SPECIFICATION

COMMERCIALLY AVAILABLE

CERAMIC BAND PASS

PART NUMBER: CF-11000405

RoHS

ISSUED	CHECKED	CHECKED	CHECKED	APPROVED
8/13/2003 **				
6/25/08 **				
5/24/12 kn		**10/21/2013 GL**		**10/21/2013 TFG**

FILTRO*NETICS Inc.*

1. APPLICATION

THIS SPECIFICATION APPLIES TO BAND PASS FILTER, USING DIELECTRIC RESONATORS.

2. PART NUMBER

PART NO	**CF-11000405**
PACKING	**PLASTIC TRAY**

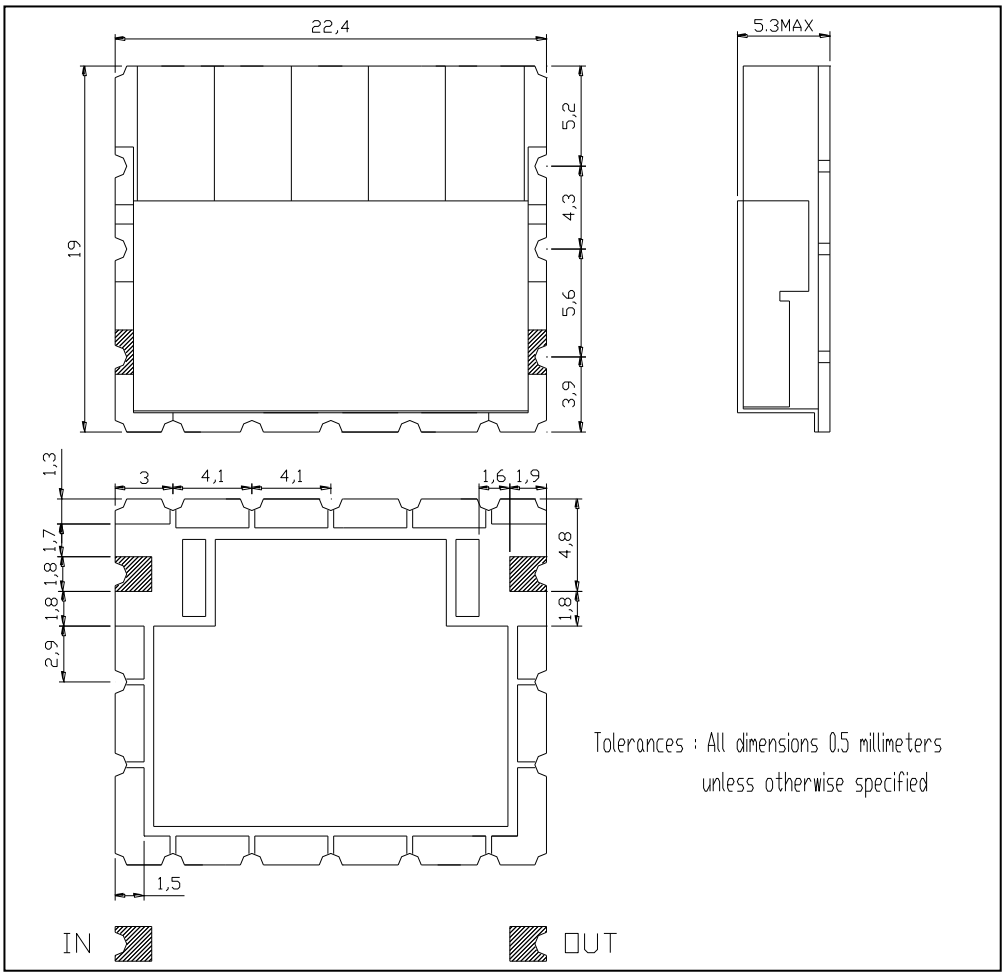
3. SPECIFICATIONS

Center Frequency (fo)		**1100 MHz**
Pass Band Width		**Fo +/-20 MHz**
Insertion Loss	**at fo**	**2.7 dB max**
Ripple	**in PB**	**1.0 dB max**
Attenuation	**Fo+/- 200 MHz**	**70 dB min**
Return Loss	**in PB**	**13 dB min**
Impedance		**50Ω**
Maximum Input Power		**1 W (+30dBm)**
Group Delay Time	**in PB**	**Ns max**
Operating Temperature Range		**-40 - +70 °C**

