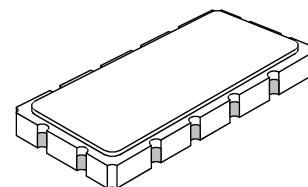


SF2230A

**70 MHz
SAW Filter**



SM13365-12

- Precision IF SAW Filter
- Hermetic 13.3 x 6.5 mm Surface-mount Case
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1

Maximum Rating:

1. Input Power Level: 10 dBm
2. Operating Temperature: -40°C to +85°C
3. Storage Temperature: -40°C to +85°C
4. Moisture Sensitivity Level: Level1 (MSL1)

Electrical Characteristics:

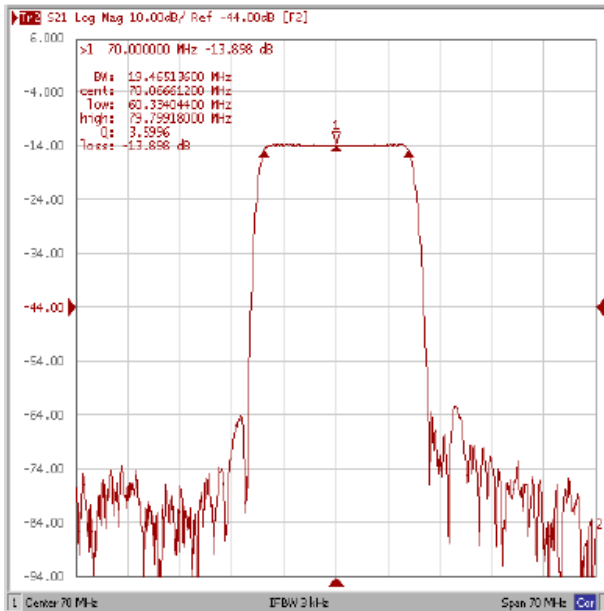
Ambient Temperature: 25°C

Item	Unit	Min.	Type.	Max.	Note
Center frequency, Fc	MHz	-	70	-	
Insertion Loss, IL	dB	-	14.5	16.5	
1dB Bandwidth	MHz	18.7	19.48	-	
3dB Bandwidth	dB	-	20.3	-	
40dB Bandwidth	MHz		20.8	25	
Passband ripple Fc+/-8.2MHz	dB	-	0.45	1.0	
Group Delay ripple Fc+/-8.2MHz	nS		25	60	
Absolute Delay	µS	-	0.9	-	
Attenuation Reference level from Min IL)					
35 MHz ~ 57.75MHz	dB	40	45	-	
82.75 MHz ~105MHz	dB	40	45	-	
Temperature Coefficient	ppm/°C	-	-86	-	

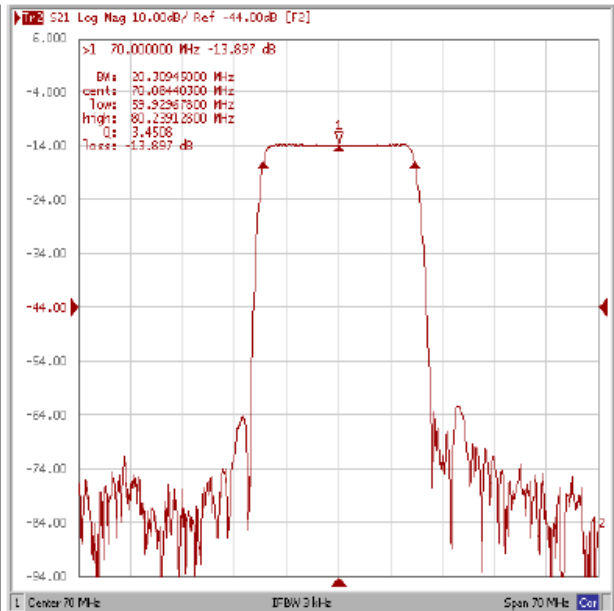
Impedance Matching to 50 Ω Unbalanced Source/Load	External L-C
Case Style	SM13365-12 13.3 x 6.5 mm Nominal Footprint
Lid Symbolization (YY = year, WW = week, S = shift, ## = Sequence Code)	RFM, SF2230A, YYWWS##

Frequency Characteristics:

