

ACLX-5036-A1-CC-S Specification

1. Features and Application :

This product is for GPS L1、L2、L5 bands & Glonass L1、L2、L3、L5 bands & Compass B1、B2、B3 bands

2. Explanation of Part Number :

AC LX - 5036 - A1 - CC - S ̄
 (1) (2) (3) (4) (5) (6) (7)

- (1) Product Type : Chip Antenna
- (2) Center Frequency/Band Code : GPS/Glonass/Compass all bands
- (3) Product Code : 5.0*3.6mm (Length * Width)
- (4) Design Revision Code : Rev. 1
- (5) Antenna Type : Coupling Ceramics
- (6) Special Code : RoHS Compliant
- (7) Suffix For Special Requirements

3. Electrical Specification :

Item	Specification	
Frequency Band	1170 ~ 1270 MHz	1520 ~ 1610 MHz
Polarization	Linear	
Impedance	50 ohm Typ.	
VSWR	Less than 2.0	Less than 2.0
*Peak Gain	4.1 dBi Typ.	4.9 dBi Typ.
*Peak Efficiency	79.2% Typ.	82.2% Typ.

* Test condition : Test board size 80*40 mm
 Matching circuit may be required

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=
 ANGLES=± HOLEDIA=±



INPAQ TECHNOLOGY CO., LTD.

SCALE : -----

UNIT : mm

DRAWN BY:林豪建

CHECKED BY:吳柏青

DESIGNED BY:林豪建

APPROVED BY:黃月碧

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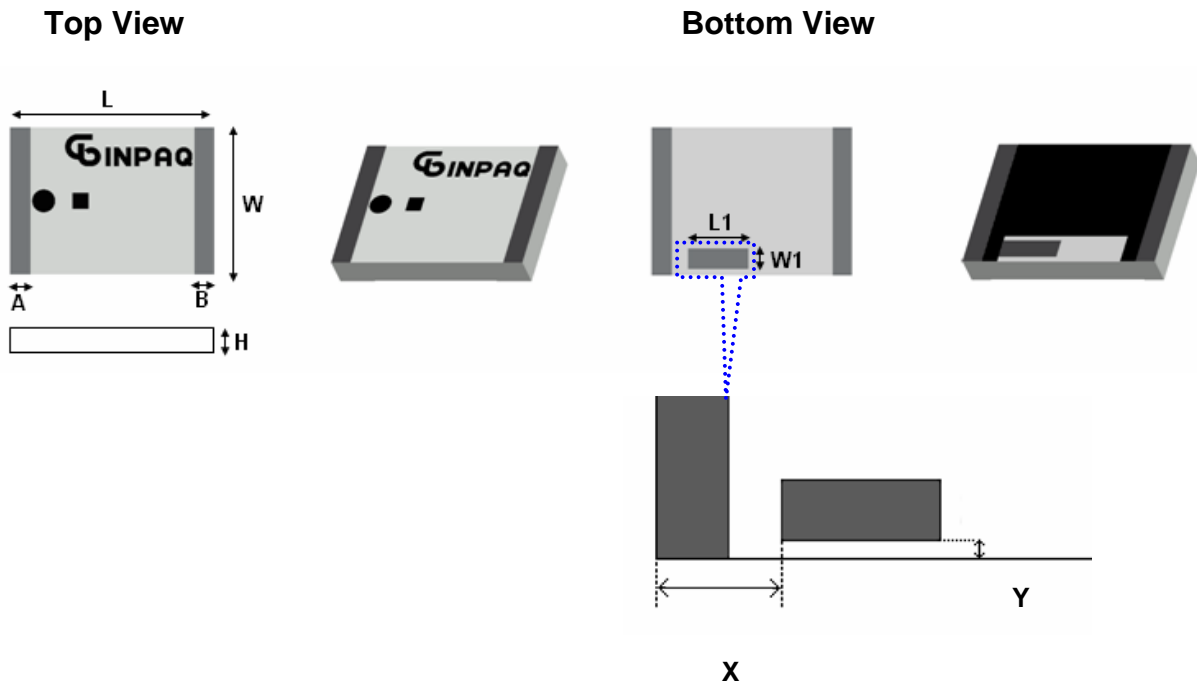
TITLE : ACLX-5036-A1-CC-S Specification

DOCUMENT NO.

