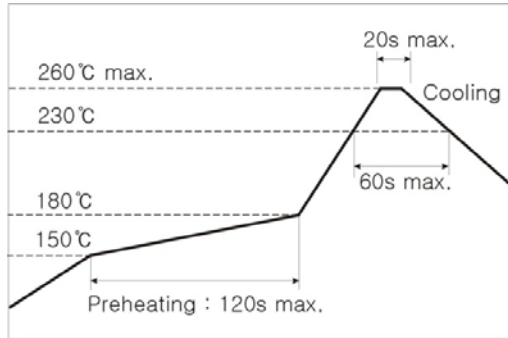
5.3. Testing method

parameter	Capacitance (Cp)	Insulation Resistance	DC Resistance
Equipment	Capacitance meter	Source meter	Milliohm Meter
Terminal to be Tested			

6. Soldering (Reflow soldering)

6.1. Soldering condition

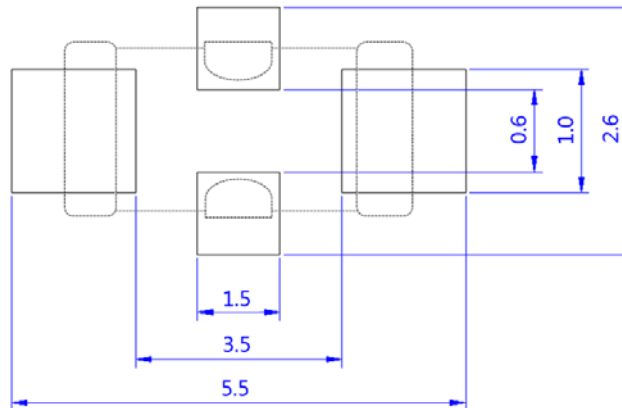
a. Lead-free solder paste: Sn/Ag/Cu:96.5/3.0/0.5



b. Follow the recommended soldering conditions to avoid degradation of performance.

- This product 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.

6.2. PCB pattern design condition (recommended)



7. 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.
- 4) Use chips within 6 months. If over 6 months, check solderability before use.