4. DIMENSIONS

UNIT: mm

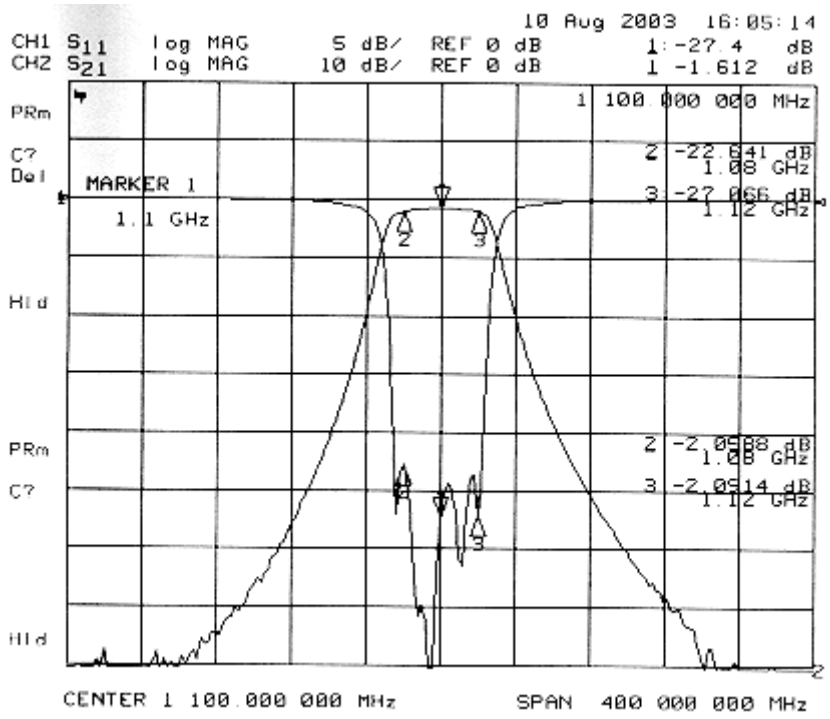
TOLERANCE: +/- 0.5 mm

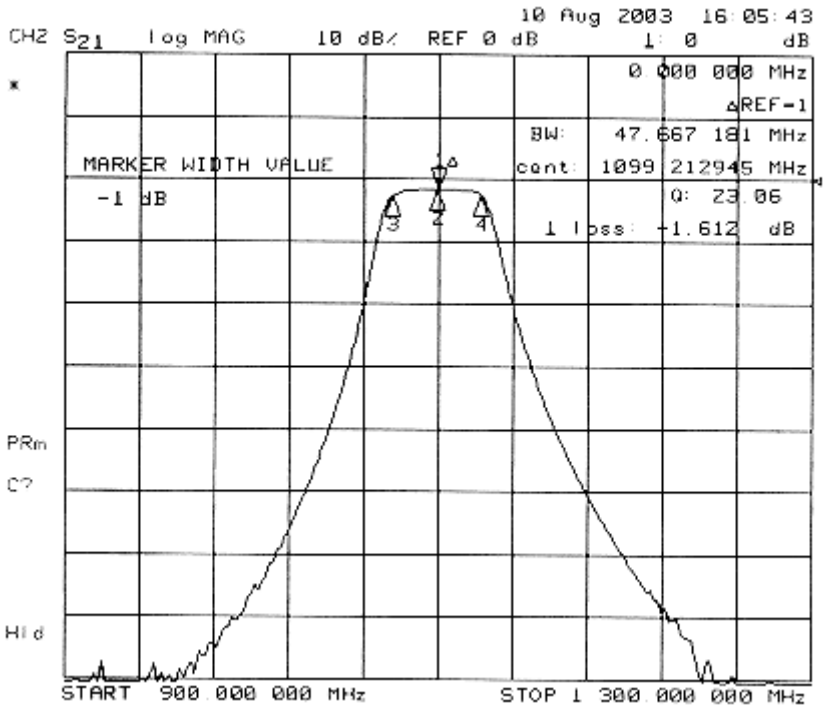


1. PCB
    1) MATERIAL : FR-4
    2) TERMINALS : Gold (Au) PLATED
2. CASE
