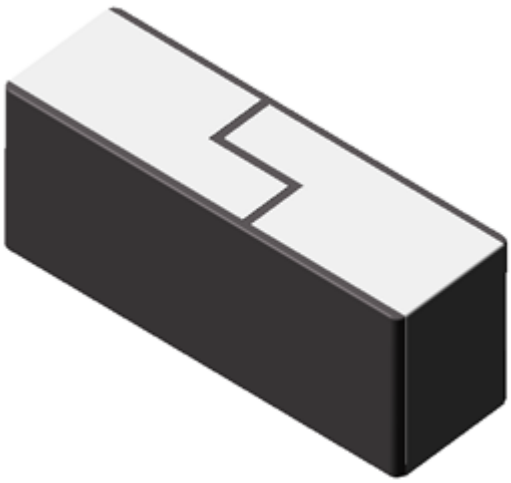
Pulse | LARSEN Antennas
A YAGEO Company

TECHNICAL DATA SHEET

Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

PART NUMBER: W3073



Features:

- Frequency:

824-894/1710-2170MHz or
880-960/1710-2170MHz

- Size 10 x 3.2 x 4 mm
- PCB Keep out 40 x 10 mm
- Polarization Linear
- Radiation pattern Omni

Applications:

- 2G/3G
- Nb-IoT
- GSM850 or EGSM900/, PCN1800, PCS1900 and WCDMA

All dimensions are in mm / inches

Issue: 2037

RoHS COMPLIANT

For more information:

Pulse Worldwide Headquarters
15255 Innovation Drive #100
San Diego, CA 92128
USA
Tel:1-858-674-8100

Pulse/Larsen Antennas
18110 SE 34th St Bldg 2 Suite 250
Vancouver, WA 98683
USA
Tel: 1-360-944-7551

Europe Headquarters
Pulse GmbH & Do, KG
Zeppelinstrasse 15
Herrenberg, Germany
Tel: 49 7032 7806 0

Pulse (Suzhou) Wireless Products Co, Inc.
99 Huo Ju Road(#29 Bldg,4th Phase
Suzhou New District
Jiangsu Province, Suzhou 215009 PR China
Tel: 86 512 6807 9998

Pulse | LARSEN Antennas
A YAGEO Company

TECHNICAL DATA SHEET

Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

PART NUMBER: W3073

ELECTRICAL SPECIFICATIONS

Antenna Type	Chip antenna
Frequency	Version1：868-870MHz 1710-2170MHz Version2：880-960MHz 1710-2170MHz
Nominal Impedance	50 Ω
Radiation Pattern	Omni
Polarization	Vertical
Power Withstanding	3W

MECHANICAL SPECIFICATIONS

Compact size	10 x 3.2 x 4mm
Weight	0.6g
Fixing system	SMT
MSL(MOISTURE SENSITIVITY LEVEL)	1

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40 ~ +85° C
Storage Temperature	-10 ~ +30° C
RoHS Compliant	Yes

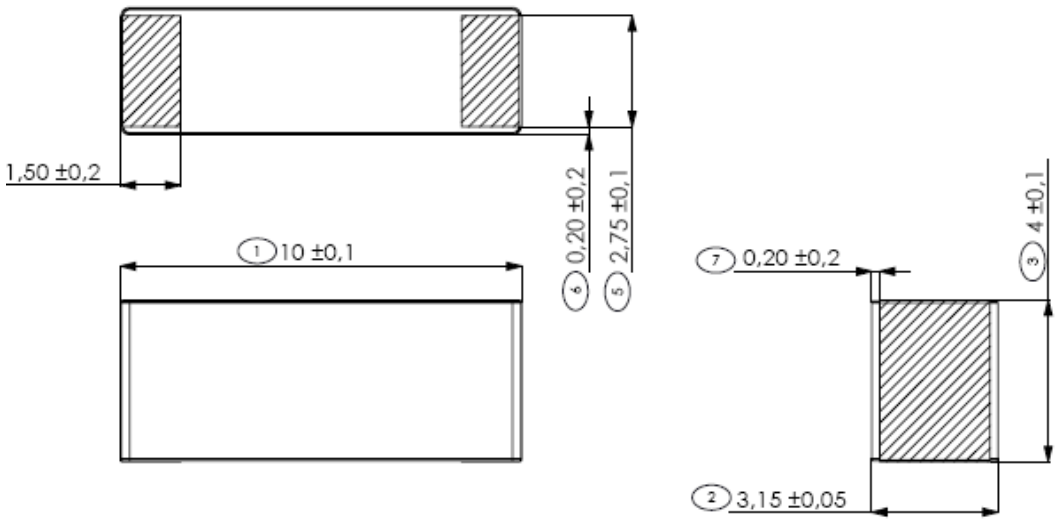
RoHS COMPLIANT

Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

PART NUMBER: W3073

MECHANICAL DRAWING



No.	Terminal Name	Terminal Dimensions
1	Feed	1.5 x 2.75 mm
2	Support pad	1.5 x 2.75 mm
Antenna is symmetrical and orientation on footprint can be rotated 180 degrees without change in performance		

Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

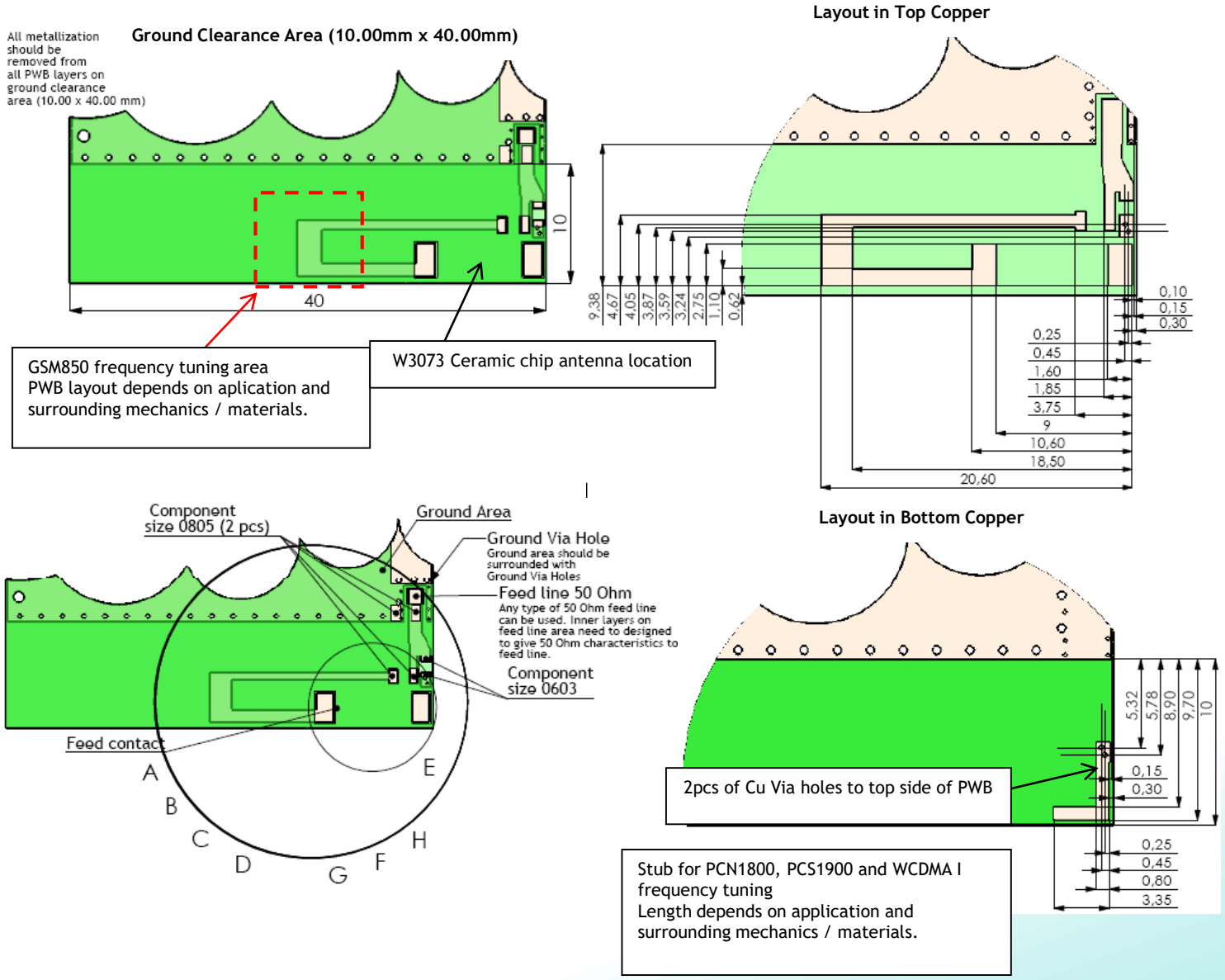
PART NUMBER: W3073

PWB Layout

Test Setup for Electrical Measurements

Recommended test board- layout for electrical characteristic measurement. Test board outline size 105 x 40mm. Ground cleared under antenna 40mm x 10mm.

