

# Multilayer Antenna (Dual Band type)

For 1574-1576MHz / 2400-2484MHz

# ANT016008LCD1575MA1

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**1.6x0.8mm [EIA 0603]\***

\* Dimensions Code JIS[EIA]

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# Multilayer Antenna

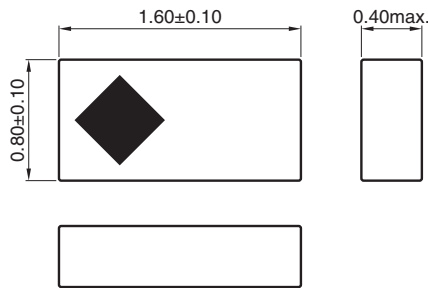
Conformity to RoHS Directive

For 1574-1576MHz / 2400-2484MHz

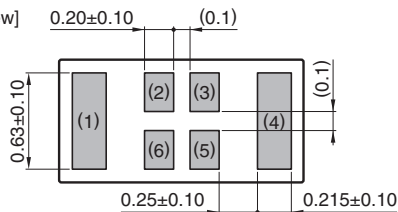
## ANT016008LCD1575MA1

### SHAPES AND DIMENSIONS

[Top view]



[Bottom view]



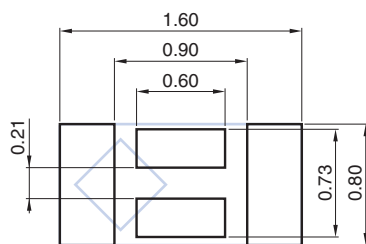
Terminal functions

1	Radiator electrode for GPS
2	Feed point
3	Feed point
4	Radiator electrode for 2.4GHz ISM
5	Feed point
6	Feed point

\* Terminal 2, 3, 5 and 6: Connected in inner structure

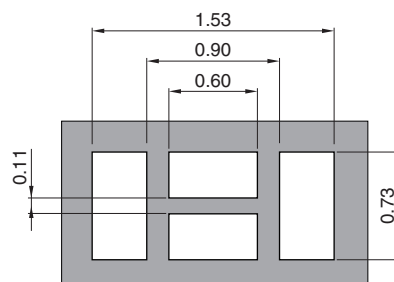
Dimensions in mm

### RECOMMENDED LAND PATTERN



Dimensions in mm

### SOLDER RESIST PATTERN



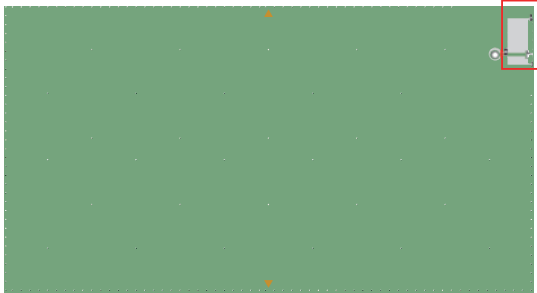
Dimensions in mm

○ RoHS Directive Compliant Product: See the following for more details. <https://product.tdk.com/info/en/environment/rohs/index.html>

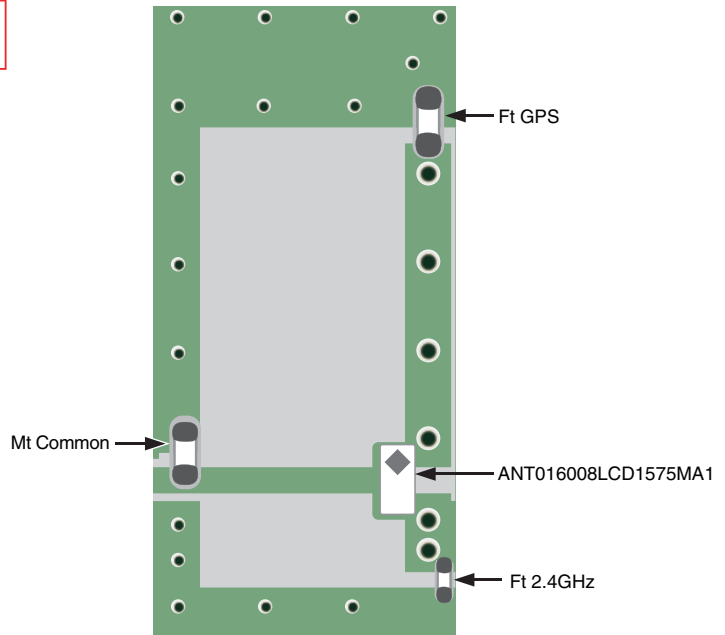
- All specifications are subject to change without notice.
- Before using these products, be sure to request the delivery specifications.

