



Customer : _____

ROHS

SPECIFICATION

Type : DIELECTRIC FILTER

Part no. : AMOBP 1575 P02 – A1

Date : September 10, 2007.

Rev. No	Issue	Page	Rev. Date	Check
01	* The device should satisfy → The device satisfies * Addition of packages part	3,6,7	2007. 8. 31	J.S. Maeng
02	* The device should satisfy → The device satisfies	4	2007. 9. 10	J.S. Maeng

Customer	Written	Checked	Approved
Receptec			
Date	/	/	/

AMOTECH CO., LTD. 5B 1L, 617, NAMCHON-DONG, NAMDONG-GU, INCHEON, KOREA TEL : 82-32-821-0363 FAX : 82-32-811-0283	Designed	Checked	Approved
	/	/	/

1. Scope

This specification covers the characteristics of the dielectric band pass filter for the 1.5G GPS System.

2. Model numbering

Part No. : AMOBP 1575 P02 – A1

3. Composition and materials

3-1. Resonators : Dielectric Materials

3-2. Number of Poles : 2 poles

3-3. Input/Output Terminals : Ag plated pattern

4. Electrical specifications

No.	ITEM	SPECIFICATION	Typical data
4-1	Center Frequency (fo)	1575.42 MHz	1575.42±0.5MHz
4-2	Pass Bandwidth (BW)	fo +/- 5.0 MHz	10.0MHz ±0.5MHz
4-3	Insertion Loss (IL) in BW	3.0 dB Max	Avg 2.33 dB (B.W)
4-4	Ripple	1.0 dB Max	Avg 0.31 dB (B.W)
4-5	VSWR in BW	1.5 Max	Avg 1.16 (B.W)
4-6	Attenuation (Absolute Values)		
	at 1525.42MHz (fo-50MHz)	17.0dB Min	Avg 18.3dB
	at 1698.00MHz (fo+122.58MHz)	40.0dB Min	Avg 46.8dB
4-7	Input Power	1 Watt Max	1.5 Watt
4-8	Input/Output Impedance	50 ohms	45 ~ 55 ohms
4-9	Operation Temperature Range	-40°C ~ +90°C	-40°C ~ +95°C
4-10	Testing Jig	PCB JIG (6030)	

*Ripple Definition: (Peak max in BW)–(Peak min in BW)=1.0dB max



5. Reliability guarantee condition

The device satisfies the electrical characteristics specified in paragraph 4 after the following tests. And measurements should be done after putting in the typical condition (20~30 °C / 55~75 % RH) for 2 hours minimum.

5-1. Temperature Characteristics

The device satisfies the electrical characteristics specified in paragraph 4 at the temperature range of $-40\text{ }^{\circ}\text{C} \sim +90\text{ }^{\circ}\text{C}$.

5-2. Heat Proof

The device satisfies the electrical characteristics specified in paragraph 4 after exposed to the temperature $90 \pm 2\text{ }^{\circ}\text{C}$ for 96 hours.

5-3. Cold Proof

The device satisfies the electrical characteristics specified in paragraph 4 after exposed to the temperature $-40 \pm 2\text{ }^{\circ}\text{C}$ for 96 hours.

5-4. Moisture Proof

The device satisfies the electrical characteristics specified in paragraph 4 after exposed to the temperature $40 \pm 2\text{ }^{\circ}\text{C}$ and the humidity 95 % RH for 96 hours.

5-5. Vibration

The device satisfies the electrical characteristics specified in paragraph 4 after applied to the vibration of 10 to 50 Hz with amplitude of 1.5 mm & sw of 1min for 2 hours each of x, y and z directions.

5-6. Drop Shock

The device satisfies the electrical characteristics specified in paragraph 4 after dropped onto the hard wooden board from the height of 50 cm for 3times toward each of x, y and z directions except the terminal direction.

5-7. Solder Heat Proof

The device satisfies the electrical characteristics specified in paragraph 4 after reflowed at $260 \pm 5\text{ }^{\circ}\text{C}$ for 10 ± 1 seconds.