    1) MATERIAL : Sn** OR Ni PLATED
3. RoHS Compliant

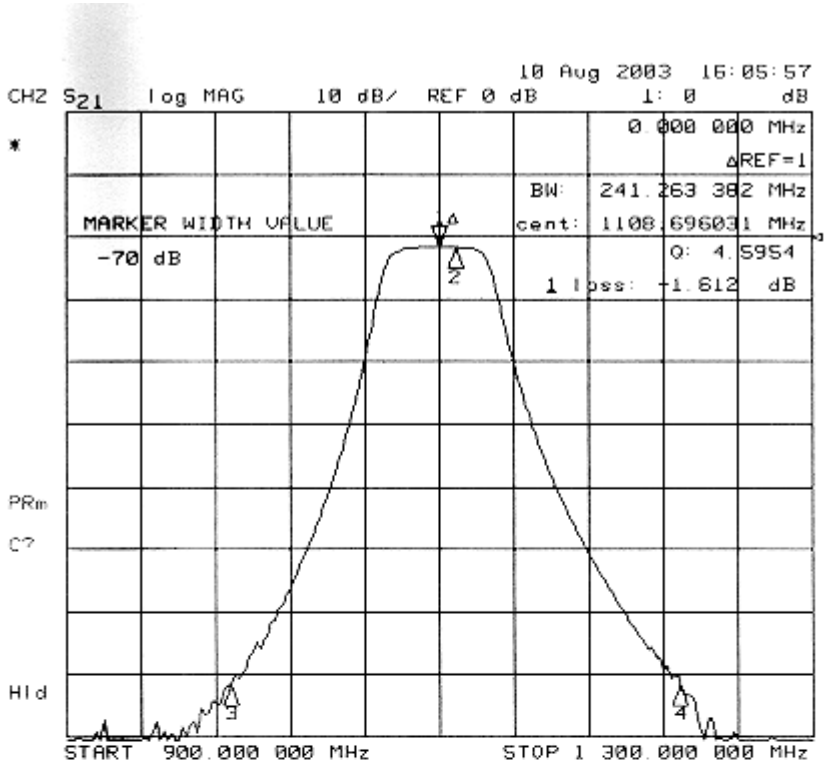
5. GRAPH

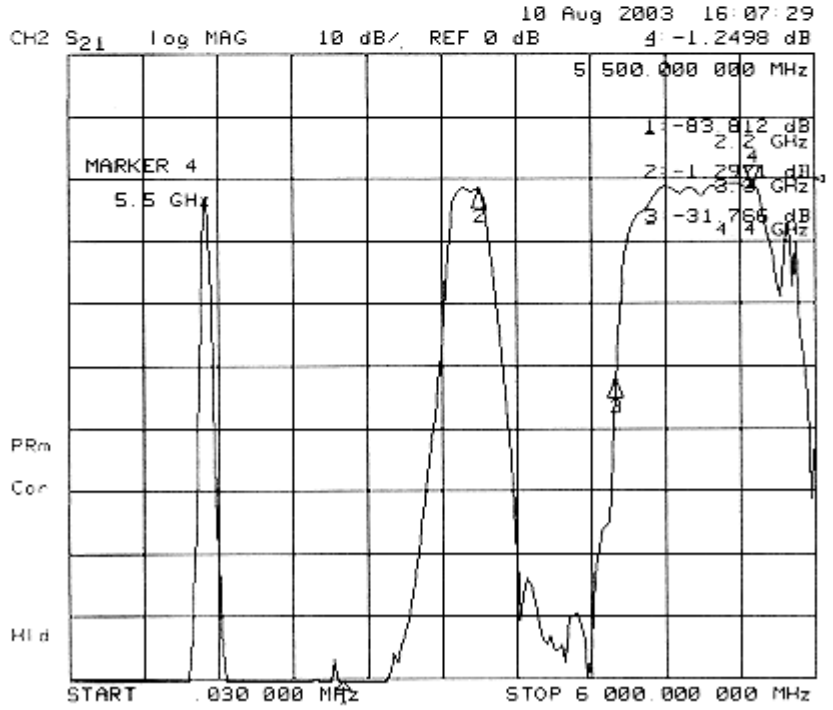
S21 vs S11 (INSERTION LOSS, RETURN LOSS, 1dB bandwidth)