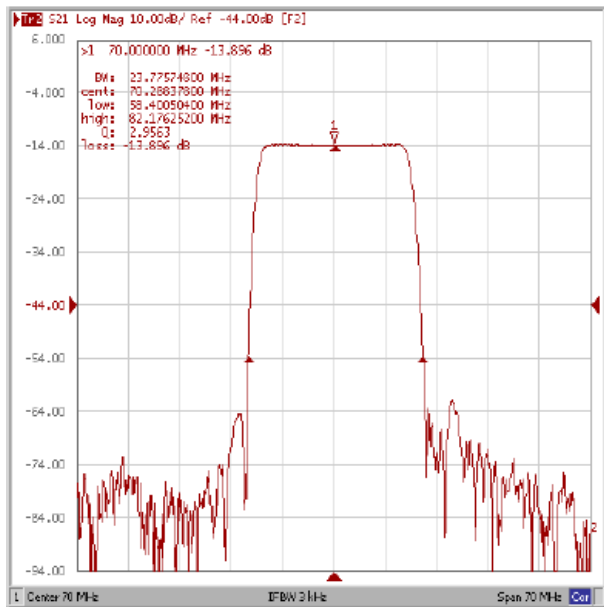
Bandwidth at -1.0 dB



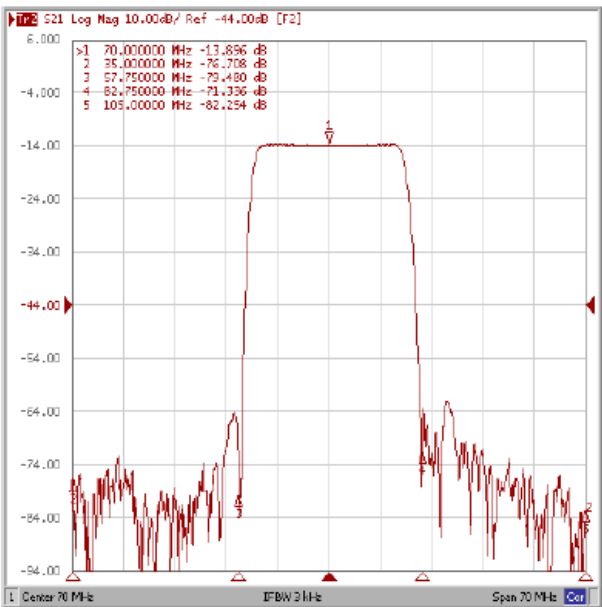
Bandwidth at -3.0 dB



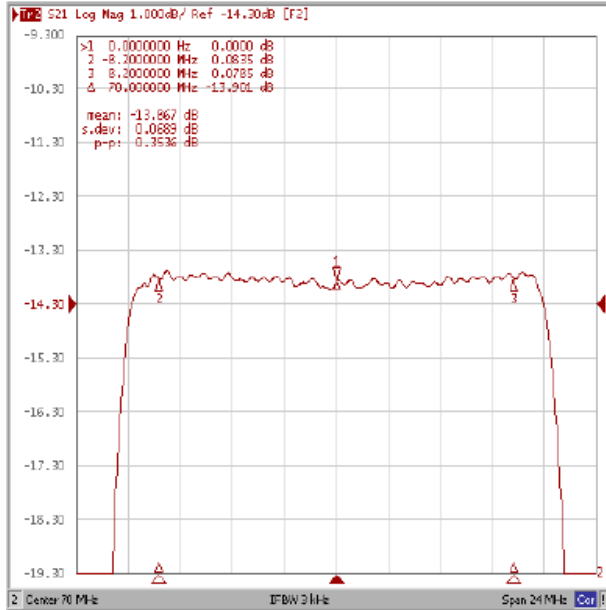
Bandwidth at -40 dB



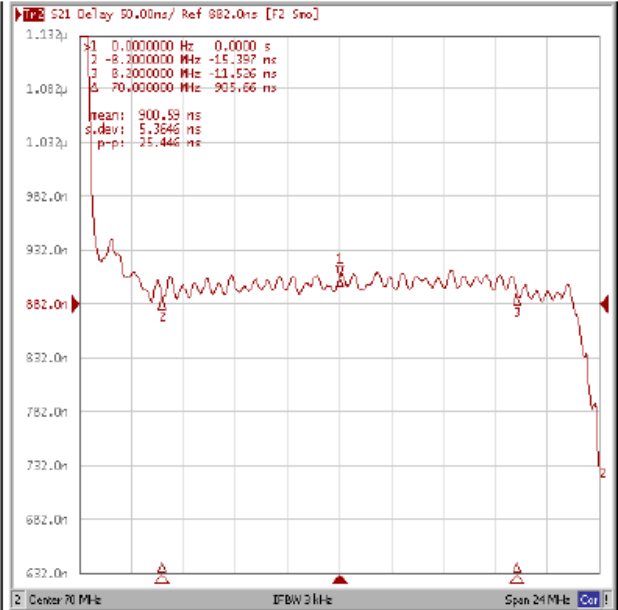
Relative Attenuation



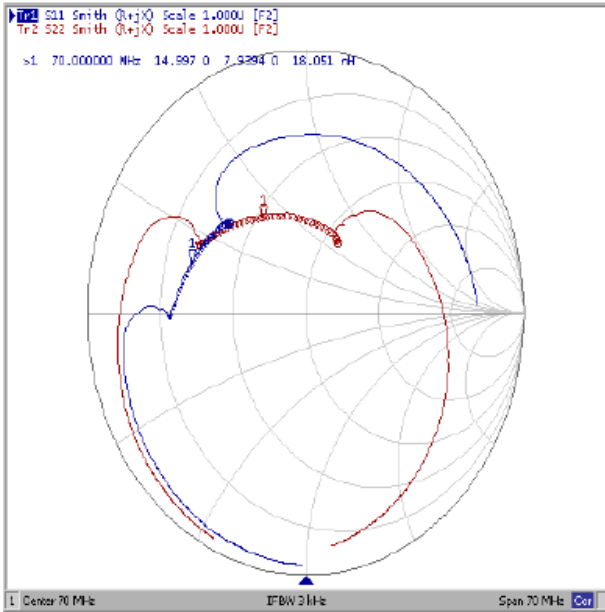