ENS000094870

SPEC REV.
P0

4. Physical Dimension :



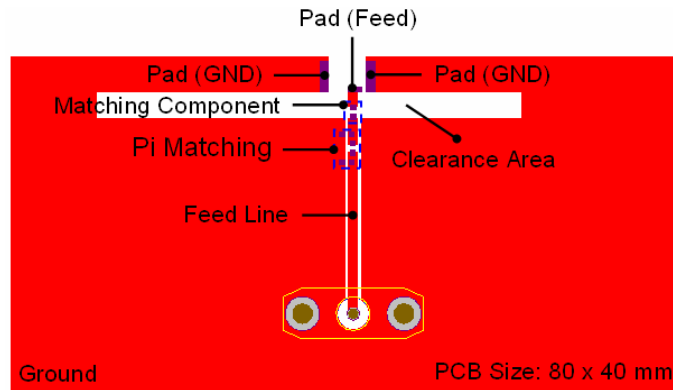
Chip Antenna	L	W	A	B	L1	W1	H	X	Y
ACLX5036	5.2±0.3	3.7±0.3	0.45±0.25	0.45±0.25	1.55±0.20	0.55±0.20	0.70±0.15	0.85±0.25	0.12±0.06

(Unit: mm)

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DESIGNED BY:林豪建	APPROVED BY:黃月碧	
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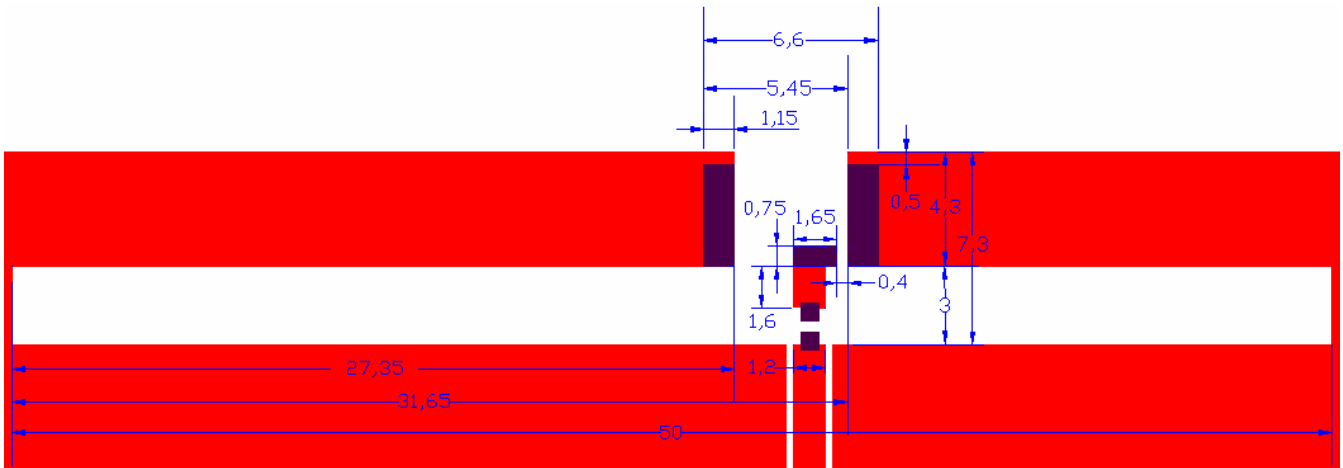
5. Recommend PCB Layout :