Version 1: GSM850, PCN1800, PCS1900 and WCDMA I



RoHS COMPLIANT

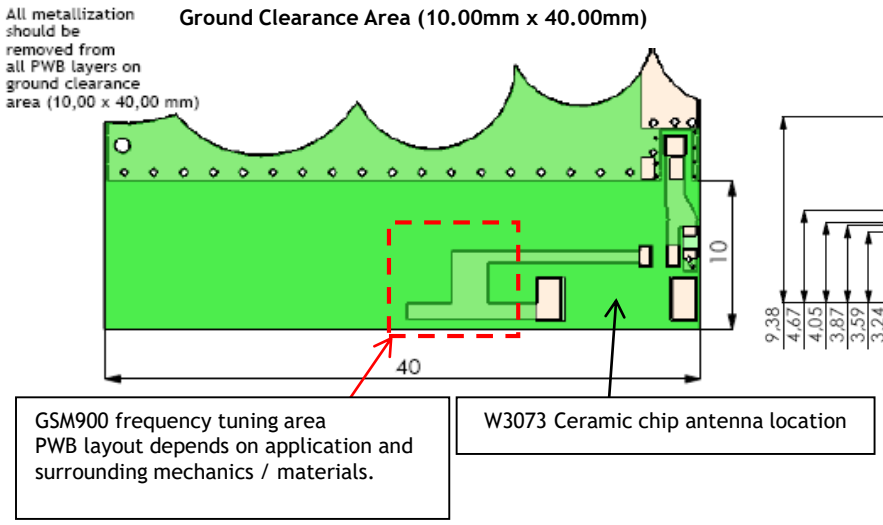
Description: Quad Band Monopole Ceramic Chip Antenna

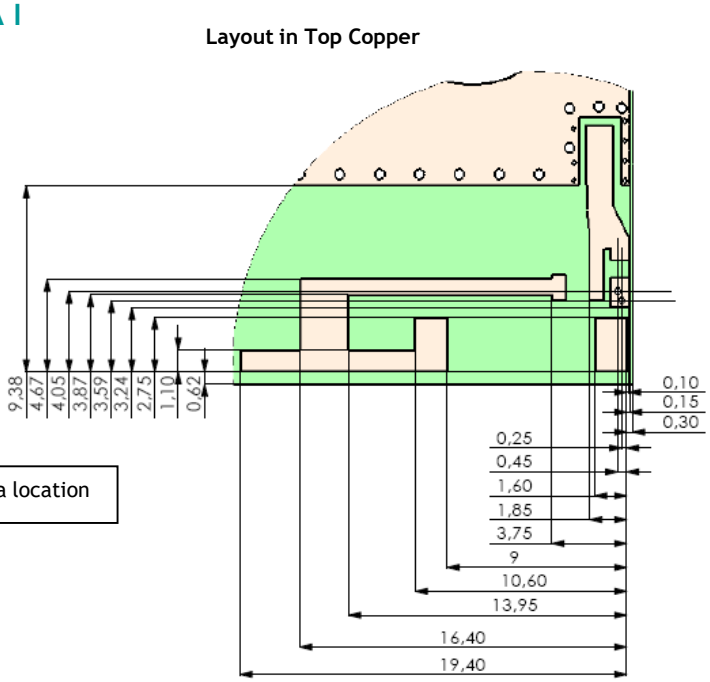
Series: Ceramic Chip Antenna

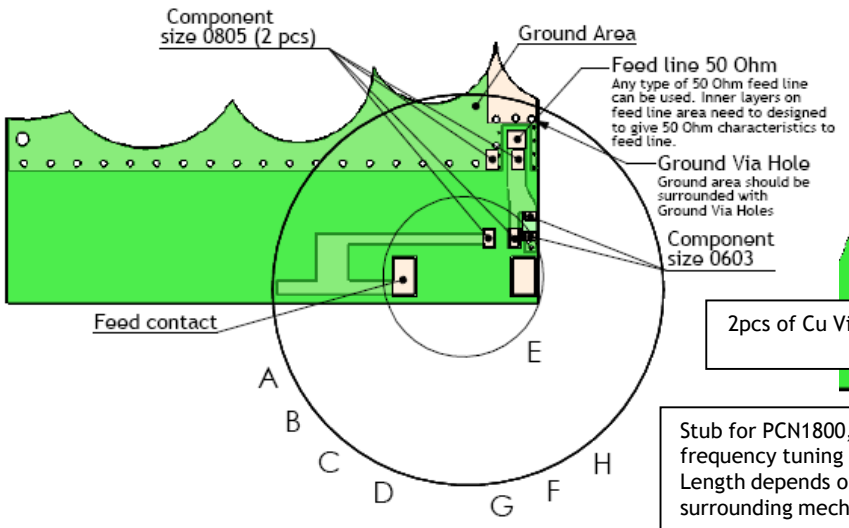
PART NUMBER: W3073

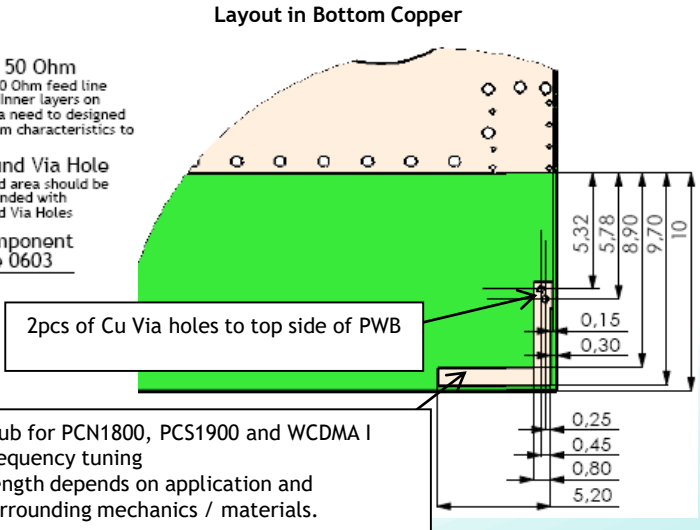
PWB Layout

Version 2: EGSM900, PCN1800, PCS1900 and WCDMA I









RoHS COMPLIANT

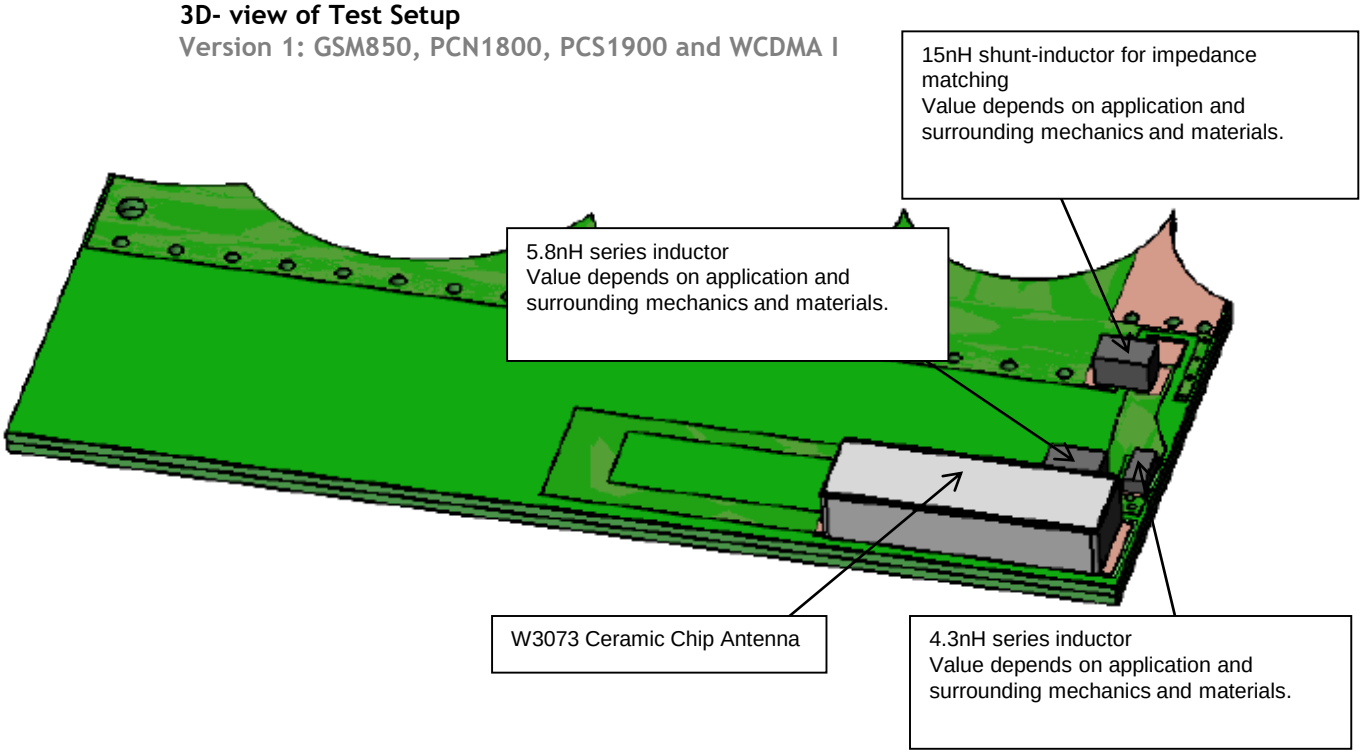
Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

