SPECIFICATION FOR APPROVAL

COMMERCIALLY AVAILABLE

ITEM: CERAMIC BAND PASS
PART NUMBER: CF-06000255

Revised 06/20/18 – Clarified Stop Band Performance

ISSUED	CHECKED	CHECKED	CHECKED
11/8/07 **	**7/12/10 SW**	**7/12/2010 BF**	
4/5/11 kn	**4/19/2011 SRJ**	**4/20/2011 BF**	**4/20/2011 GL**
06/20/18(tg)			

***FILTRO**NETICS Inc.*

1. APPLICATION

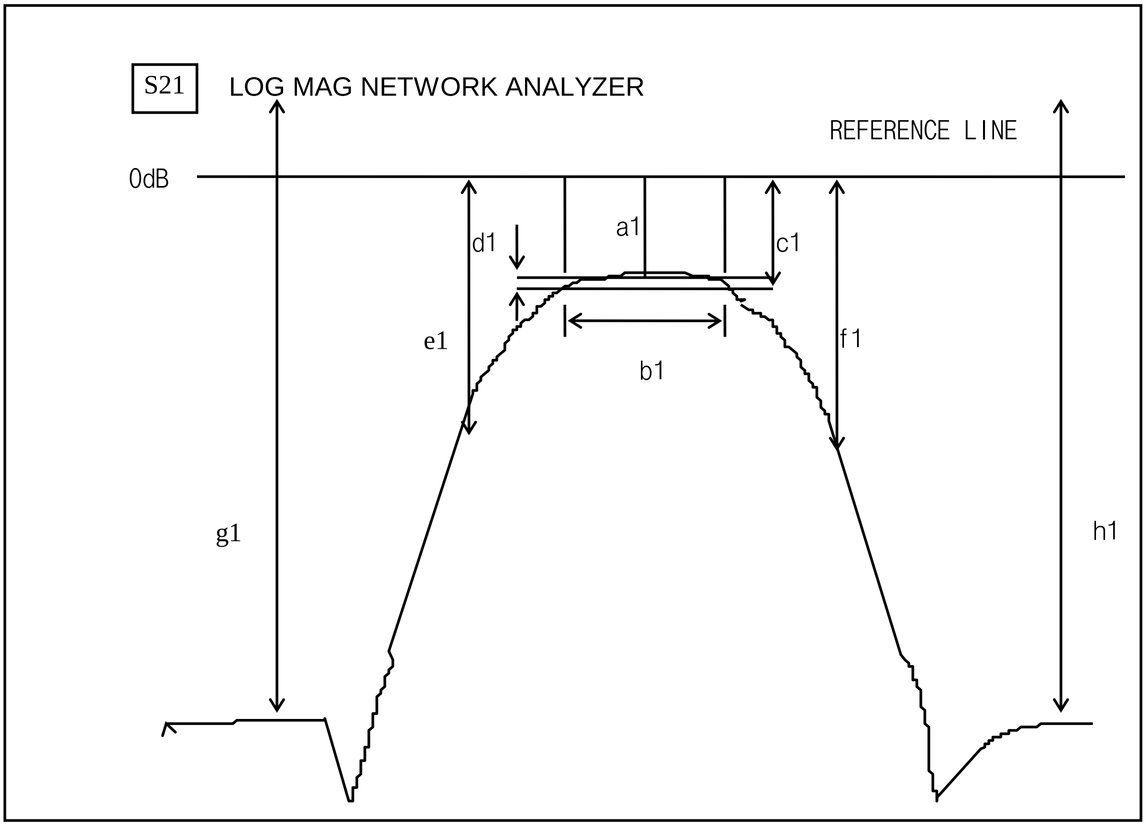
THIS SPECIFICATION APPLIES TO BAND PASS FILTER, USING DIELECTRIC RESONATORS.