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## EVALUATION BOARD

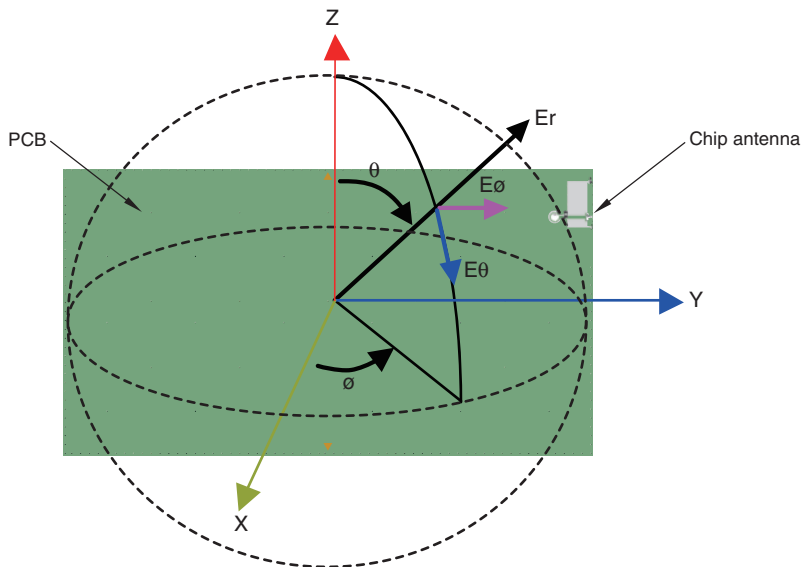


PCB size : 120mm x 65mm x 1mm  
Antenna area : 10.5 x 6 mm



	Component P/N
Ft GPS	15pF
Ft 2.4GHz	2.2pF
Mt Common	1.5nH(MHQ1005P1N5B:TDK)

### Measurement condition for Radiation Pattern



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## ANT016008LCD1575MA1

## ELECTRICAL CHARACTERISTICS

Item	Frequency Range (MHz)	Min.	Typ.	Max.
VSWR	1574 to 1576	—	1.50	4.0
	2400 to 2484	—	2.50	4.0
Polarization			Linear	
PCB size (mm)			120×65×1.0	
Antenna keep-out area (mm)			10.5×6	
Characteristic Impedance ( $\Omega$ )			50 (Nominal)	

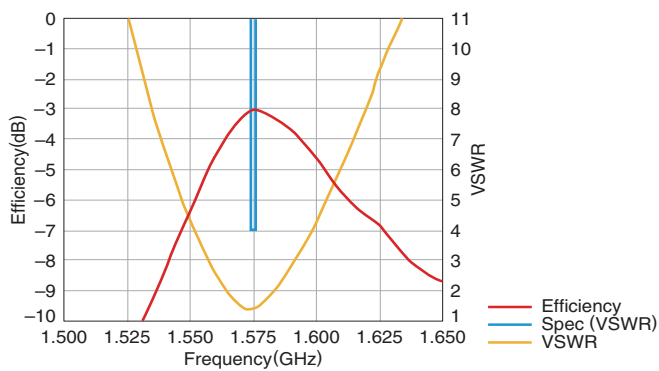
• This is typical antenna performance with the standard PCB.

## TEMPERATURE RANGE

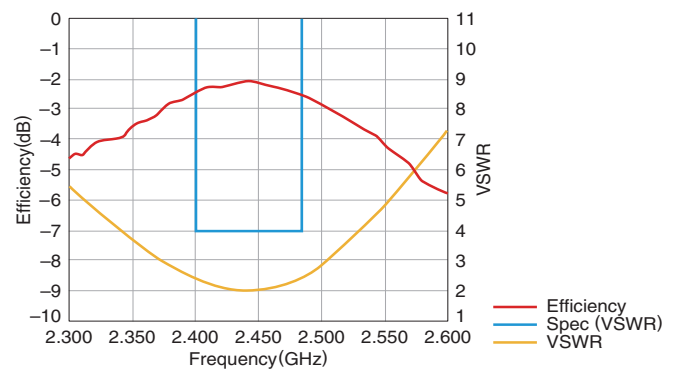
Operating temperature (°C)	Storage temperature (°C)
-40 to +85	-40 to +85

## FREQUENCY CHARACTERISTICS

## GPS BAND



## 2.4GHz ISM BAND



• Tested antenna has been soldered. Evaluation board size is 120x65x1 mm.