PART NUMBER: W3073

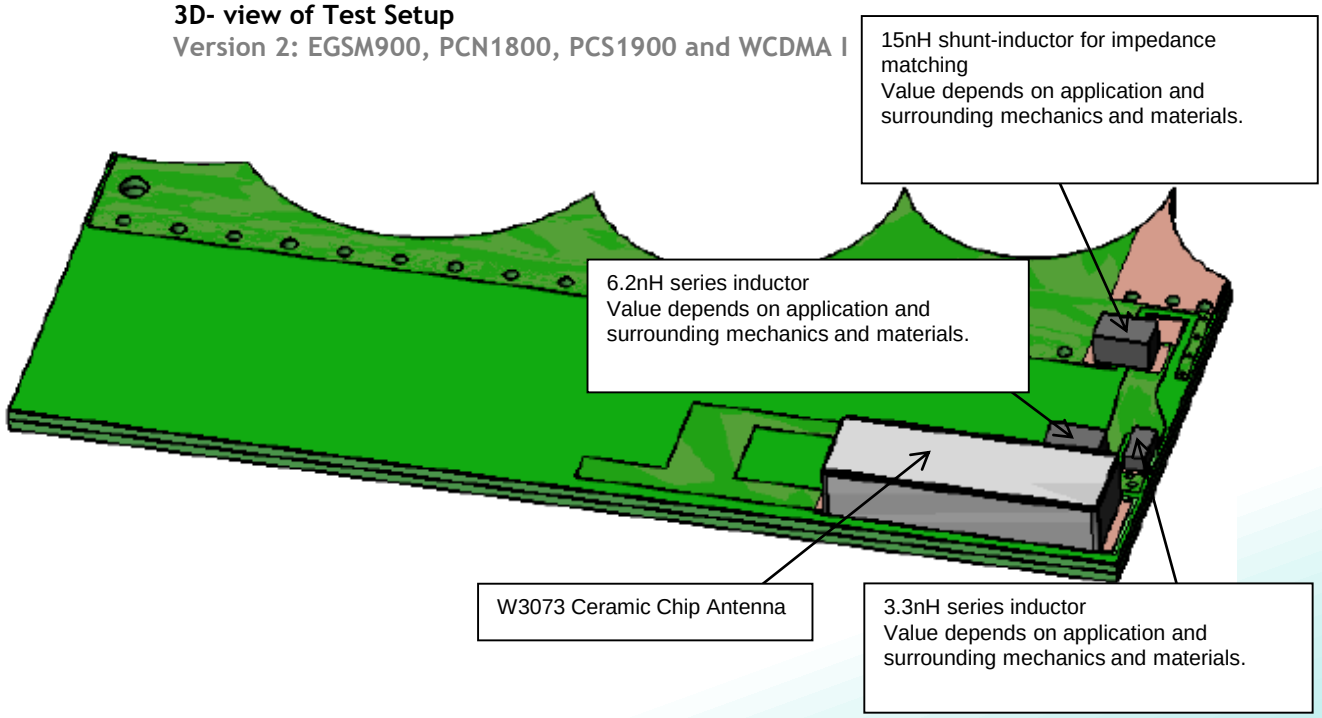
3D- view of Test Setup

Version 1: GSM850, PCN1800, PCS1900 and WCDMA I



3D- view of Test Setup

Version 2: EGSM900, PCN1800, PCS1900 and WCDMA I



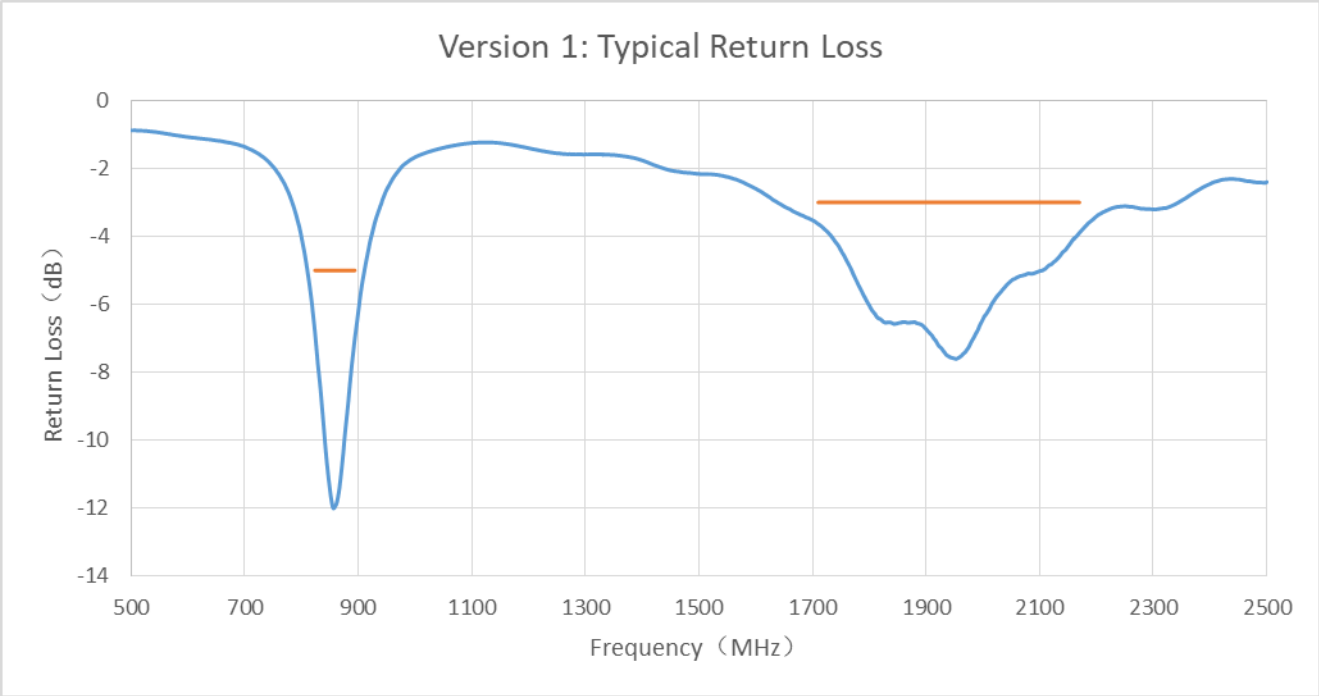
RoHS COMPLIANT

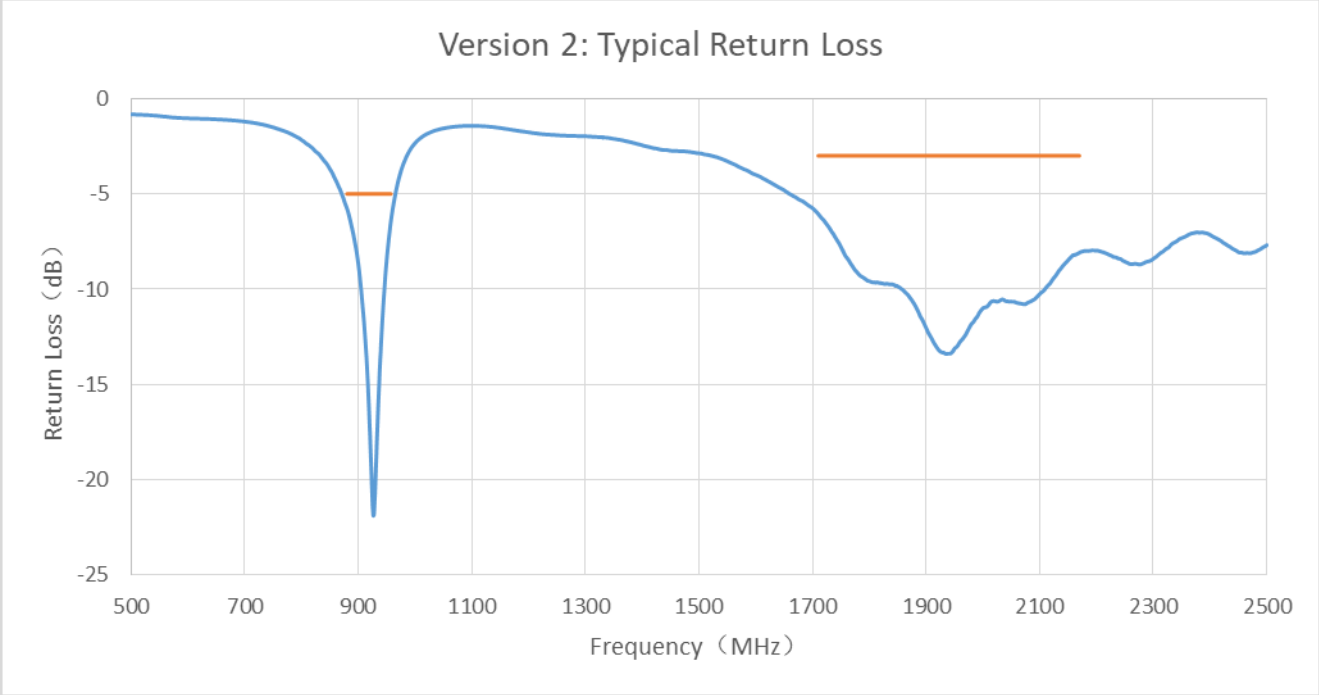
Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