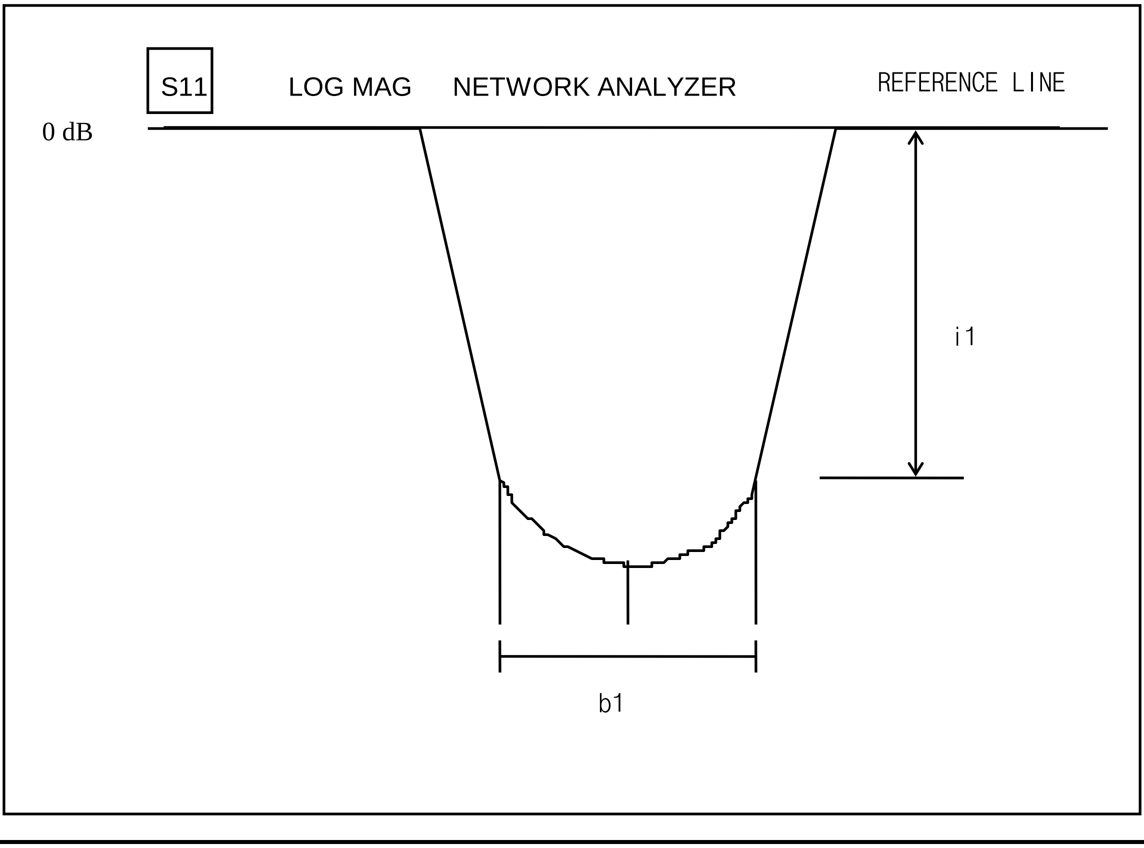
2. PART NUMBER

PART NO	**CF-06000255**
PACKING	**PLASTIC TRAY**

3. SPECIFICATIONS

Center Frequency (F0)		**a1**	**600 MHz**
Pass Band Width		**b1**	**Fo +/-12.5 MHz**
Insertion Loss @ F0		**c1**	**2.5 dB max**
Ripple in PB		**d1**	**1.0 dB max**
Attenuation	**F0 ±100 MHz**	**g1~h1**	**70dB Min**
	F0 ± 200 MHz	**g1~h1**	**70 dB Min**
	At 480 MHz	**g1~h1**	**65 dB Min**
	DC ~ 500 MHz	**g1~h1**	**65 dB Min**
	700MHz ~ 1200 MHz	**g1~h1**	**65 dB Min**
Return Loss in PB		**i1**	**16 dB min**
Impedance			**50 Ohms**
Maximum Input Power			**1 W (+30 dBm)**
Operating Temperature Range			**-40°C to +70°C**