Ripple Variation Fo±8.2MHz



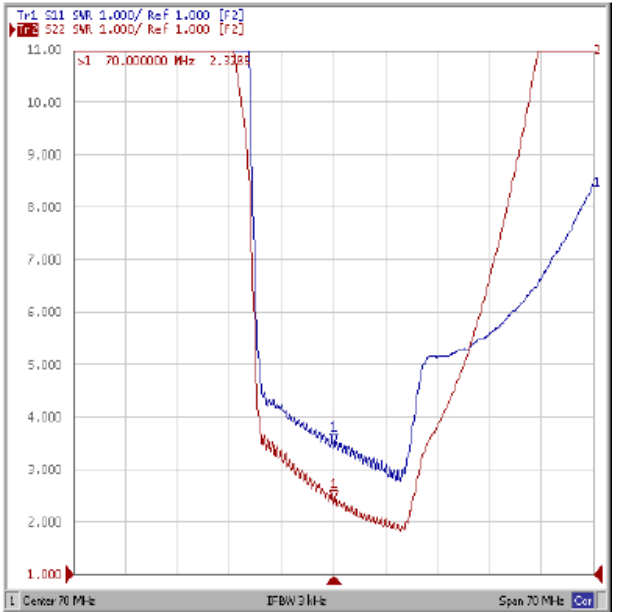
Group Delay Variation Fo±8.2MHz

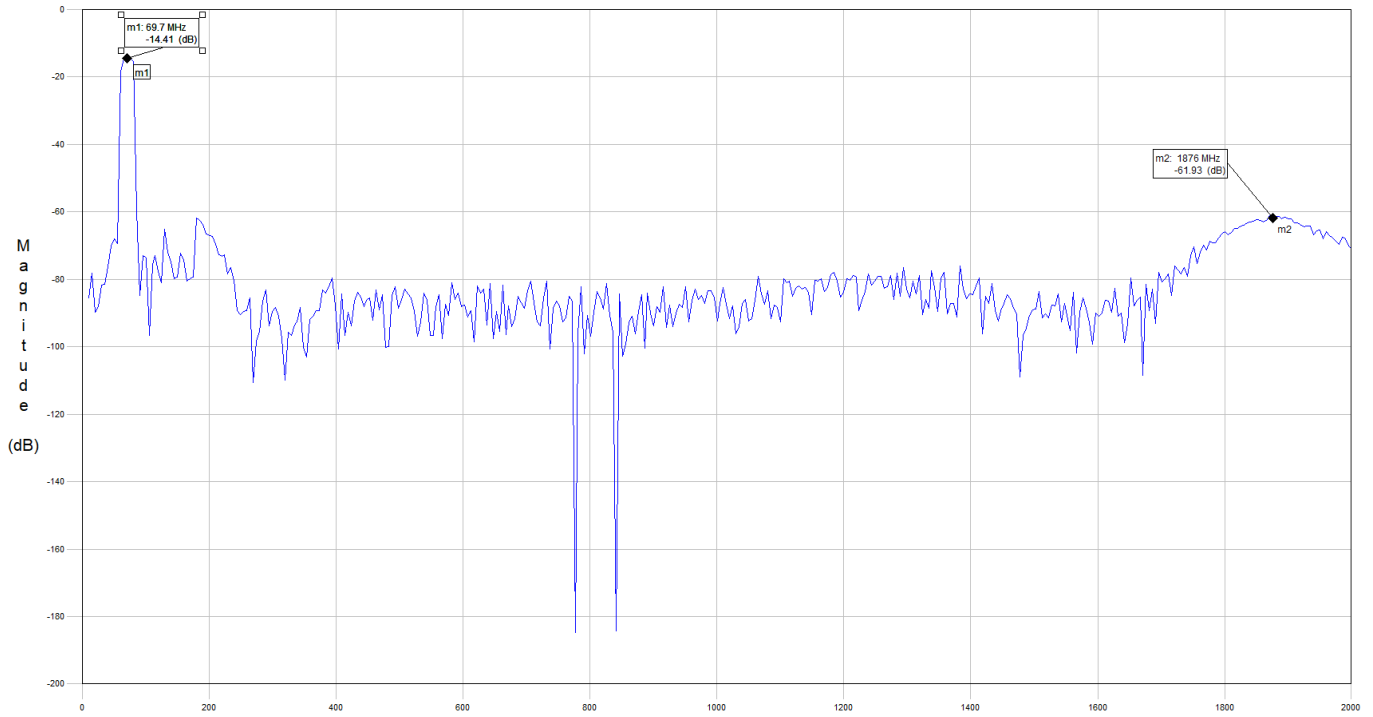


Smith Chart

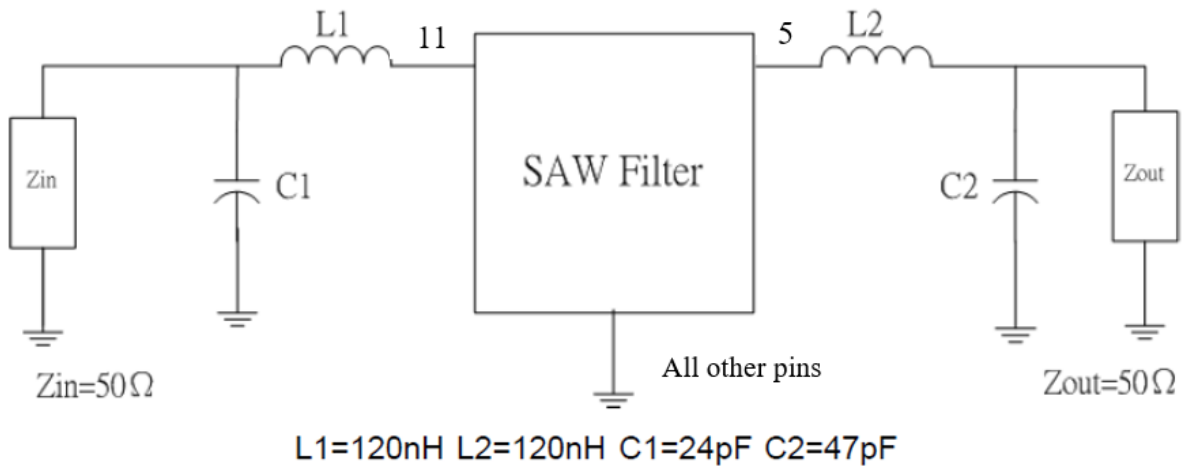


VSWR

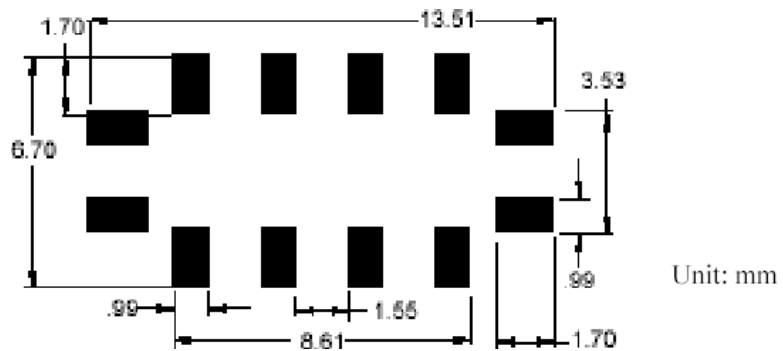




Measurement Circuit:

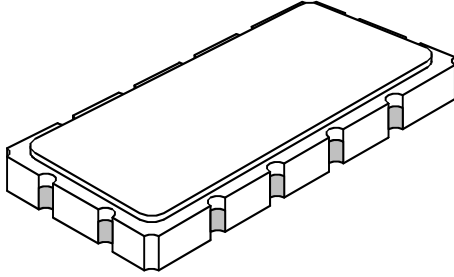


PCB Footprint:



SM13365-12 Ceramic Surface-mount 12-Terminal Case

13.3 x 6.5 mm Nominal Footprint



Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	13.10	13.30	13.50	0.516	0.524	0.531
B	6.30	6.50	6.70	0.248	0.256	0.264
C			1.80			0.071
D		1.50			0.059	
E		0.80			0.031	
H		0.80			0.031	
P		2.54			0.100	