Layout

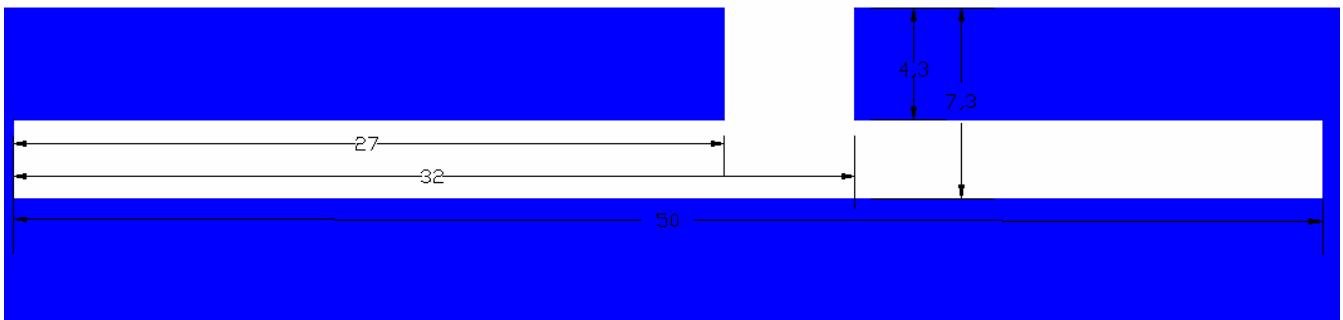


Pad Dimensions on PCB Layout

Top View



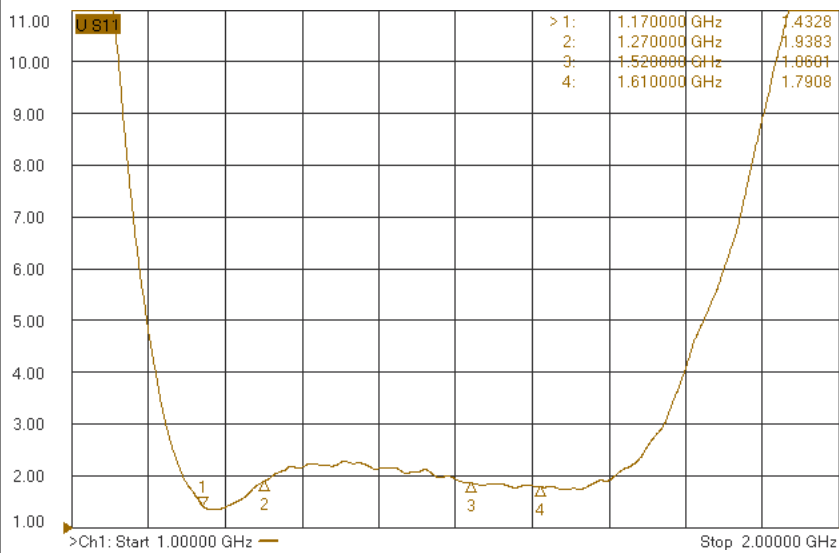
Perspective View



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HOLEDIA=±		
SCALE : -----	UNIT : mm	DOCUMENT NO. ENS000094870
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6. Electrical Characteristics :