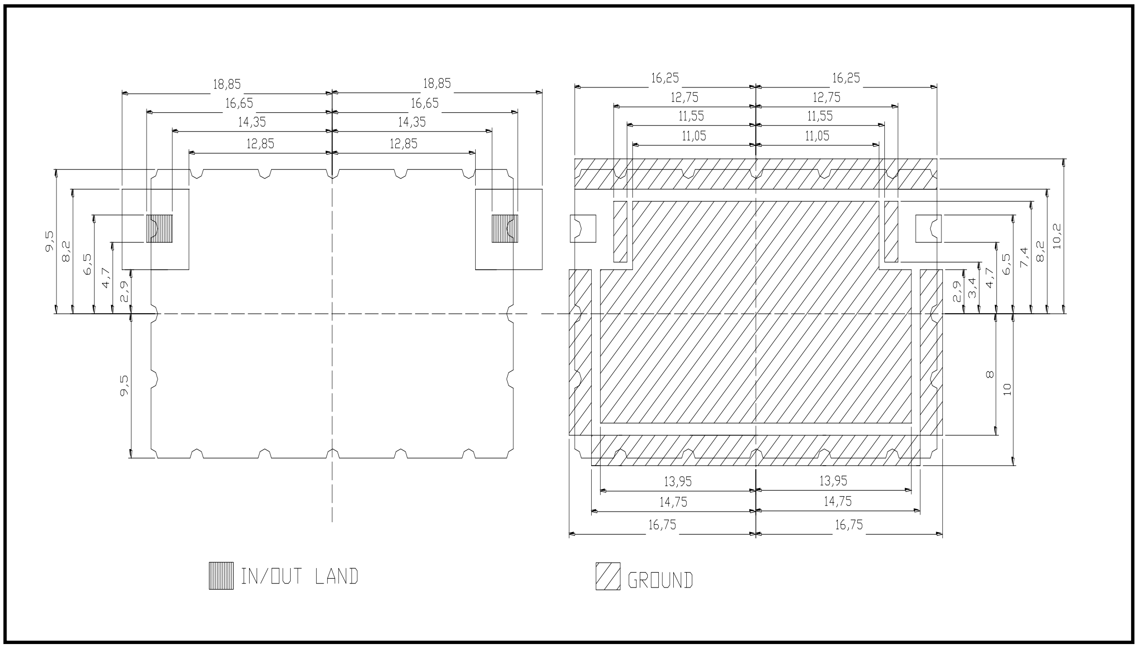

S21
LOG MAG NETWORK ANALYZER
REFERENCE LINE
0dB
a1
d1
c1
e1
f1
b1
g1
h1


S11
LOG MAG NETWORK ANALYZER
REFERENCE LINE
0 dB
i1
b1

4. SPECIFICATION:

CHARACTERISTICS	DESCRIPTION	SPECIFICATION
CENTER FREQUENCY	THE MIDPOINT OF THROUGH BANDPASS FILTER PASSBAND, NORMALLY EXPRESSED AS THE ARITHMETIC MEAN OF THE -3 dB 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 -1.0 dB 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.	