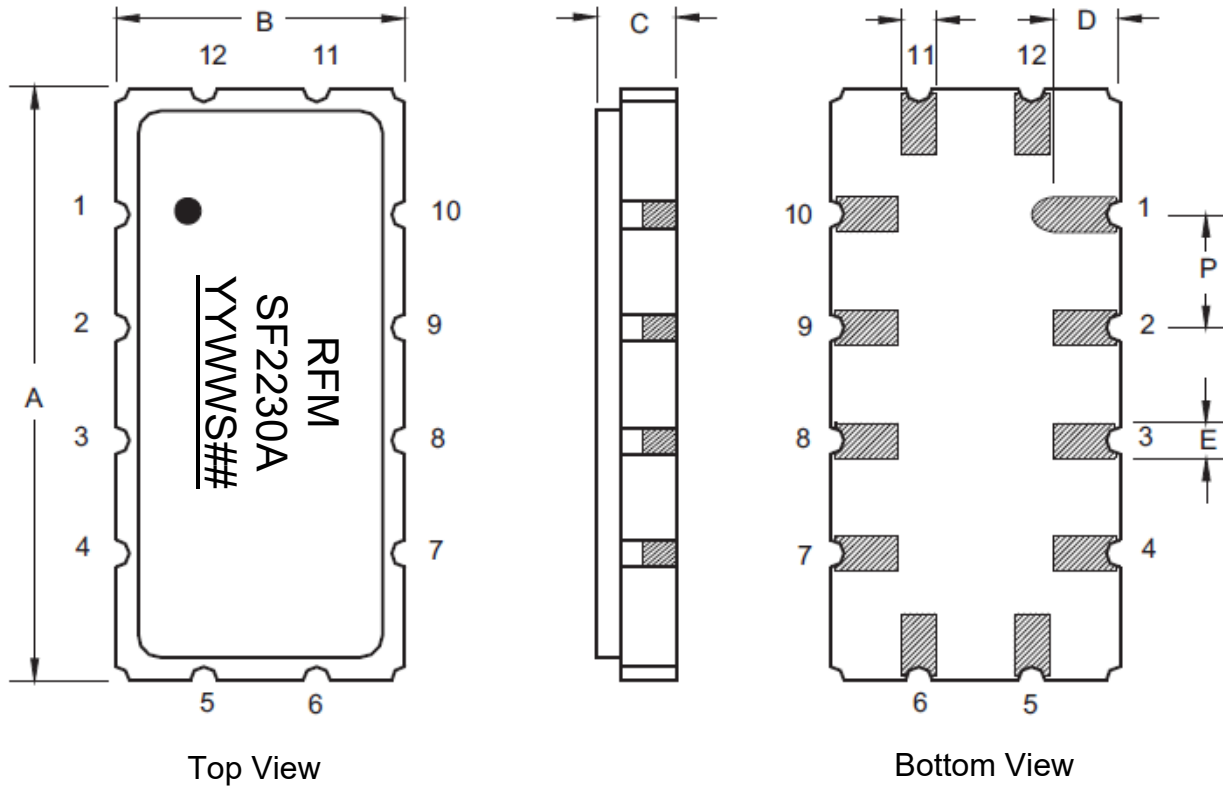
Electrical Connections

Connection	Terminals
Input	11
Output	5
Case Ground	All others

Case Material

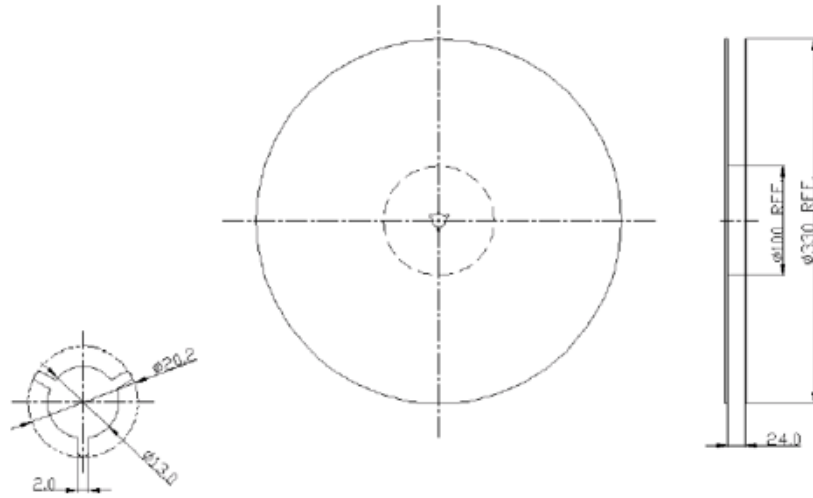
Materials	
Solder Pad Plating	0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel
Lid Plating	2.0 to 3.0 μm Nickel