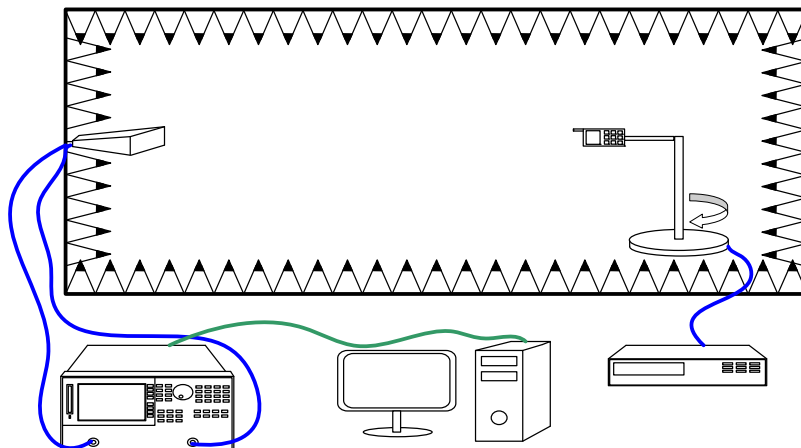
VSWR



Frequency (MHz)	VSWR
1170	1.43
1270	1.93
1520	1.86
1610	1.79

Radiation Pattern

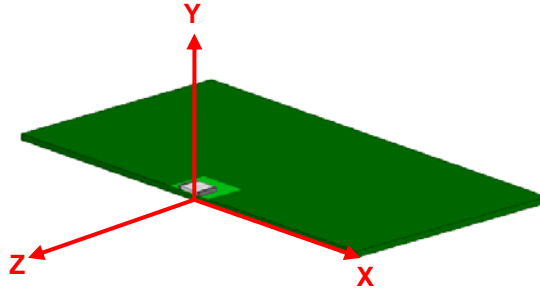
The Gain pattern is measured in INPAQ's FAR-field chamber. DUT is placed on the table of rotator, a standard horn antenna and Vector Network Analyzer is used to collect data.



3D Chamber Definition

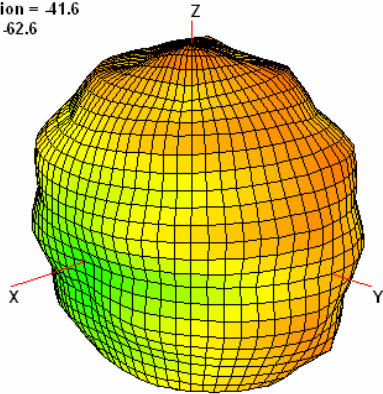
UNLESS OTHER SPECIFIED TOLERANCES ON :		 INPAQ TECHNOLOGY CO., LTD.			
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ANGLES=±	HOLEDIA=±				
SCALE : -----	UNIT : mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION			
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3D Gain Pattern