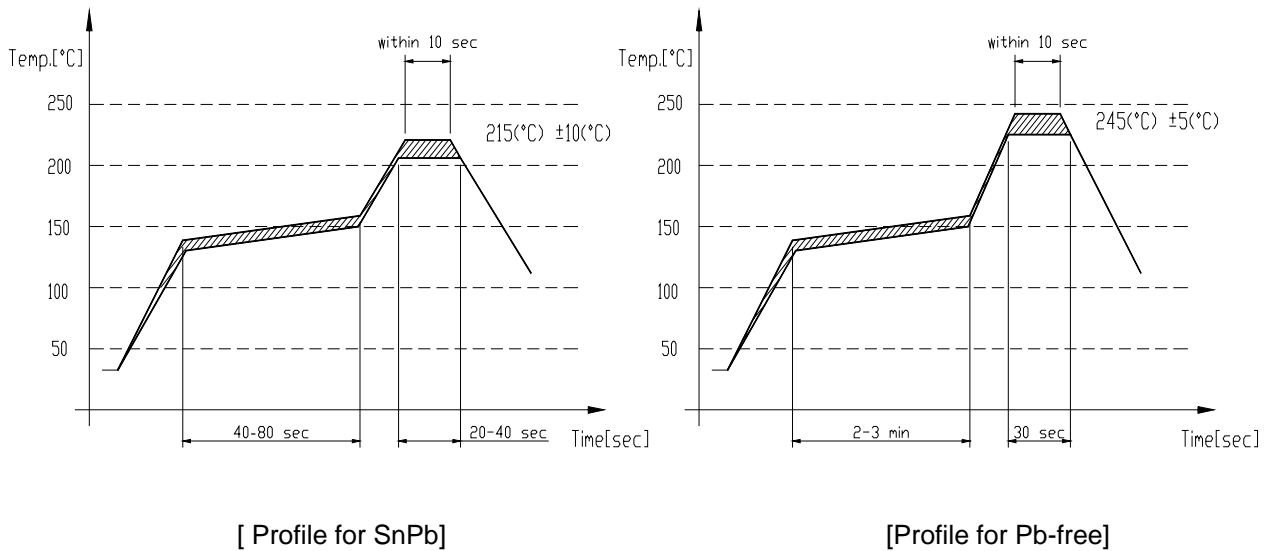
6. Soldering condition

The device satisfies the electrical characteristics specified in paragraph 4 after reflowed on the following condition.

6-1. Reflow Conditions.

	Profile for eutectic Sn/Pb solder paste	Profile for Pb-free solder paste	unit
Soldering type	Reflow	Reflow	
Maximum soldering temperature	235(max 2sec) 225(max 10sec)	260(max 2sec) 250(max 10sec)	

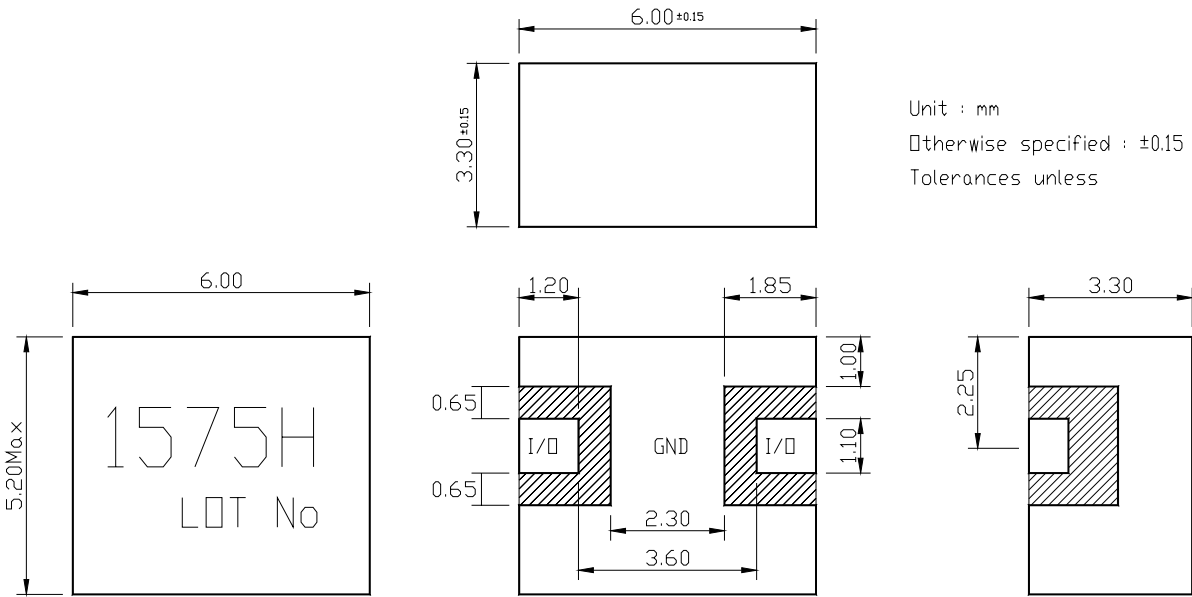
6-2. Recommended reflow soldering standard conditions (Example)