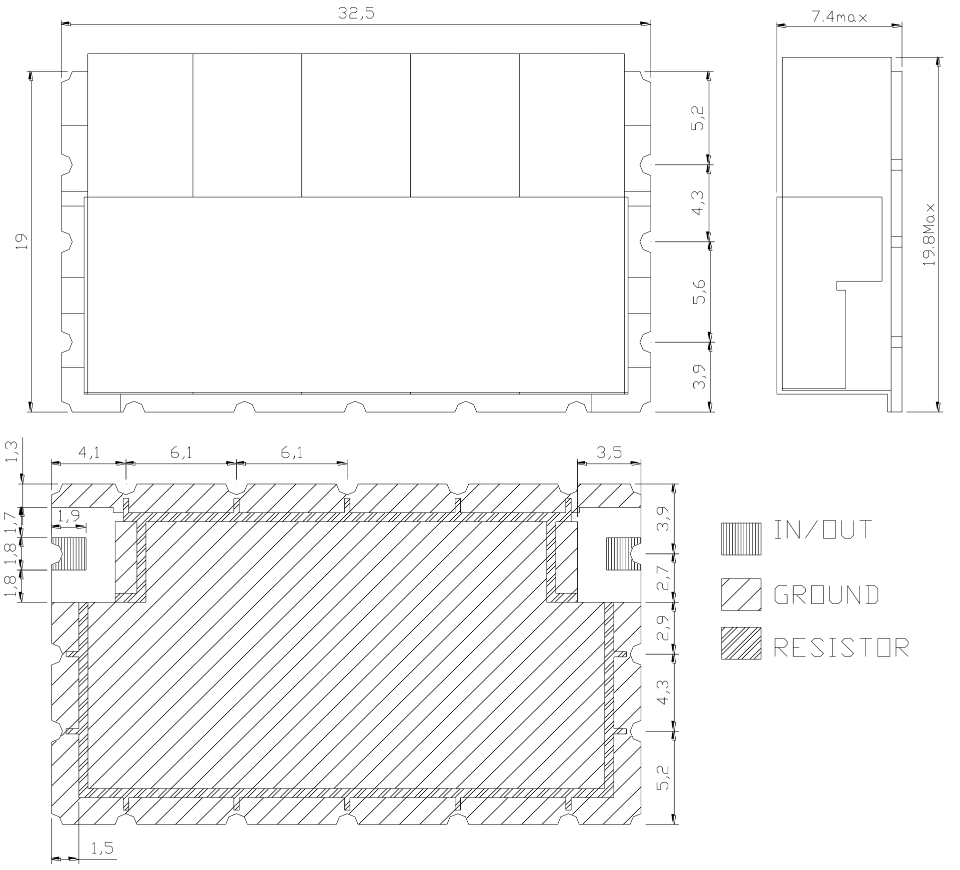
LAY OUT



5. DIMENSIONS:

UNIT: mm

TOLERANCE: +/- 0.5 mm

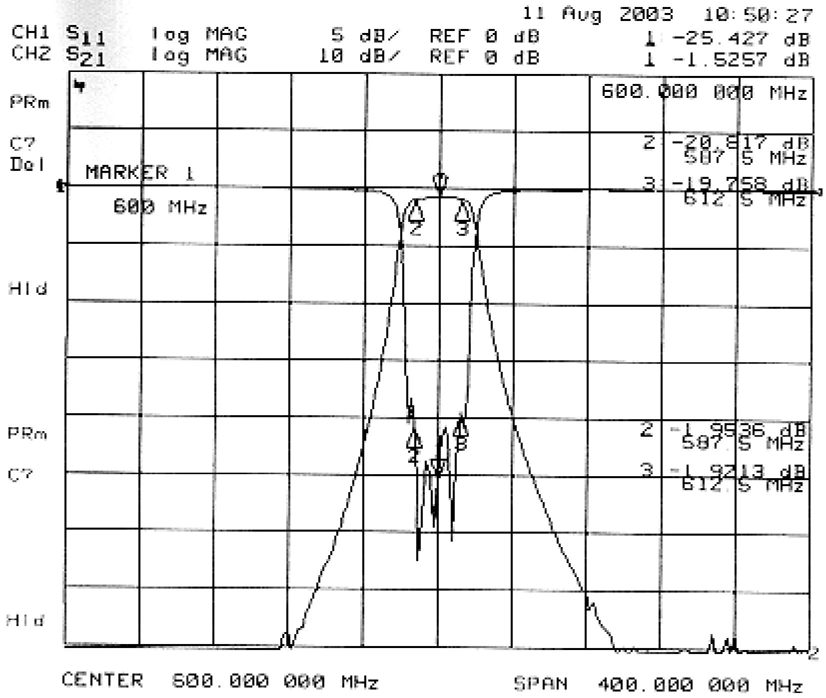


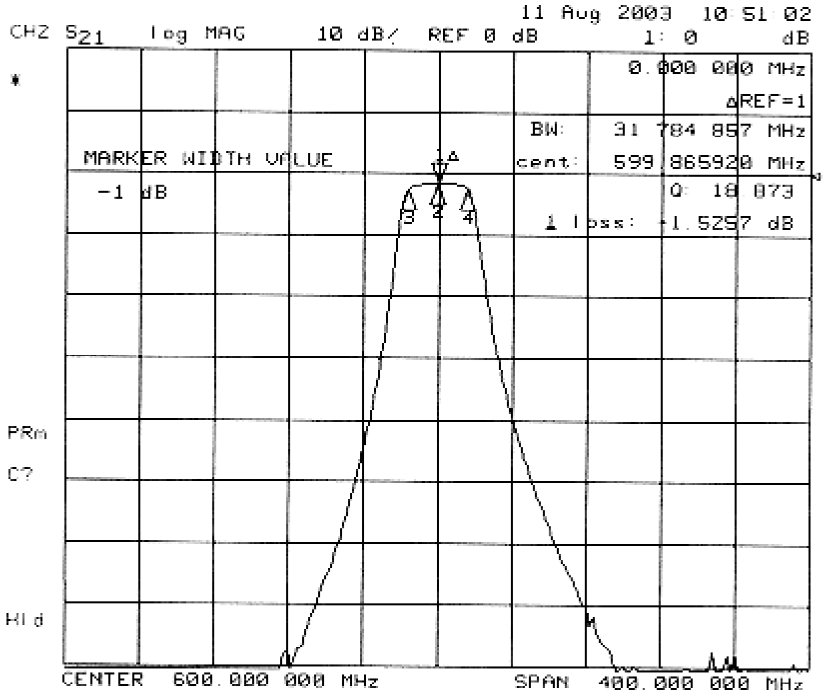
1. PCB