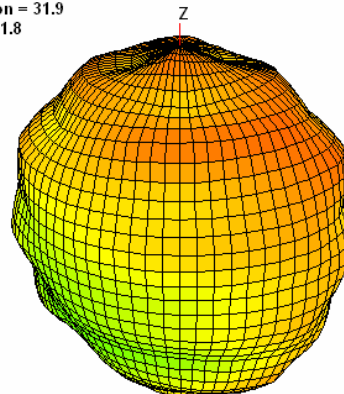


1227 MHz

Azimuth = 109.0
Elevation = -41.6
Roll = -62.6

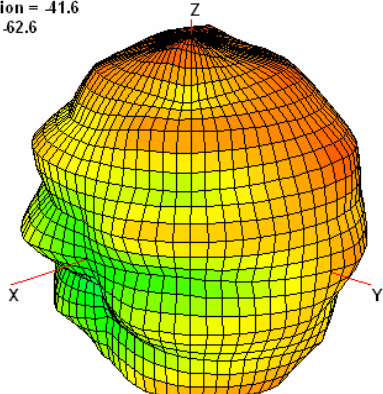


Azimuth = -74.4
Elevation = 31.9
Roll = 61.8

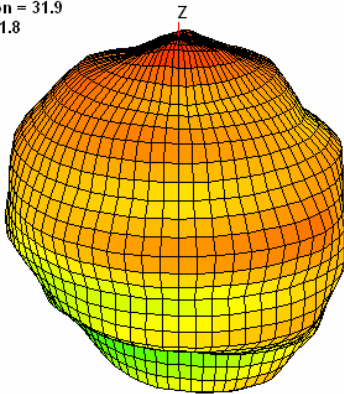


1575 MHz

Azimuth = 109.0
Elevation = -41.6
Roll = -62.6



Azimuth = -74.4
Elevation = 31.9
Roll = 61.8



UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=
ANGLES=± HOLEDIA=±



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SCALE : -----

UNIT : mm

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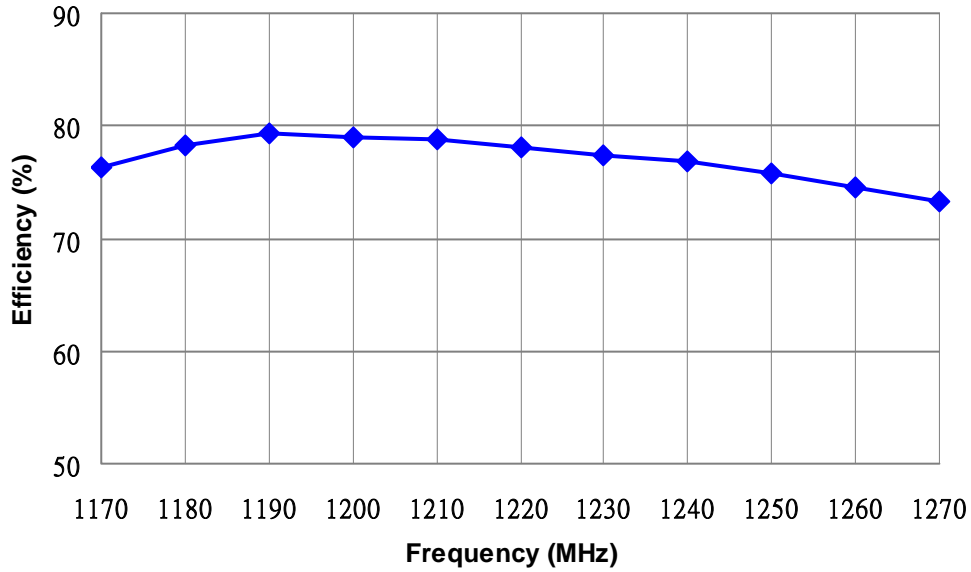
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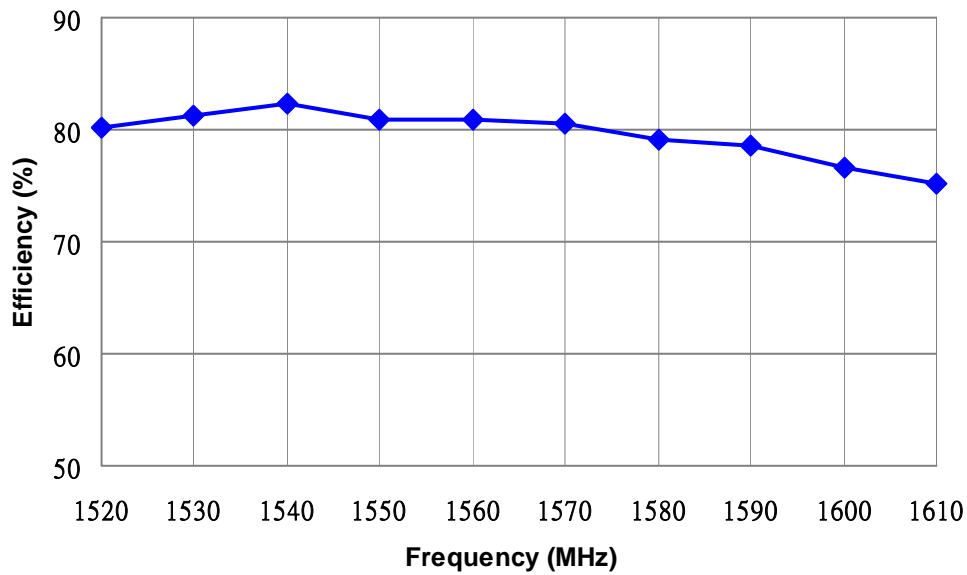
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Efficiency