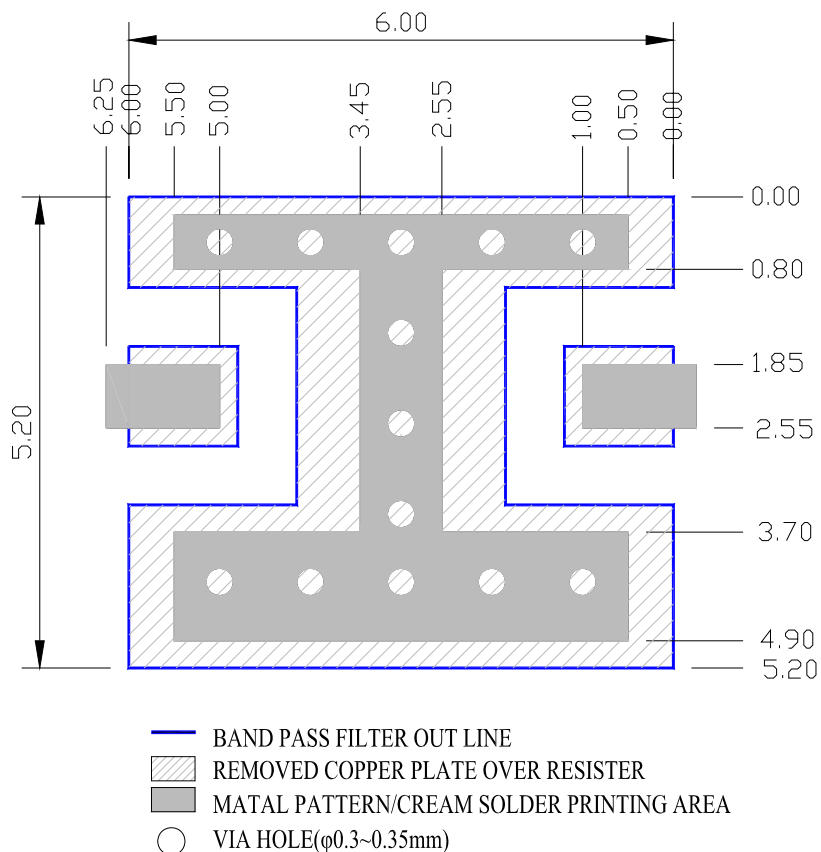
This product is designed for reflow soldering only. Do not use flow (wave) soldering.

- ① Use non-activated flux (Cl content 0.2% max.)
- ② Follow the recommended soldering conditions to avoid damage.
- ③ Reflow-cycle is max. 3 times.

7. Dimensions



8. Recommended PCB Footprint Layout

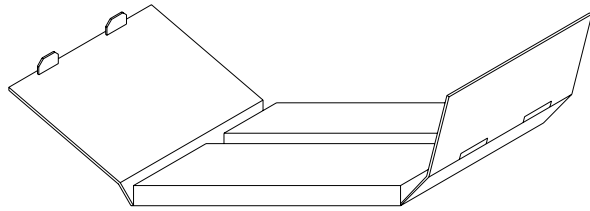
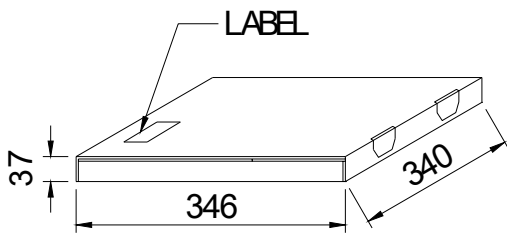


NOTICE.