PART NUMBER: W3073

GHARTS





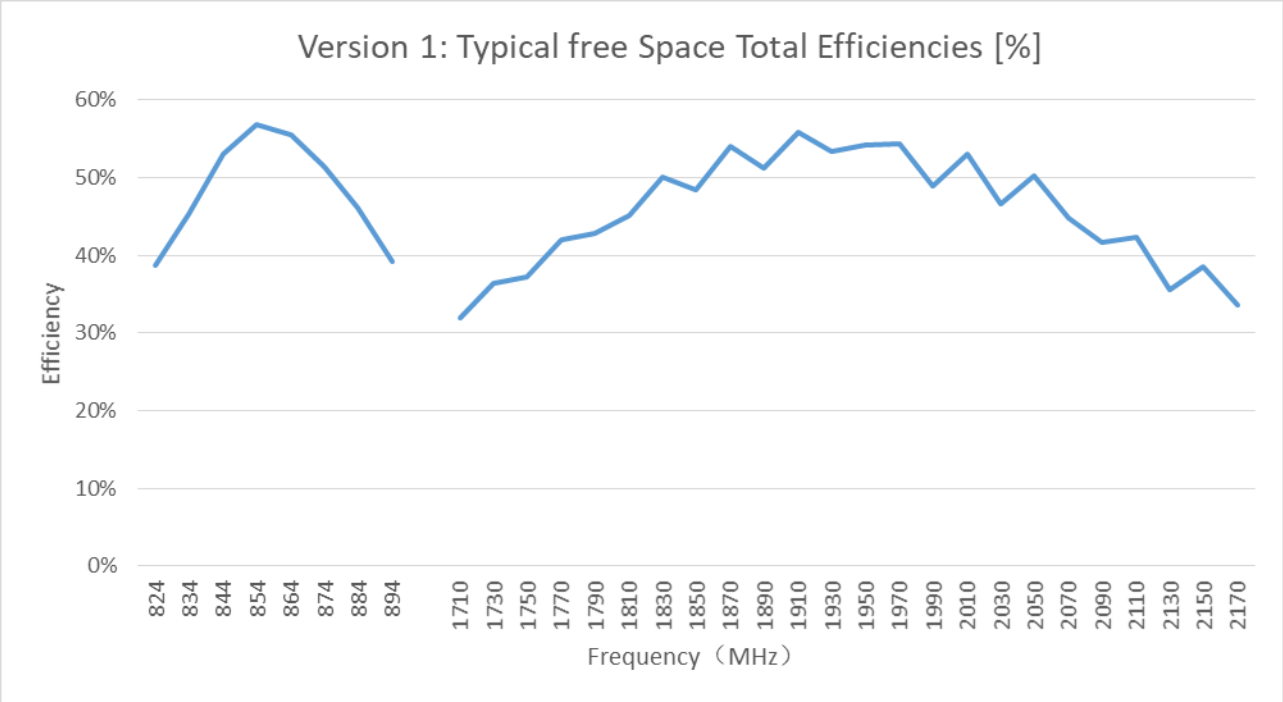
RoHS COMPLIANT

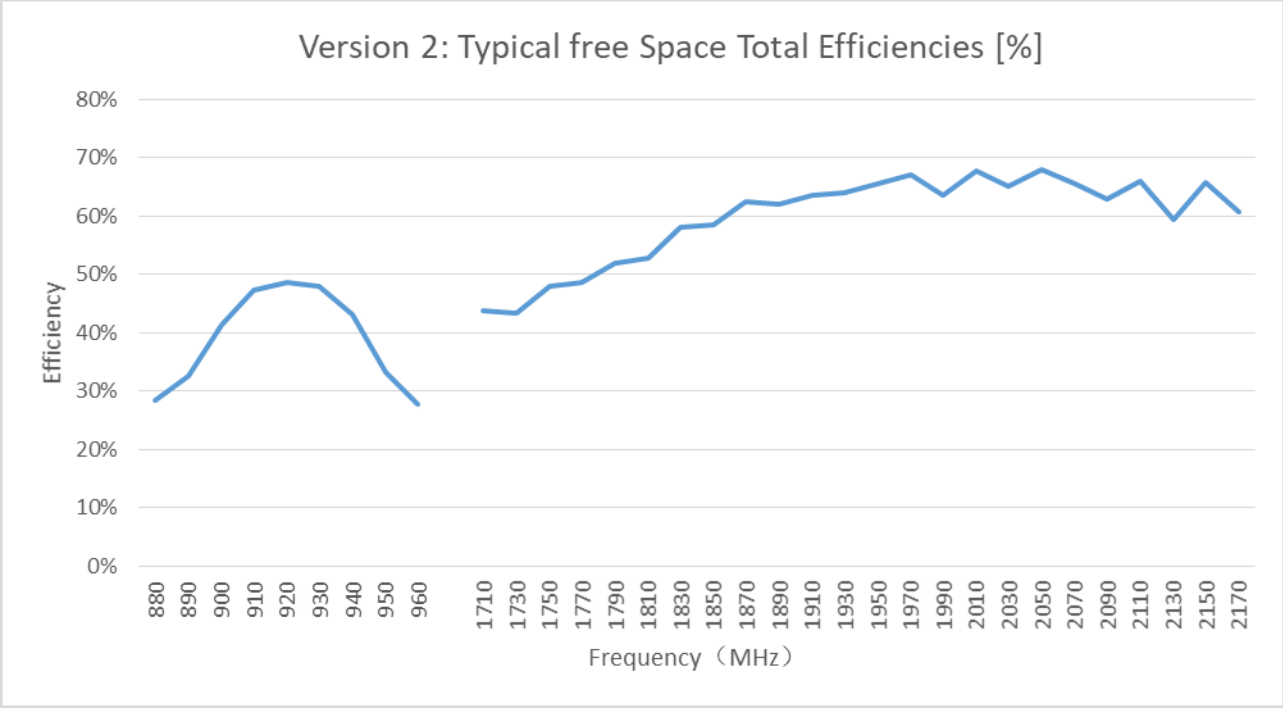
Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

PART NUMBER: W3073

CHARTS





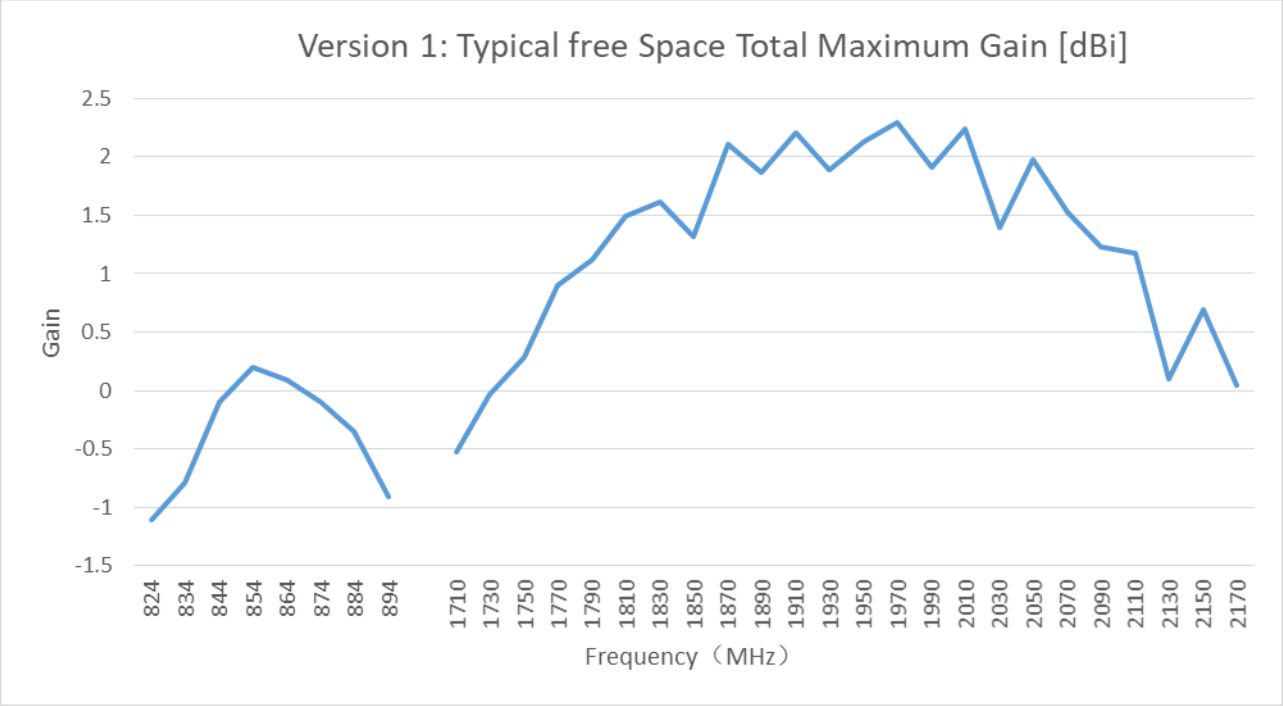
RoHS COMPLIANT

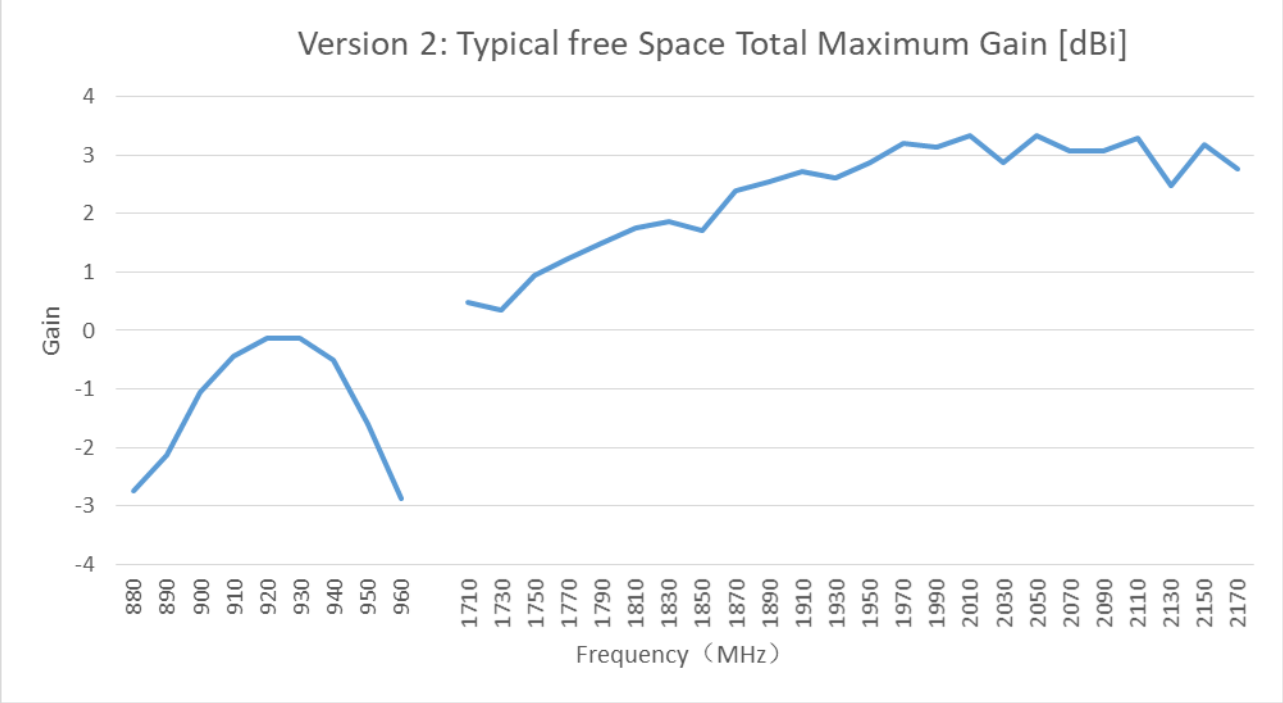
Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