1170 ~ 1270 MHz



1520 ~ 1610 MHz



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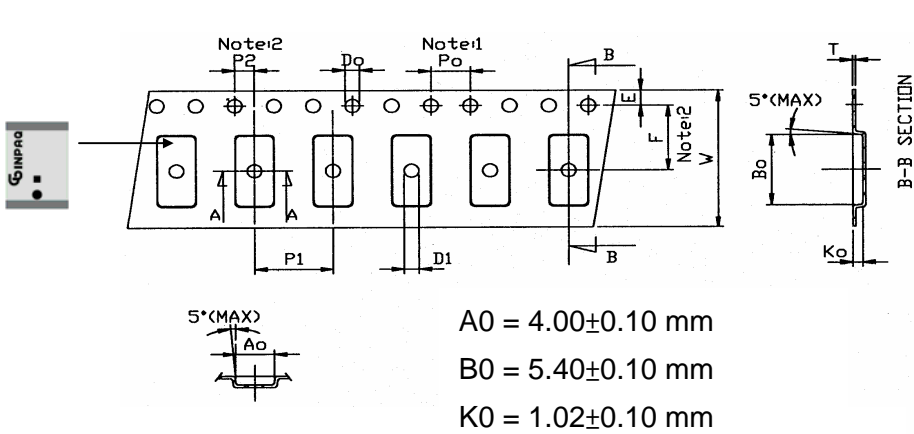
DOCUMENT NO.

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7. Tape & Reel Specifications (Unit : mm)

- (1) Quantity/reel : 2000 pcs/reel
- (2) Carrier Tape Dimensions



A-A SECTION

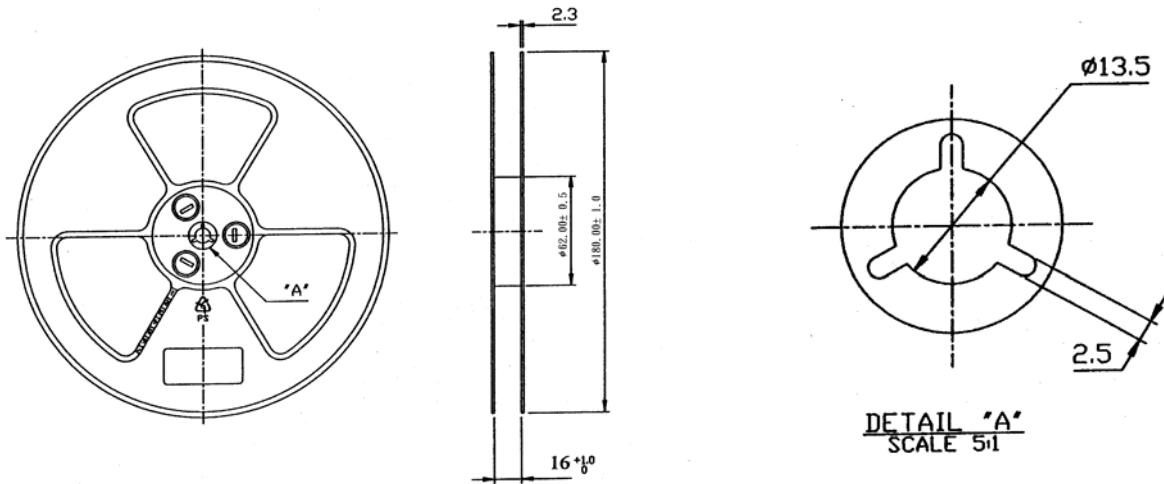
Unit: mm

Symbol	Spec.
K1	-
Po	4.0±0.10
P1	8.0±0.10
P2	2.0±0.10
Do	1.50 ^{+0.1} _{+0.}
D1	1.50(MIN)
E	1.75±0.10
F	7.50±0.10
10Po	40.0±0.10
W	16.0±0.20
T	0.30±0.10

Notice:

1. 10 Sprocket hole pitch cumulative tolerance is ±0.1mm
2. Pocket position relative to sprocket hole measured as true position of pocket not pocket hole.
3. Ao & Bo measured on a plane 0.3mm above the bottom of the pocket to top surface of the carrier.
4. Ko measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
5. Carrier camber shall be not than 1mm per 100mm through a length of 250mm.