    1) MATERIAL : FR-4
    2) TERMINALS : Gold (Au) PLATED
2. CASE
    1) MATERIAL : Sn OR Ni PLATED

Marking:
CF-06000255
Date Code

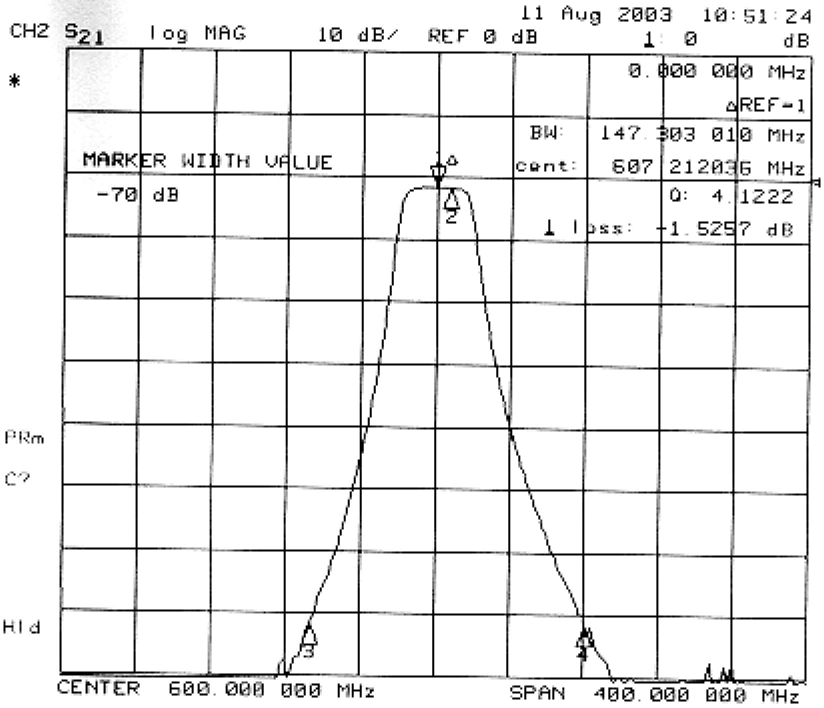
6. GRAPHS:

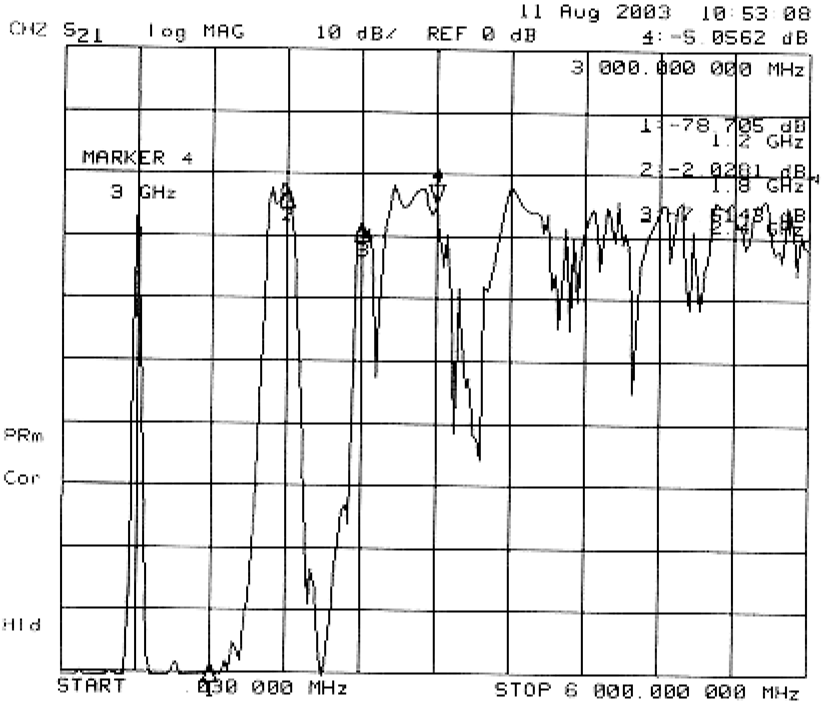
S21 vs. S11 (INSERTION LOSS, RETURN LOSS, 1 dB bandwidth)





S21 (ATTENUATION, OUTBAND ATTENUATION)