PART NUMBER: W3073

CHARTS





RoHS COMPLIANT

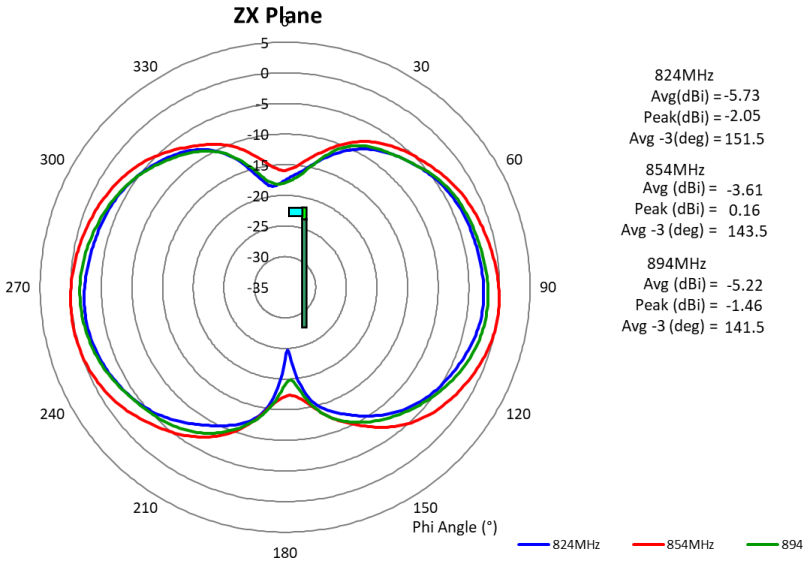
Description: Quad Band Monopole Ceramic Chip Antenna

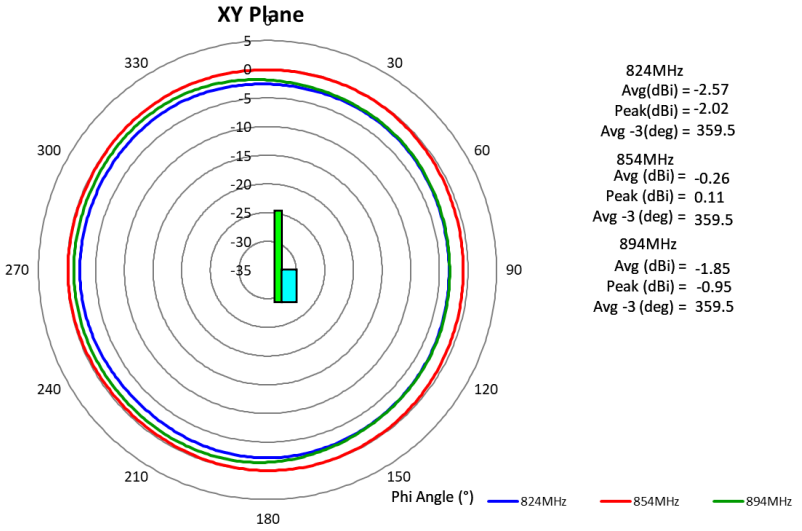
Series: Ceramic Chip Antenna

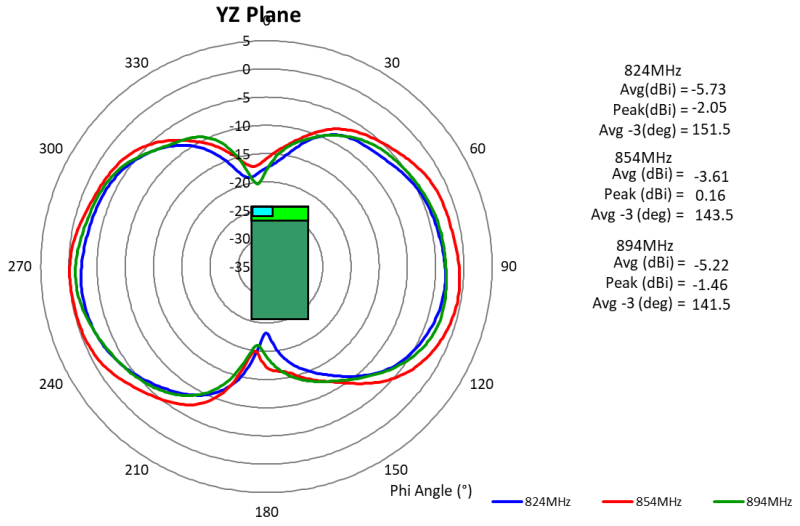
PART NUMBER: W3073

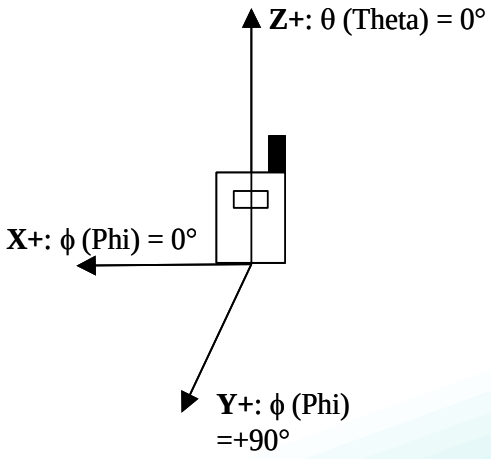
CHARTS

Version 1: Typical Free Space Radiation Patterns









RoHS COMPLIANT

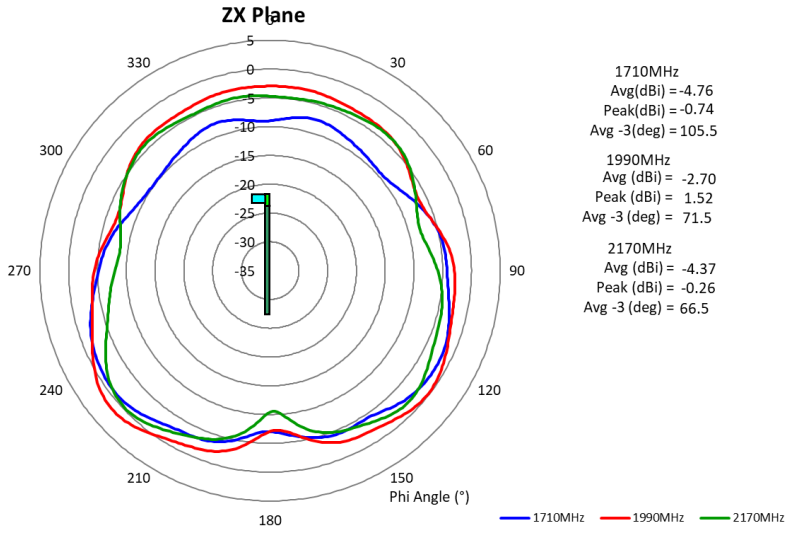
Description: Quad Band Monopole Ceramic Chip Antenna