(3) Taping Reel Dimensions



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8. Environmental Characteristics :

(1) Reliability Test

Item	Condition	Specification
Thermal shock	1. 30±3 minutes at -40±5°C 2. Convert to +105°C (5 minutes) 3. 30±3 minutes at +105±5°C 4. Convert to -40°C (5 minutes) 5. Total 100 continuous cycles	No apparent damage fulfill the electrical spec. after test
Humidity resistance	1. Humidity: 85% R.H. 2. Temperature: 85±5°C 3. Time: 1000 hours	No apparent damage Fulfill the electrical spec. after test
High temperature resistance	1. Temperature: 150±5°C 2. Time: 1000 hours	No apparent damage Fulfill the electrical spec. after test
Low temperature resistance	1. Temperature: -40±5°C 2. Time: 1000 hours	No apparent damage Fulfill the electrical spec. after test
Soldering heat resistance	1. Solder bath temperature : 260±5°C 2. Bathing time: 10±1 seconds	No apparent damage
Solderability	The dipped surface of the terminal shall be at least 95% covered with solder after dipped in solder bath of 245±5°C for 3±1 seconds	No apparent damage

(2) Storage Condition

(a) At Warehouse :

The temperature should be within 0 ~ 30°C and humidity should be less than 60% RH.

The product should be used within 1 year from the time of delivery.

(b) On Board:

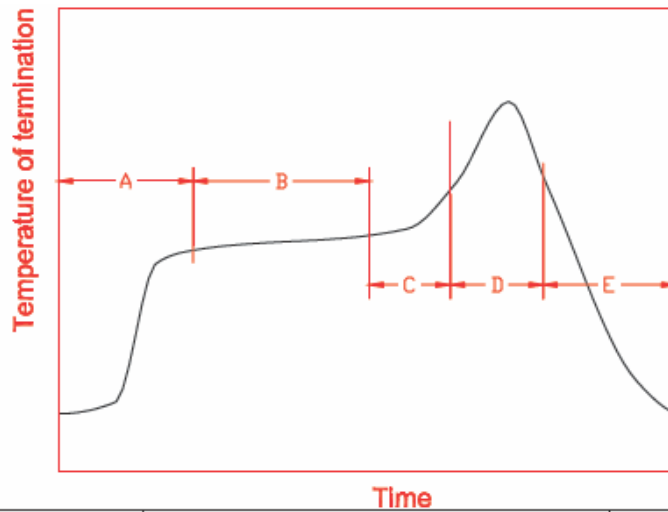
The temperature should be within -40~85°C and humidity should be less than 85% RH.

(3) Operating Temperature Range

Operating temperature range : -40 to +105°C.

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9. Recommended reflow soldering :



Time			
A	1 st rising temperature	The normal to Preheating temperature	30s to 60s
B	Preheating	140°C to 160°C	60s to 120s
C	2 nd rising temperature	Preheating to 200°C	20s to 40s
D	Main heating	if 220°C	50s~60s
		if 230°C	40s~50s
		if 240°C	30s~40s
		if 250°C	20s~40s
E	Regular cooling	200°C to 100°C	1°C/s ~ 4°C/s

*reference: J-STD-020C

(1) Soldering Gun Procedure

Note the follows, in case of using solder gun for replacement.

- (a) The tip temperature must be less than 350°C for the period within 3 seconds by using soldering gun under 30 W.
- (b) The soldering gun tip shall not touch this product directly.

(2) Soldering Volume

Note that excess of soldering volume will easily get crack the body of this product.

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