

Metal Structural Antenna

1. Features

- Provide customers with design, material selection, and antenna circuit design consultation
- Provide use wire cut electrical discharge machining process of sample making services
- Low cost sample production
- Increase production quantity
- Halogen-free compliance



2. Description

Cirocomm uses wire cut electrical discharge machining and s process for communication antenna applications.

Based on Girocomm’s proprietary antenna design and process, these series of antenna have excellent stability and sensitivity to provide high signal reception efficiency consistently.

3. Applications

- Tracker
- Mobile Phone
- Personal Digital Assistant (PDAs)
- Portable Navigation Device (PNDs)
- Mobile Internet Device (MIDs)
- Netbook/NotBook/Tablet PC

4. Specification

Product Name	Part Number	Bandwidth (MHz) At 2:1 VSWR	Efficiency (%)	Dimension (mm ³)	Clearance Area (mm ²)	Reference Outline
MPA2442A	03H40E4B000A120	200	>50	20.5x7.55x3	-----	O
MPA2450B	03H15E3E0009120	200	>50	22.2x7.55x3	-----	P

* Actual value will depend on customer ground plane size

SPEC NO. : **SP03AF2450C-0020**

PART NO. : **03H15E3E0009120**

PRODUCT NAME : **MPA2450B**

DESCRIPTION : **Metal PIFA Antenna**
(22.2x3.0x7.55mm)

ROHS Compliant Product

1.0 SCOPE

This specification covers the Metal PIFA antenna for **2400-2500** MHz .

2.0 Name of the product

This product is named “Metal Planer Inverted - F Antenna”

3.0 Electrical characteristics

3-1 Electrical characteristics of antenna

The antenna has the electrical characteristics given in Table 1 under the *cirocomm* standard installation conditions shown in the figure of Evaluation Board.

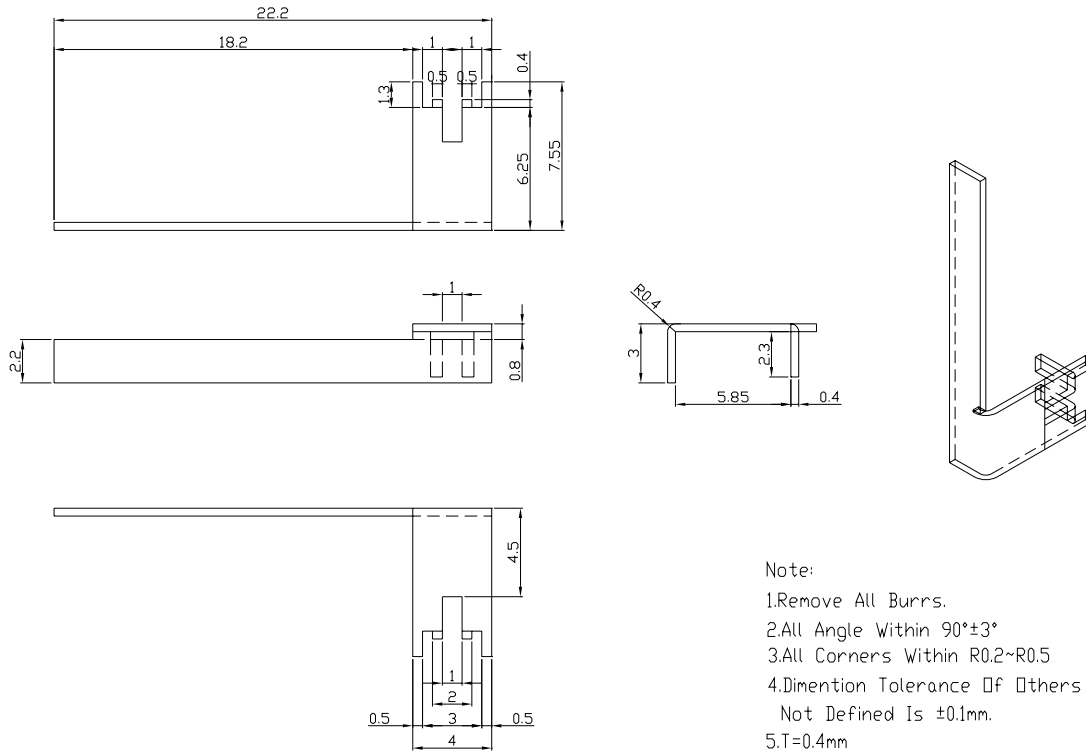
Table 1

No	Parameter	Specification
1	Working Frequency	2400MHz~2500MHz
2	Bandwidth	2450±50MHz
3	Dimension	22.2x3.0x7.55 mm
4	VSWR	2.0 max
5	Peak Gain	1.5 dBi typ
6	Polarization	Linear
7	Impedance	50 Ohm
8	Operating Temperature	-40~105°C