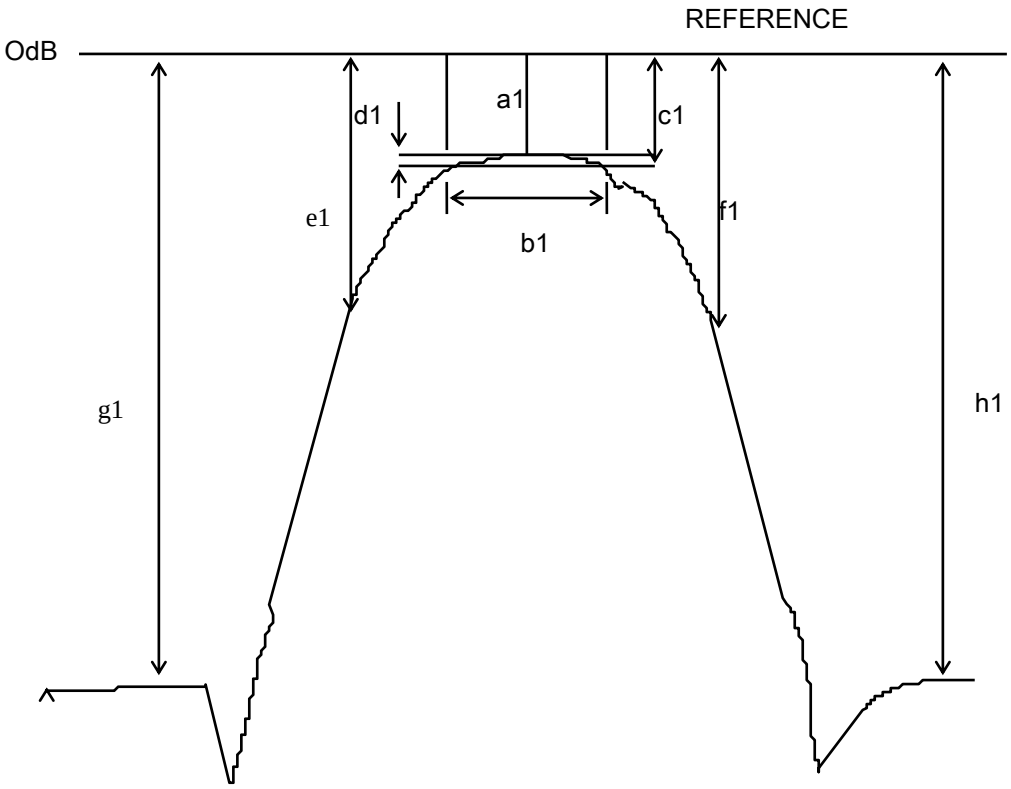


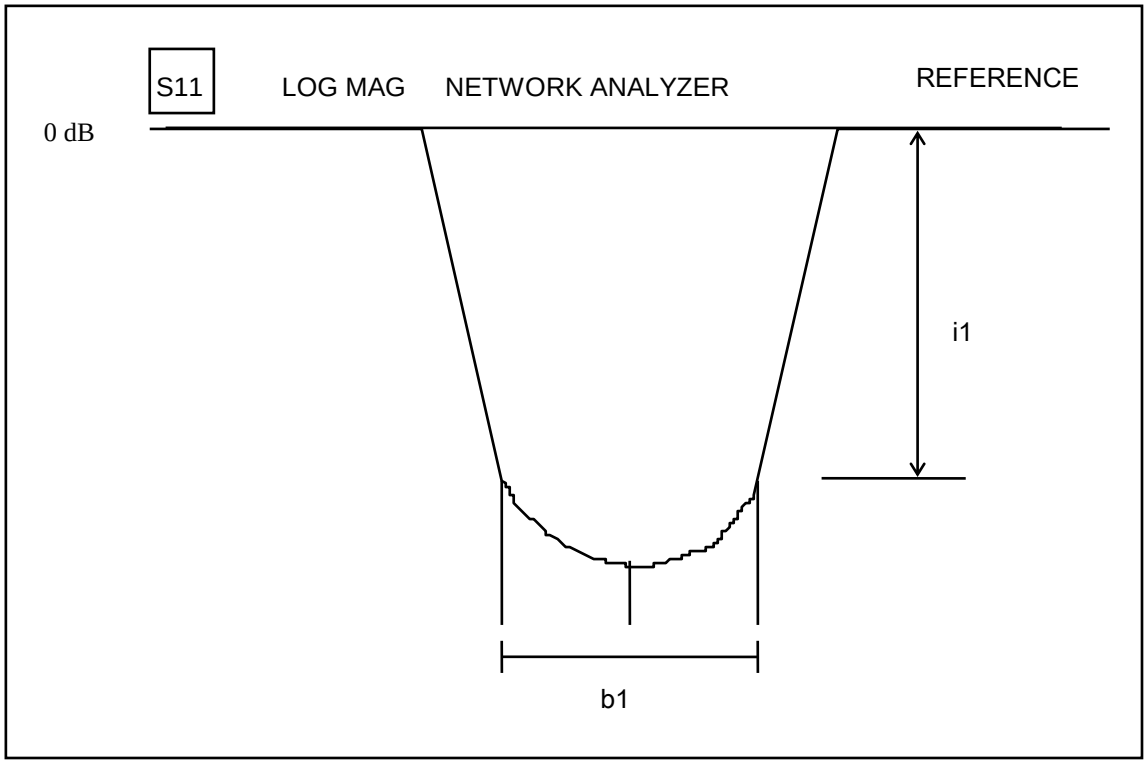
S21 (ATTENUATION, OUTBAND ATTENUATION)