- Line width should be designed to match 50ohm characteristic impedance, depending on PCB material and thickness
- Isolated distance between BPF and another RF device need to above 1.5mm(recommended distance)

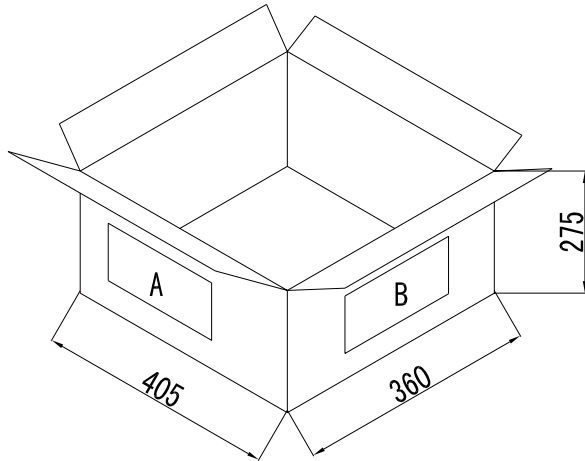
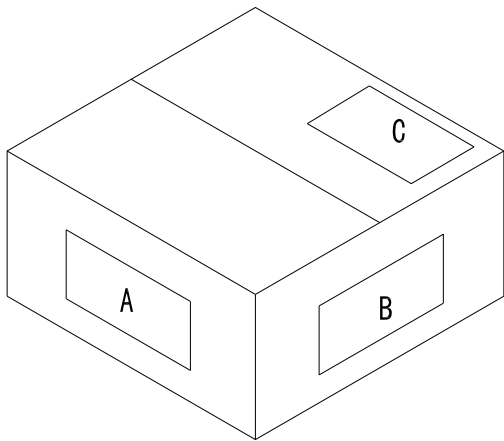
9.3.1) Inner Box-

Size : 346(w) x 340(D) x 37(H) (mm)
 - Q'ty : 2 Reel (1,500ea/reel)



9.3.2) Outer Box :

- Size : 405(w) x 360(D) x 275(H) (mm)
 - Q'ty : 6 Inner Box (3000ea / Inner box x 6 Inner box = 18,000 ea)

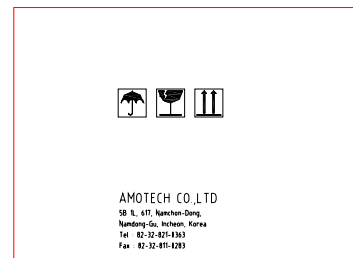
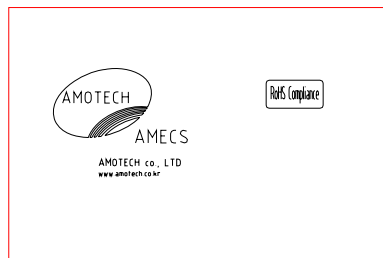


A- MARKING
 C- MARKING

B- MARKING
 A- MARKING

C- MARKING
 B- MARKING

Model :
 Customer :
 Quantity:
 date:



10. Caution

10-1. Storage environment must be at an ambient temperature of 0~35°C and an ambient humidity up to 60 % RH.

10-2. Avoid mechanical shock and drop to prevent cracking of the dielectric filters.

10-3. Use dielectric filters within 6 months. If over 6 months, check solderability before use.

10-4 Electrode metallization are unprotected silver and will tarnish during storage due to sulphuric compounds (namely H₂S) in the atmosphere and human skin contact also cause tarnishing.

This has no effect whatsoever on the electrical performance of the filter. Because of this normal and to be expected process, AMOTECH accepts no warranty claims for tarnished products.

11. Typical performance curve

- S11 : Return Loss & S21 : Log mag