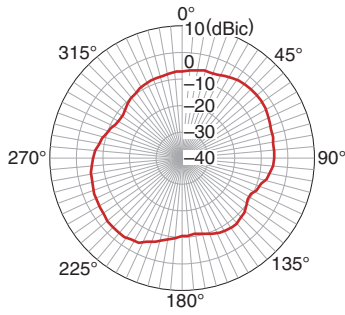
# ANT016008LCD1575MA1

## RADIATION PATTERNS

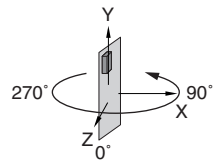
### GPS BAND

#### RHCP

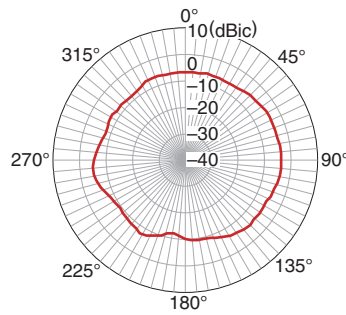
Z-X plane



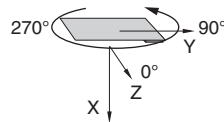
Frequency(GHz)	1.575
Average(dBic)	-6.3
Maximum(dBic)	-2.9
Minimum(dBic)	-12.2



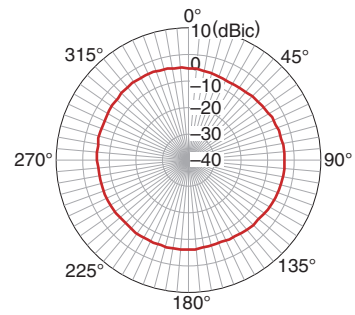
Z-Y plane



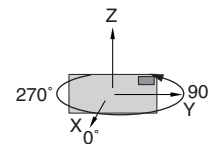
Frequency(GHz)	1.575
Average(dBic)	-6.5
Maximum(dBic)	-3.7
Minimum(dBic)	-12.1