Body	Al_2O_3 Ceramic

Case Outline Drawing

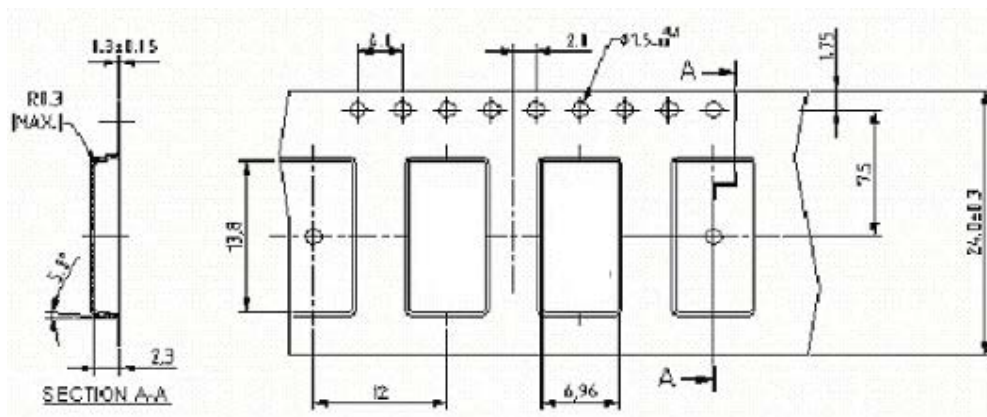


Packing:
 REEL DIMENSION

Reel Count:
 7" = 500
 13" = 1000



TAPE DIMENSION



Direction of feed →

Recommended reflow profile:

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C+0/-5°C peak (20~40sec).
4. Time: 2 times.