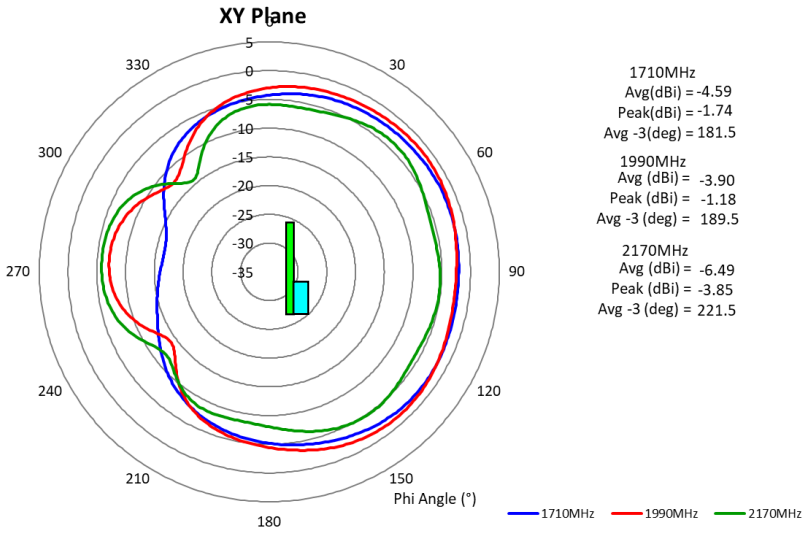
Series: Ceramic Chip Antenna

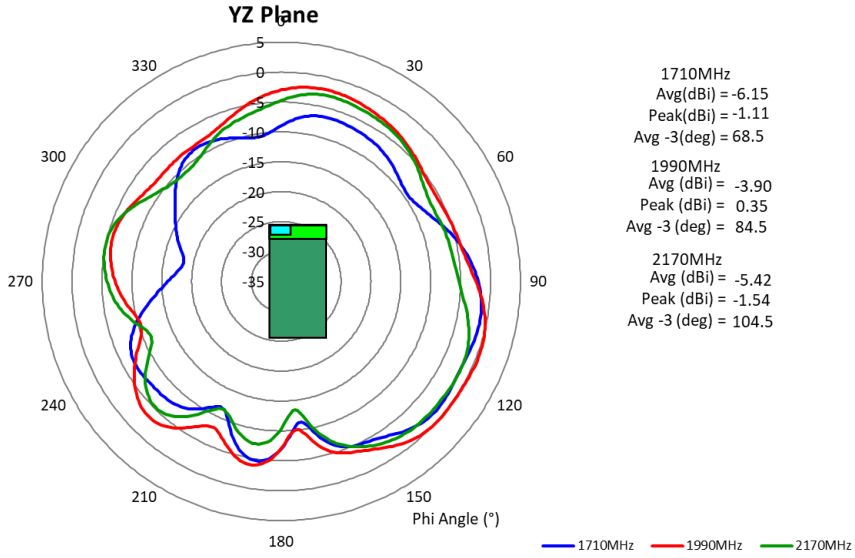
PART NUMBER: W3073

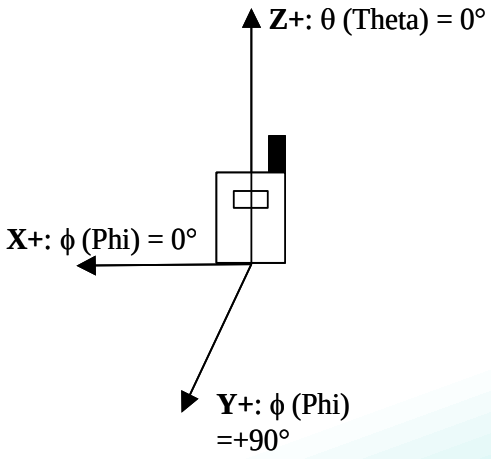
CHARTS

Version 1: Typical Free Space Radiation Patterns









Issue: 2037

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

RoHS COMPLIANT

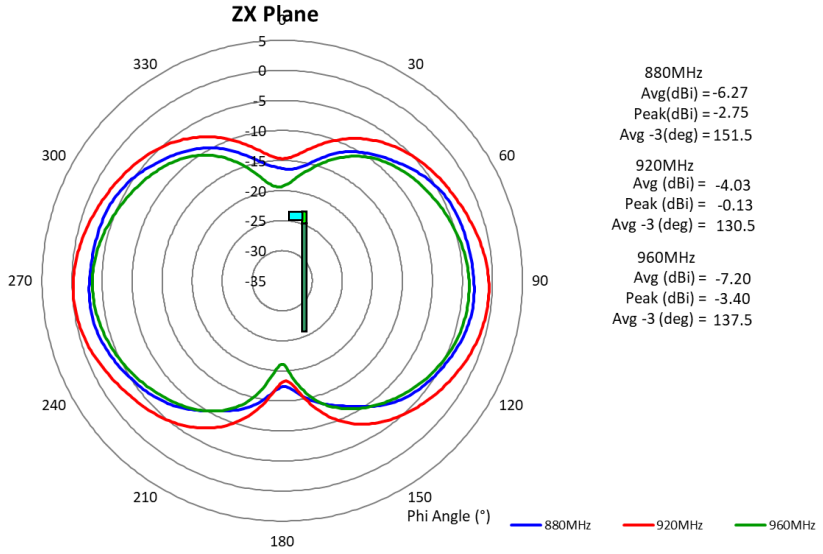
Description: Quad Band Monopole Ceramic Chip Antenna

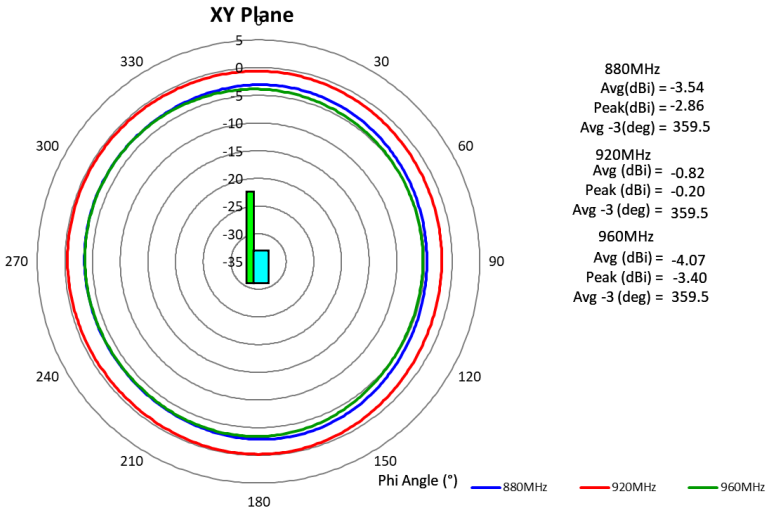
Series: Ceramic Chip Antenna

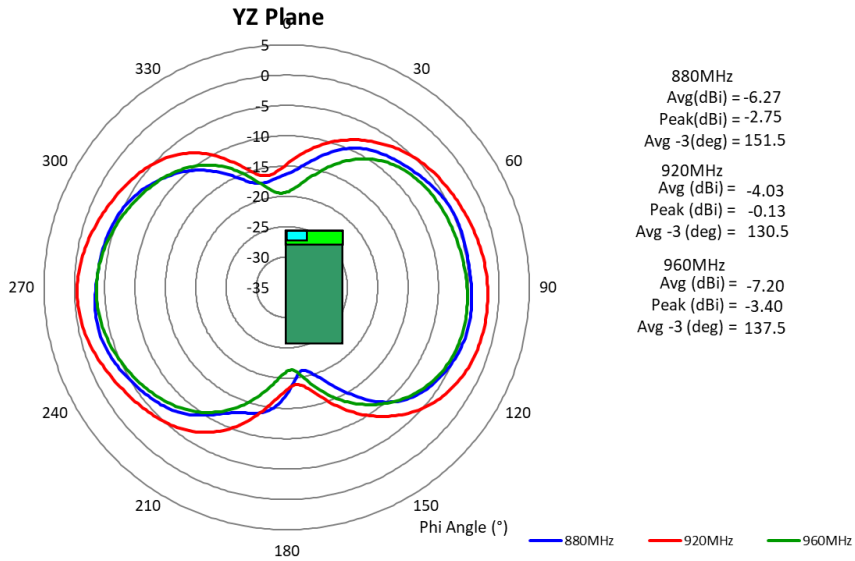
PART NUMBER: W3073

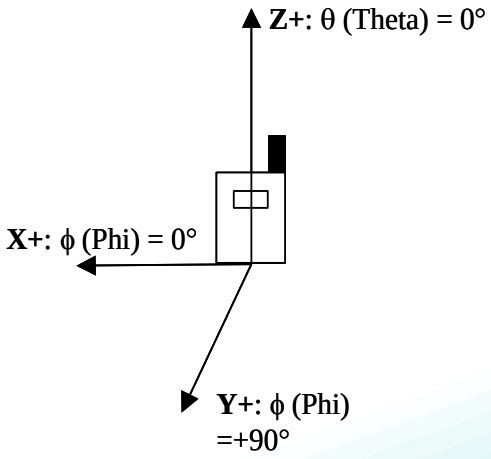
CHARTS

Version 2: Typical Free Space Radiation Patterns









RoHS COMPLIANT

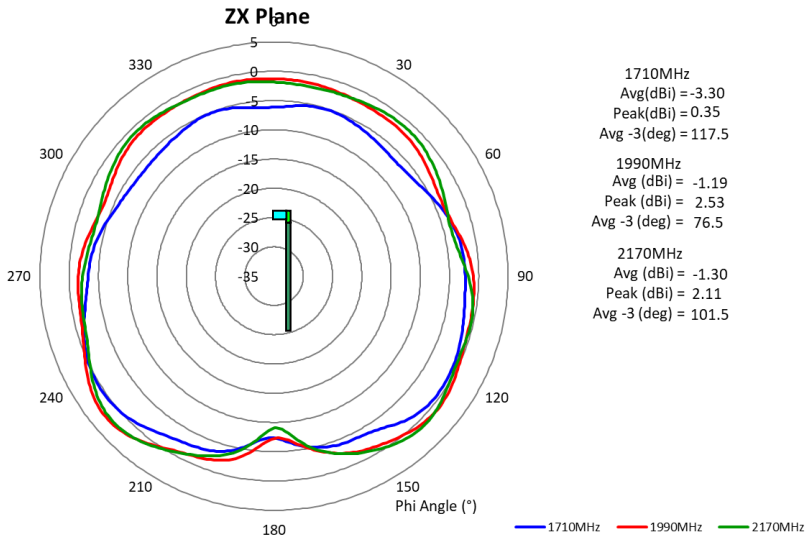
Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

PART NUMBER: W3073

CHARTS

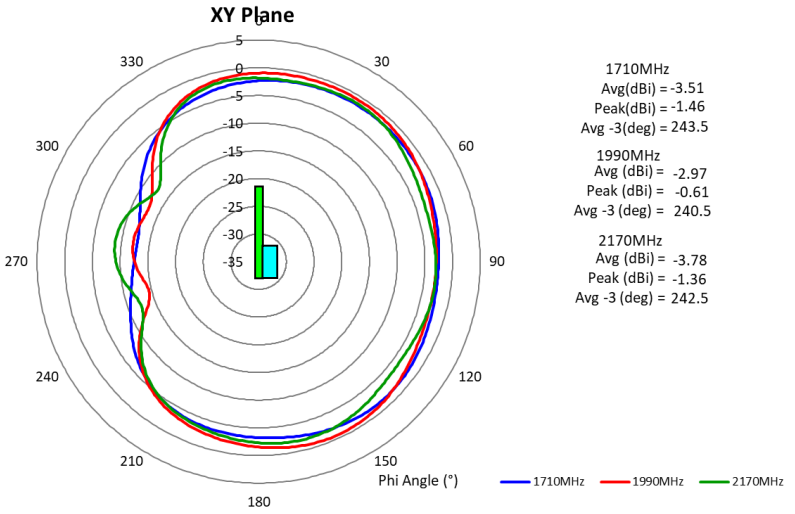
Version 2: Typical Free Space Radiation Patterns



1710MHz
Avg(dBi) = -3.30
Peak(dBi) = 0.35
Avg -3(deg) = 117.5

1990MHz
Avg (dBi) = -1.19
Peak (dBi) = 2.53
Avg -3 (deg) = 76.5

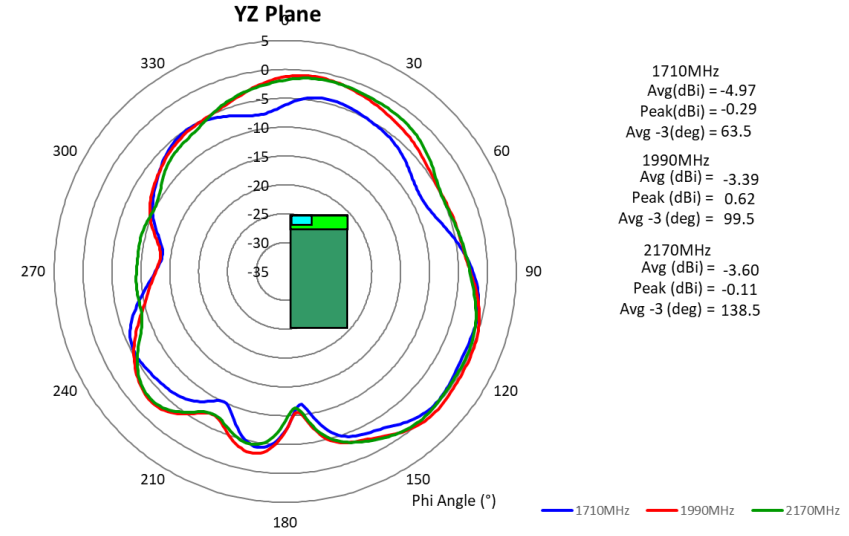
2170MHz
Avg (dBi) = -1.30
Peak (dBi) = 2.11
Avg -3 (deg) = 101.5