X-Y plane



Frequency(GHz)	1.575
Average(dBic)	-5.3
Maximum(dBic)	-3.7
Minimum(dBic)	-6.7

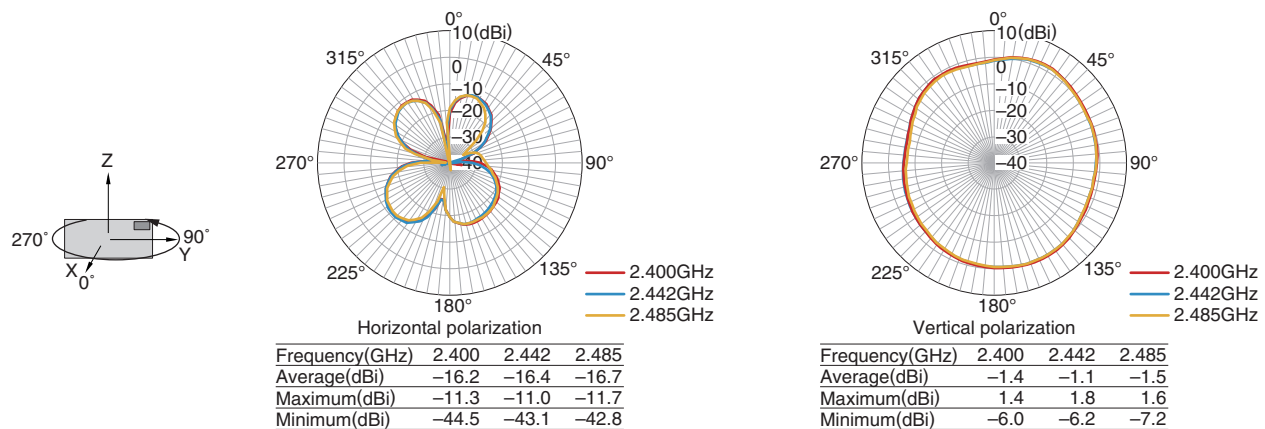
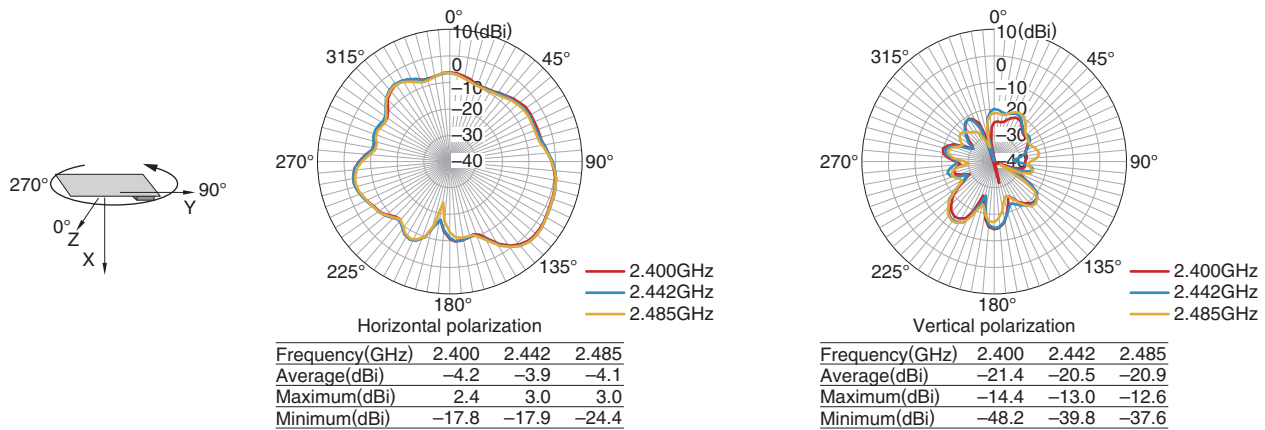
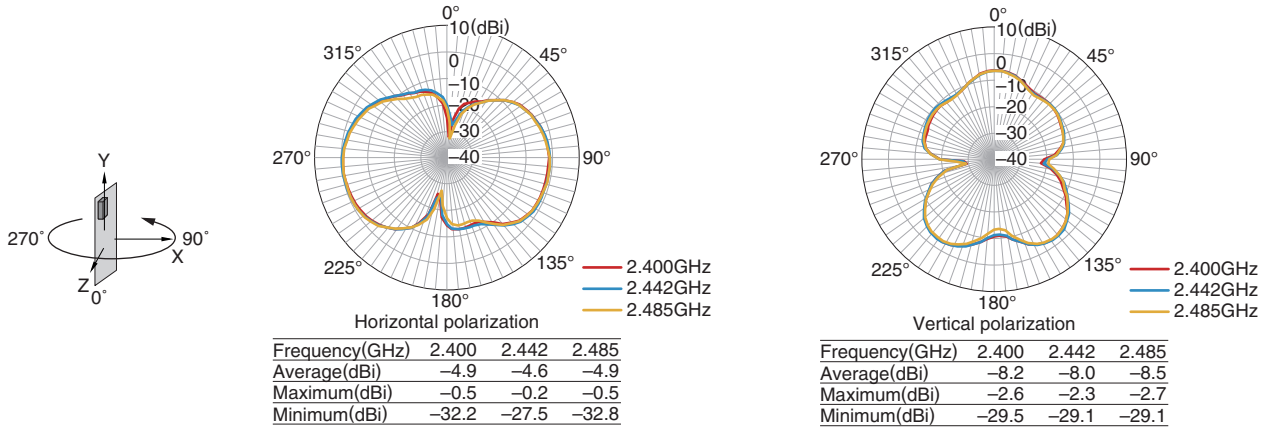


- Tested antenna has been soldered. Evaluation board size is 120x65x1 mm.