S21 LOG MAG NETWORK ANALYZER





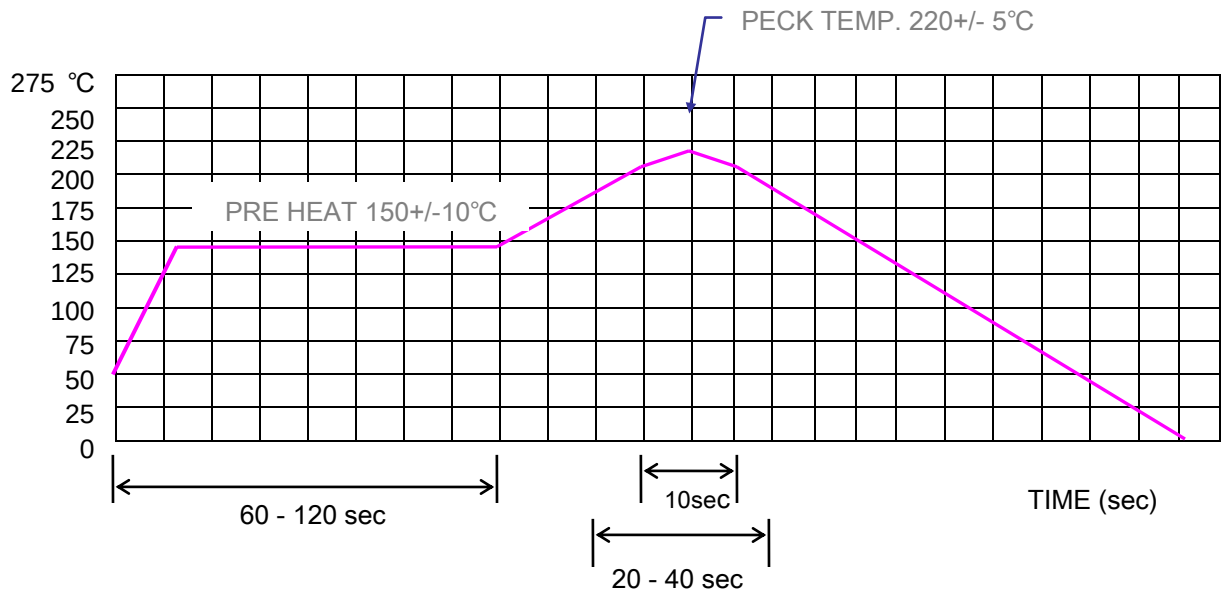
6. SPECIFICATION

CHARACTERISTICS	DESCRIPTION	SPECIFICATION
CENTER FREQUENCY	THE MIDPOINT OF THROUGH BANDPASS FILTER PASSBAND, NORMALLY EXPRESSED AS THE ARITHMETIC MEAN OF THE -3dB POINT. ALSO CALLED Fo.	3. SPECIFICATION
PASS BAND WIDTH	THE WIDTH OF THE PASSBAND OF A FILTER REFERENCED TO THE MINIMUM INSERTION LOSS POINT IN THE PASSBAND. THE PASSBAND OF A FILTER IS STATED AS -1.0dB BANDWIDTH.	
INSERTION LOSS	THE LOSS OF THE FILTER, IN dB, MEASURED AT THE MAXIMUM LOSS POINT OF THE PASSBAND RELATIVE TO A THROUGH LINE (0 dB).	
ATTENUATION	REDUCTION OF RF POWER THROUGH A FILTER, MEASURED IN dB, AT DESIRED BAND RELATIVE TO LOSS OF FILTER AT CENTER FREQUENCY.	
PASSBAND RIPPLE	VARIATIONS IN LOSS IN THE PASSBAND OF THE FILTER, SUPERIMPOSED UPON THE FUNDAMENTAL SHAPE OF THE PASSBAND.	
V.S.W.R in PB	THE RATIO OF THE MAXIMUM VALUE OF A STANDING WAVE TO ITS MINIMUM VALUE, RELATED TO THE RETURN LOSS IN PASSBAND.	

7. RELIABILITY TEST AND CONDITIONS

ITEM	TEST CONDITIONS	REQUIREMENTS
Operating Temp. range		- 20℃ ~ + 70℃
Resistance to solder heat	Preheat temperature : 120 to 150℃ Preheat time : 1 to 1.5 min Solder temperature : 260 +/- 10℃ Dipping time : 10 +/- 0.5 sec	No damage such as cracks should Be caused in chip element.