1710MHz
Avg(dBi) = -3.51
Peak(dBi) = -1.46
Avg -3(deg) = 243.5

1990MHz
Avg (dBi) = -2.97
Peak (dBi) = -0.61
Avg -3 (deg) = 240.5

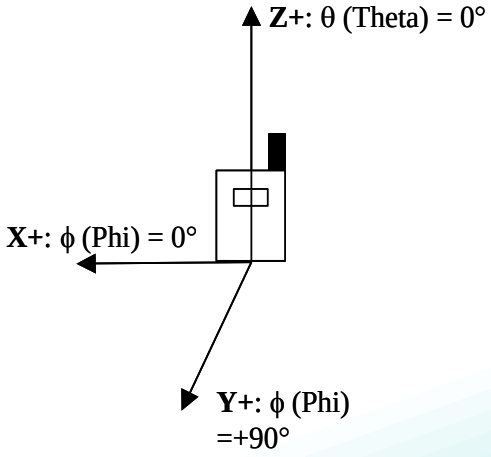
2170MHz
Avg (dBi) = -3.78
Peak (dBi) = -1.36
Avg -3 (deg) = 242.5



1710MHz
Avg(dBi) = -4.97
Peak(dBi) = -0.29
Avg -3(deg) = 63.5

1990MHz
Avg (dBi) = -3.39
Peak (dBi) = 0.62
Avg -3 (deg) = 99.5

2170MHz
Avg (dBi) = -3.60
Peak (dBi) = -0.11
Avg -3 (deg) = 138.5



Issue: 2037

RoHS COMPLIANT

Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

PART NUMBER: W3073

Recommendations for ceramic chip antenna storage

Storage time

Products should be used within 6 months from the day of manufacturers packaging even when they are stored under below mentioned conditions. Longer storage period may decrease the component solderability.

Storage environmental conditions

To maintain solderability of Pulse ceramic products care must be taken to control the storage and use conditions:

- Do not store or use products in a corrosive atmosphere, especially where chloride, sulphur or sulfide, alkali or acid salts exist in the air. Corrosive gases may cause oxidation of electrodes and reduce solderability
- Keep temperature and humidity stabile and do not exceed the below mentioned minimum and maximum conditions: Temperature: -10 to +30 Deg C Humidity: below 60% RH
- Do not store the products under direct sun light.

It is recommended to keep the products in manufacturers packing (tape&reel) until the time of assembly and soldering process. Air tight vacuum package is recommended in the conditions where it is know to be some corrosive gases.

Handling

Do not touch the components with bare hands. Protective gloves must be used to prevent contamination of terminals which may cause reduced solderability. Do not touch or damage the silver plated surface by any sharp objects. Soft materials (plastic, wood etc.) must be used if tweezers or other tools are used to pick the components. Avoid any excess mechanical shock or vibration during storage and handling.

Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

PART NUMBER: W3073

Recommendation for reflow soldering process

Printing stencil thickness 0,15 - 0,25 mm is recommended for the solder paste. The maximum soldering temperature should not exceed 260°C. The temperature profile recommendations for reflow soldering process is presented in the Figures 1 and 2. The reflow profile presented in figure 1 describes minimum reflow temperatures. The reflow profile presented in figure 2 describes maximum reflow temperatures. located at the center of the coverage area.

	Method of heat transfer	Controlled hot air convection
1	Average temperature gradient in preheating	2.5 °C/s
2	Soak time	2-3 minutes
3	Max temperature gradient in reflow	3 °C/s
4	Time above 217 °C	Max 30 sec
5	Peak temperature in reflow	230 °C for 10 seconds
6	Temperature gradient in cooling	Max -5 °C/s

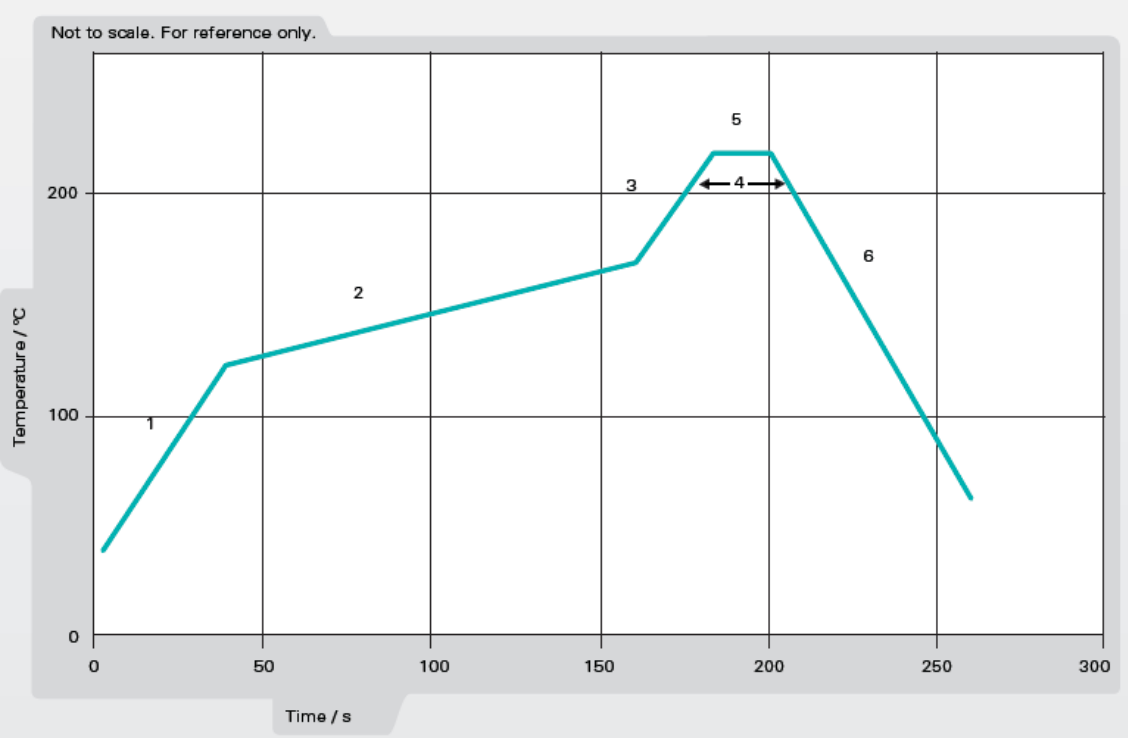


Figure 1. Minimum temperature profile recommendation for reflow soldering process

RoHS COMPLIANT

Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

PART NUMBER: W3073

Recommendation for reflow soldering process

	Method of heat transfer	Controlled hot air convection
1	Average temperature gradient in preheating	2.5 °C/s
2	Soak time	2-3 minutes
3	Max temperature gradient in reflow	3 °C/s
4	Time above 217 °C	Max 60 sec
5	Time above 230 °C	Max 50 sec
6	Time above 250 °C	Max 10 sec
7	Peak temperature in reflow	260 °C for 5 seconds
8	Temperature gradient in cooling	Max -5 °C/s

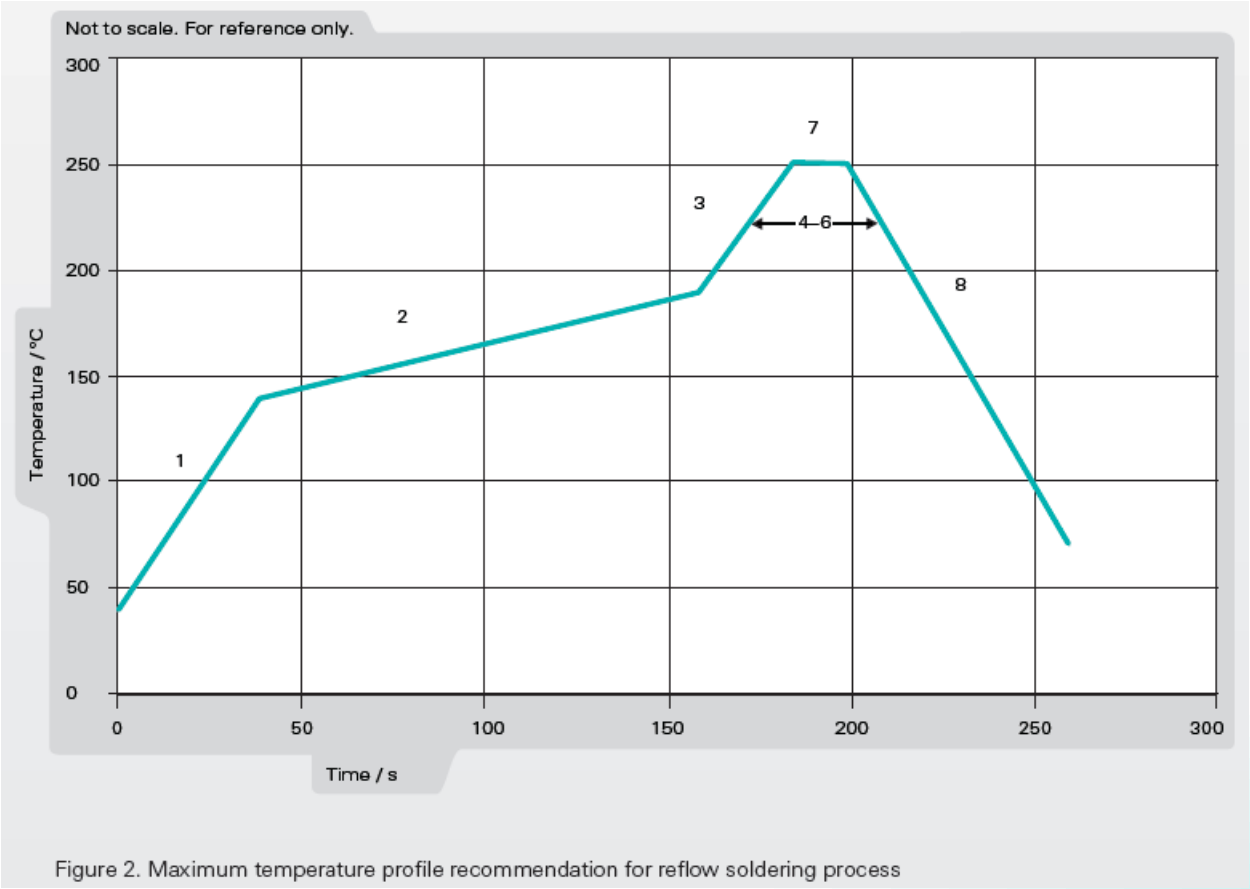


Figure 2. Maximum temperature profile recommendation for reflow soldering process