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## RADIATION PATTERNS

### 2.4GHz BAND

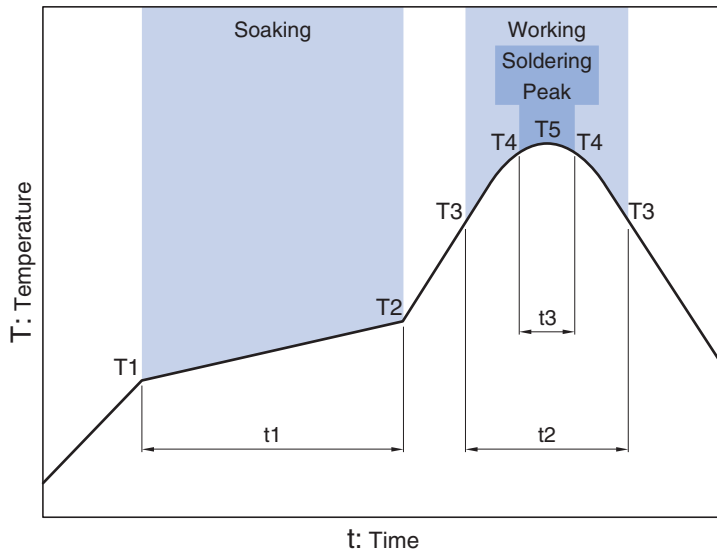


• Tested antenna has been soldered. Evaluation board size is 120x65x1 mm.

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## RECOMMENDED REFLOW PROFILE



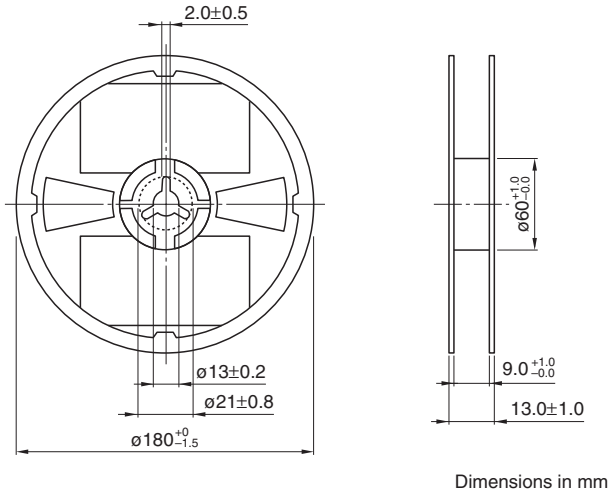
Soaking			Working		Soldering Peak		
Temp.		Time	Temp.	Time	Temp.	Time	Temp.
T1	T2	t1	T3	t2	T4	t3	T5
150°C	180°C	60 to 120s	230°C	30 to 60s	247 to 253°C	within 10s	260°C max.

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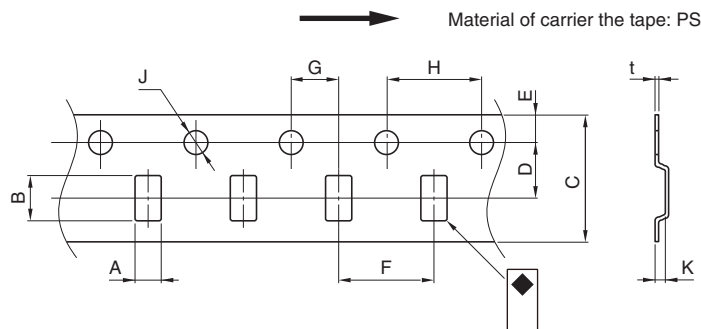
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## PACKAGING STYLE

### REEL DIMENSIONS



### TAPE DIMENSIONS



Dimensions in mm

A	B	C	D	E	F	G	H	J	K	t
0.97±0.05	1.8±0.05	8.0±0.2	3.5±0.05	1.75±0.1	4.0±0.1	2.0±0.05	4.0±0.1	1.5+0.1/-0	0.55max.	0.25±0.05

## PACKAGE QUANTITY

Standard package quantity (pieces/reel)
4,000

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## 使用注意事项

在使用本产品前，请务必随附采购规格书。

## 安全注意事项

使用本产品时，请注意安全事项。

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- |                         |                    |
|-------------------------|--------------------|
| (1) 航天航空设备              | (8) 公共信息处理设备       |
| (2) 交通运输设备（汽车，电动火车，船舶等） | (9) 军事设备           |
| (3) 医疗设备                | (10) 电加热设备、燃烧设备    |
| (4) 发电控制设备              | (11) 防灾 / 预防犯罪设备   |
| (5) 原子能源相关设备            | (12) 安全设备          |
| (6) 海底设备                | (13) 其他不被视为常规用途的用途 |
| (7) 交通控制设备              |                    |

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