Solderability	Preheat temperature : 120 to 150℃ Preheat time : 1 to 1.5 min Solder temperature : 235 +/- 5℃ Dipping time : 5 +/- 1 sec	More than 80% of the terminal electrode shall be covered with new solder
Heat resistance (High-temperature load)	Temperature : 85 +/- 2℃ Applied voltage : Rated voltage Applied current : Rated current Recovery : 1 to 2hrs of recovery under the standard condition after the removal from test chamber.	No mechanical damage. After test, the device shall satisfy the specification in section 3.
Thermal shock (Temperature cycle)	Conditions for 1 cycle / Step 1 : + 85℃ 15 min Step 2 : - 30℃ 15 min Number of cycle : 10	No mechanical damage. After test, the device shall satisfy the specification in section 3.
Humidity resistance	Temperature: 40 +/- 2℃ Humidity: 90 to 95% RH Duration: 96 +/- 5 hrs Recovery: 1 to 2hrs of recovery under the standard condition after the removal from test chamber.	No mechanical damage. After test, the device shall satisfy the specification in section 3.
Vibration	Frequency : 10 ~ 50 Hz Amplitude : 1.52 ㎜ (0.060 inches) Direction and time : X, Y and Z Directions for 30 min each.	No mechanical damage. After test, the device shall satisfy the specification in section 3.