RoHS COMPLIANT

Description: Quad Band Monopole Ceramic Chip Antenna

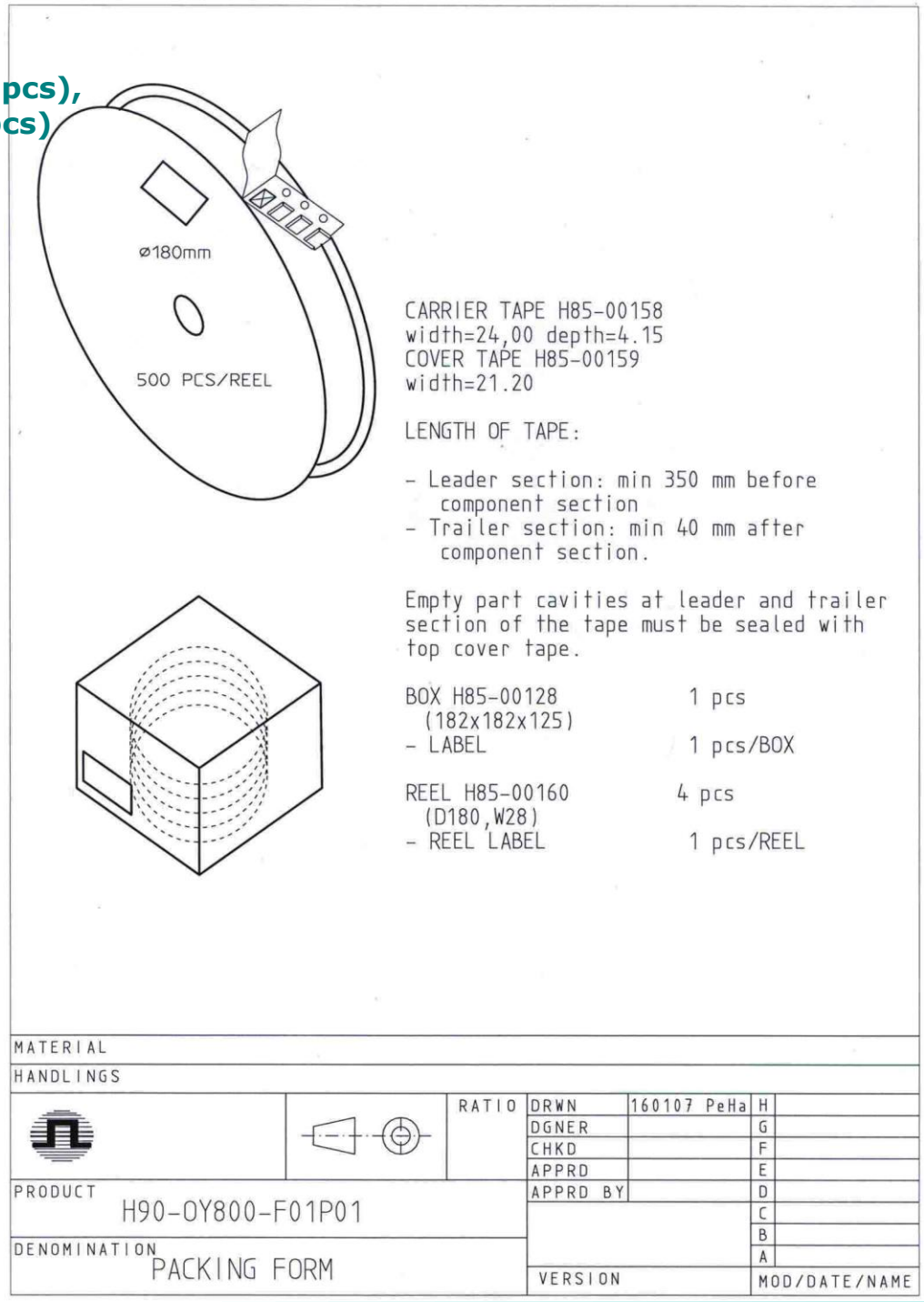
Series: Ceramic Chip Antenna

PART NUMBER: W3073

PACKAGING

Packing form

500pcs in one Reel,
3 reel in one inbox (1500 pcs),
2 inbox in out box (3000pcs)



RoHS COMPLIANT

Description: Quad Band Monopole Ceramic Chip Antenna

Series: Ceramic Chip Antenna

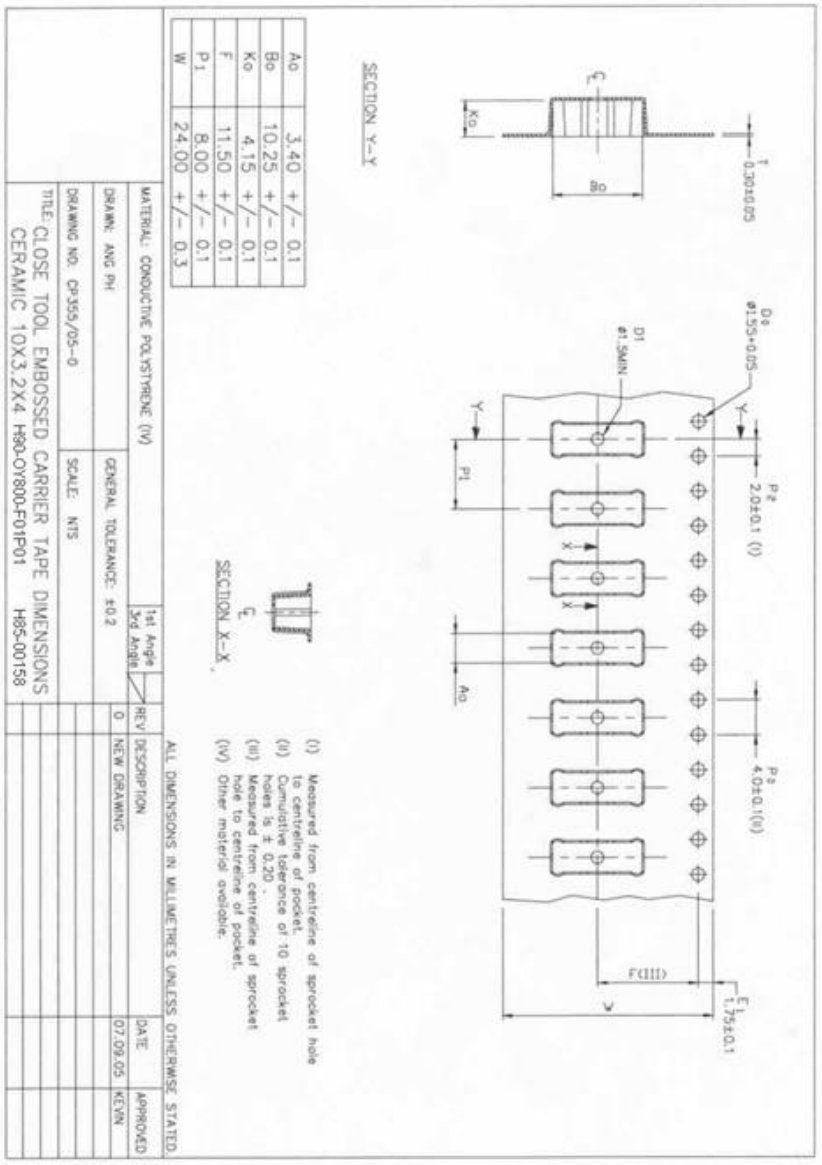
PART NUMBER: W3073

PACKAGING

General

Tape and reel packing is used. Carrier tape, reel and box dimensions are presented in following pictures.

Carrier tape



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Antennas ***category:***

Click to view products by Pulse ***manufacturer:***

Other Similar products are found below :

GAN30084EU 930-033-R GW17.07.0250E 1513563-1 EXE902SM APAMPG-117 MAF94383 W3908B0100 W6102B0100 YE572113-30RSMM 108-00014-50 66089-2406 A09-F8NF-M A09-F5NF-M RGFRA1903041A1T W3593B0100 W3921B0100 SIMNA-868 SIMNA-915 SIMNA-433 W1044 W1049B090 A75-001 WTL2449CQ1-FRSMM CPL9C EXB148BN 0600-00060 TRA9020S3PBN-001 GD5W-28P-NF MA9-7N GD53-25 GD5W-21P-NF EXB144SM C37 MAF94051 GD35-17P-NF P1744 MA9-5N EXD420PL B1322NR QWFTB120 MAF94271 MAF94300 GPSMB301 FG4403 AO-AGSM-OM54 5200232 MIKROE-2349 WCM.01.0111 MIKROE-2393