9	Termination	Cu (Environmentally-Friendly Pb Free)
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* Actual value will depend on customer ground plane size

4.0 Shape and Dimension



- Note:
- 1.Remove All Burrs.
 - 2.All Angle Within $90^{\circ} \pm 3^{\circ}$
 - 3.All Corners Within R0.2~R0.5
 - 4.Dimension Tolerance of Others That Is Not Defined Is $\pm 0.1\text{mm}$.
 - 5.T=0.4mm

Kimara Chin

From: elisa [elisa@cirocomm.com.tw]
Sent: Wednesday, October 12, 2011 3:13 AM
To: Andy Setlak
Cc: Ciro_David
Subject: Re: RoHS declaration, Lead times and cost information for MPA2450B
Attachments: MSDS.pdf; Copper Nickel.pdf

Dear Andy,

Sorry for late reply.

Currently we only have Japanese version document and Chinese MSDS because the raw material our supplier using is from Japan.

We are checking with our supplier and see if they can provide English version.

But according to the document, the melting point of this material (Copper Nickel) is around 1020C~1110C.

Since MPA2450B is made by Copper Nickel only, 250C for 5sec should be no problem.

Please let me know if these documents are ok for you.

Thanks and best regards,

Elisa

----- Original Message -----

From: [elisa](#)
To: [Andy Setlak](#)
Cc: [Ciro_David](#)
Sent: Tuesday, October 11, 2011 6:19 PM
Subject: Re: RoHS declaration, Lead times and cost information for MPA2450B

Dear Andy,

Our engineer said that they need to check with supplier of material and see if they can provide reference document.

A max temp of 250C for 5sec should be no problem since MPA2450B is metal antenna, but we will see if we can get documentation from supplier.

Thanks and best regards,

Elisa

----- Original Message -----

From: [elisa](#)
To: [Andy Setlak](#)
Cc: [Ciro_David](#)
Sent: Friday, October 07, 2011 5:39 PM
Subject: Re: RoHS declaration, Lead times and cost information for MPA2450B

Dear Andy,

Hazardous Substance Check List 有害物質調查清單

Part Name : MPA2450B Part Number : 03H15E3E0009120 Customer : Trimble

日期 : 2011/10/04

Parts Stock number 料號	Parts Description 零件名稱	Supplier 供應商	2nd level 材料組件	2nd level 供應商	3rd Party Test Lab 第三方公正實驗室	Lab Report No. 檢測報告編號	Report Date: 檢測報告日期	RoHS物質檢測結果(mg/kg, ppm) : 請填入所有原始報告中結果之最大值 Test Results for RoHS- Please enter the maximum from all 3rd party report							Remark 備註
								Limit 限值(mg/kg, ppm)							
								Pb 鉛	Cd 鎘	Hg 汞	Cr6+ 六價鉻	PBBs 多溴聯苯	PBDEs 溴聯苯醚	Packaging包裝材料 pb+cd+Hg+Cr6+	
< 500	< 50	<500	Not Detected	<500	<500	<100									
2120-沖壓成型天線	MPA2450B	太盟元件 Cirocomm	洋白銅	力鳴	SGS	CE/2011/11707	2011/1/17	N.D.	N.D.	N.D.	Negative	N.D.	N.D.	-	

Note: 1)相關細節參照"有害物質管理作業辦法". In connection with the details, please refer to"the harmful substance documents".

2)包裝材料:若為塑膠塗料墨水的部份允許Cd<5ppm. Packing materials: The part of the plastic coating ink. Allowable concentration: Less than 5 ppm.

3)未檢出(低於檢測極限值) Not Detected(Less than MDL/Method Detection Limit)

4)鉛含量排外部份: 焊錫允許1000ppm、銅合金允許40000ppm、鋁合金允許4000ppm、鋼鐵合金允許3500ppm.

Exclusive part of the lead content: The soldering tin permits and counts 1000ppm, copper alloy to permit and count 40000ppm , aluminium alloy to permit and count 4000ppm , steel alloy to permit and count 3500ppm.

5)構成物質及配製品中(產品成份配方)PFOS限值標準為<0.005% (50ppm) ,成品、半成品、零件中限值為<0.1% (1000ppm) ,塗層材料中<1 μg/m² .

PFOS limit standard is in products (compositions of the products fill a prescription) to form materials and compound < 0.005% (50ppm) , limit is < 0.1% (1000ppm) , < 1μg/m² in the coating material in finished product, semi-manufactured goods , part .