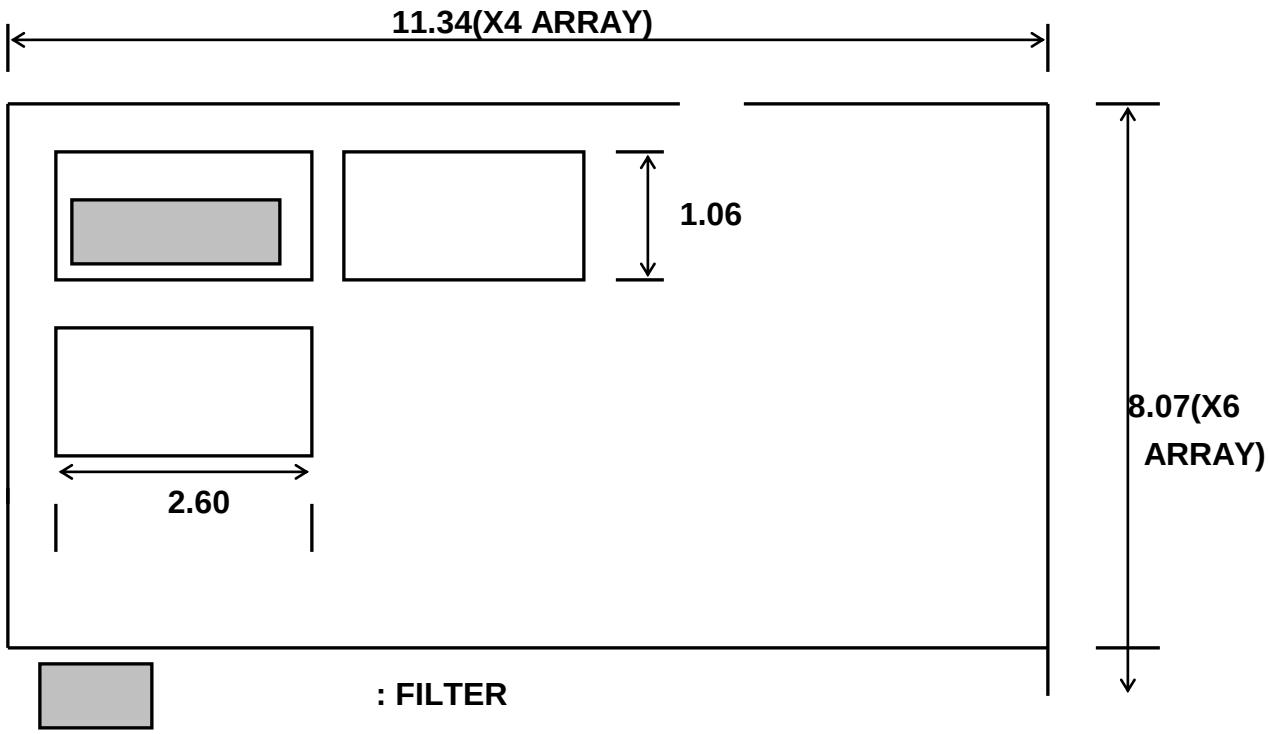
8. REFLOW SOLDERING STANDARD CONDITIONS



9. PACKING DIMENSION

9. 1 PLASTIC TRAY

UNIT : INCH



1. MATERIAL: ABS
2. HEIGHT: 0.303 inch