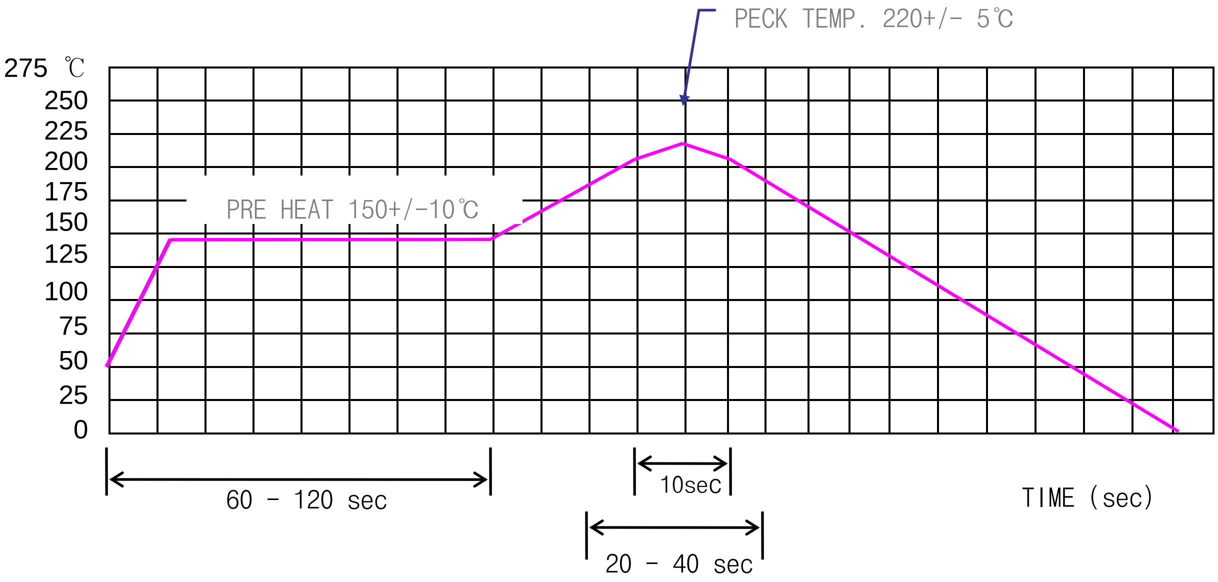




7. RELIABILITY TEST AND CONDITIONS:

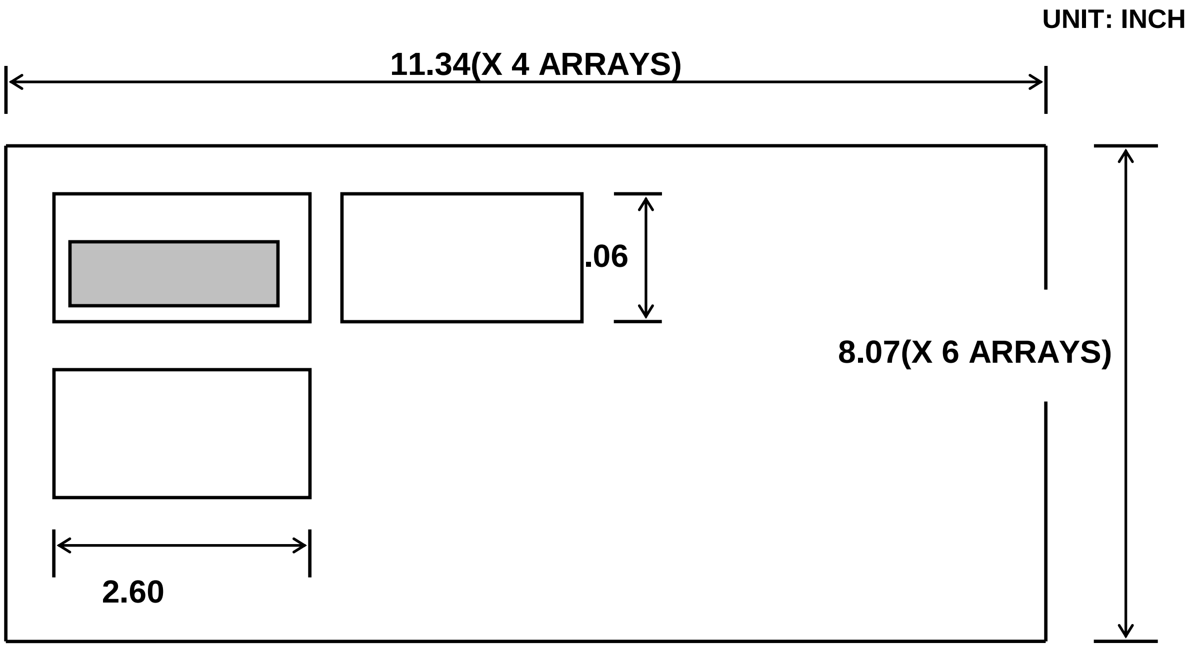
ITEM	TEST CONDITIONS	REQUIREMENTS
Resistance to solder heat	**Preheat temperature : 120 to 150°C Preheat time : 1 to 1.5 min Solder temperature : 260 +/- 10°C Dipping time : 10 +/- 0.5 sec**	**No damage such as cracks should Be caused in chip element.**
Solderability	**Preheat temperature : 120 to 150°C Preheat time : 1 to 1.5 min Solder temperature : 235 +/- 5°C 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°C 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°C 15 min Step 2: - 30°C 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°C 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 : 1.52mm (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



▨ : FILTER

1. MATERIAL: ABS
2. HEIGHT: 0.303 inch