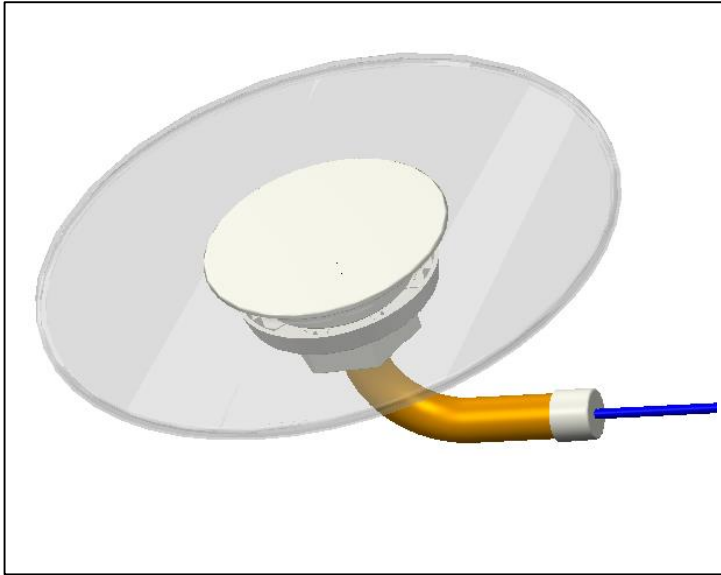


Description: DAS, Ultra Thin, Low Clearance Antenna

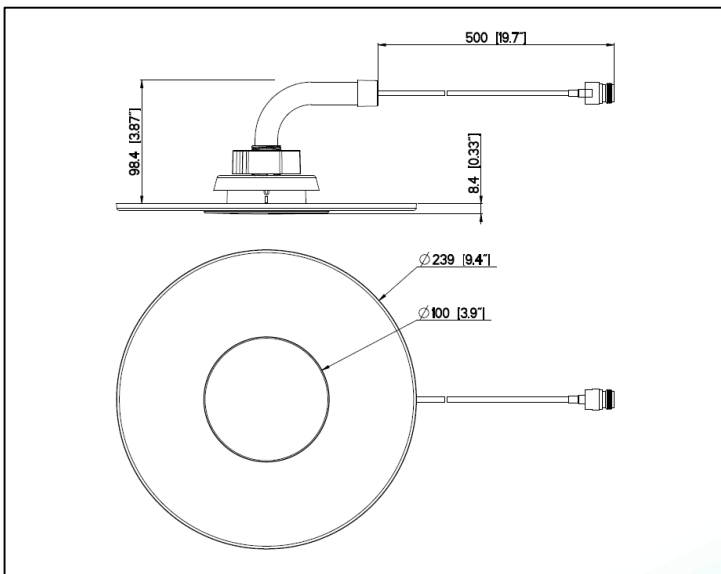
Series: Clarity

PART NUMBER: DASUTLC500NF



Features:

- 608-2700MHz
- Low PIM <-155dBc@2x20W
- L-bent stem to allow mounting on reduced height ceiling clearance
- Mounting height min 98.4mm



Applications:

- In building DAS systems
- Translucent radiator technology, ideal for areas with high visibility
- Ultra thin, only 4.3mm exposed under ceiling tile

All dimensions are in mm / inches

Issue: 1649

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

CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse Electronics, Inc. (Pulse) and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse is strictly forbidden.

For more information:

Pulse Worldwide Headquarters
12220 World Trade Drive
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



Description: DAS, Ultra Thin, Low Clearance Antenna**Series:** Clarity**PART NUMBER:** DASUTLC500NF**This document covers all product variants of the following product family:**

Pulse Part Number	Connector Type
DASUTLC500NF	N Female
DASUTLC500MD	4.1-9.5 Mini-DIN Female
DASUTLC5004310	4.3-10 DIN Female

Description: DAS, Ultra Thin, Low Clearance Antenna

Series: Clarity

PART NUMBER: DASUTLC500NF

ELECTRICAL SPECIFICATIONS

Frequency	608-960/1695-2200/2300-2700MHz
Nominal Impedance	50Ω
VSWR (608-960MHz)	2: 1
VSWR (1695-2700MHz)	2: 1
Average Peak Gain (608-960MHz)	4dBi
Average Peak Gain (1695-2200MHz)	6dBi
Average Peak Gain (2300-2700MHz)	6dBi
Efficiency (608-960MHz)	70%
Efficiency (1695-2200MHz)	65%
Efficiency (2300-2700MHz)	60%
Horizontal plane(th=45deg)	Omni
HPBW Vertical plane (608-960MHz)	80° Typ
HPBW Vertical plane (1695-2200MHz)	60° Typ
HPBW Vertical plane (2300-2700MHz)	60° Typ
Maximum power input	40W
PIM at 2x20W	<-155dBc

Description: DAS, Ultra Thin, Low Clearance Antenna

Series: Clarity

PART NUMBER: DASUTLC500NF

ELECTRICAL SPECIFICATIONS

Connector type	N-female, 4.1-9.5 Mini-DIN female or 4.3-10 DIN female
Cable type	Dia. 0.16" low loss, Low PIM, Plenum Rated
Cable length [Inches/mm]	19.7"/500mm

Description: DAS, Ultra Thin, Low Clearance Antenna

Series: Clarity

PART NUMBER: DASUTLC500NF

MECHANICAL SPECIFICATIONS

Plastic radome	UV Protected, UL94 V-0
Color	Translucent (clear)
Weight	900 g
Mounting	Ceiling
Mounting Hole [Inches / mm]	2 1/2"-2 3/4" / 64-70 mm

ENVIRONMENTAL SPECIFICATIONS

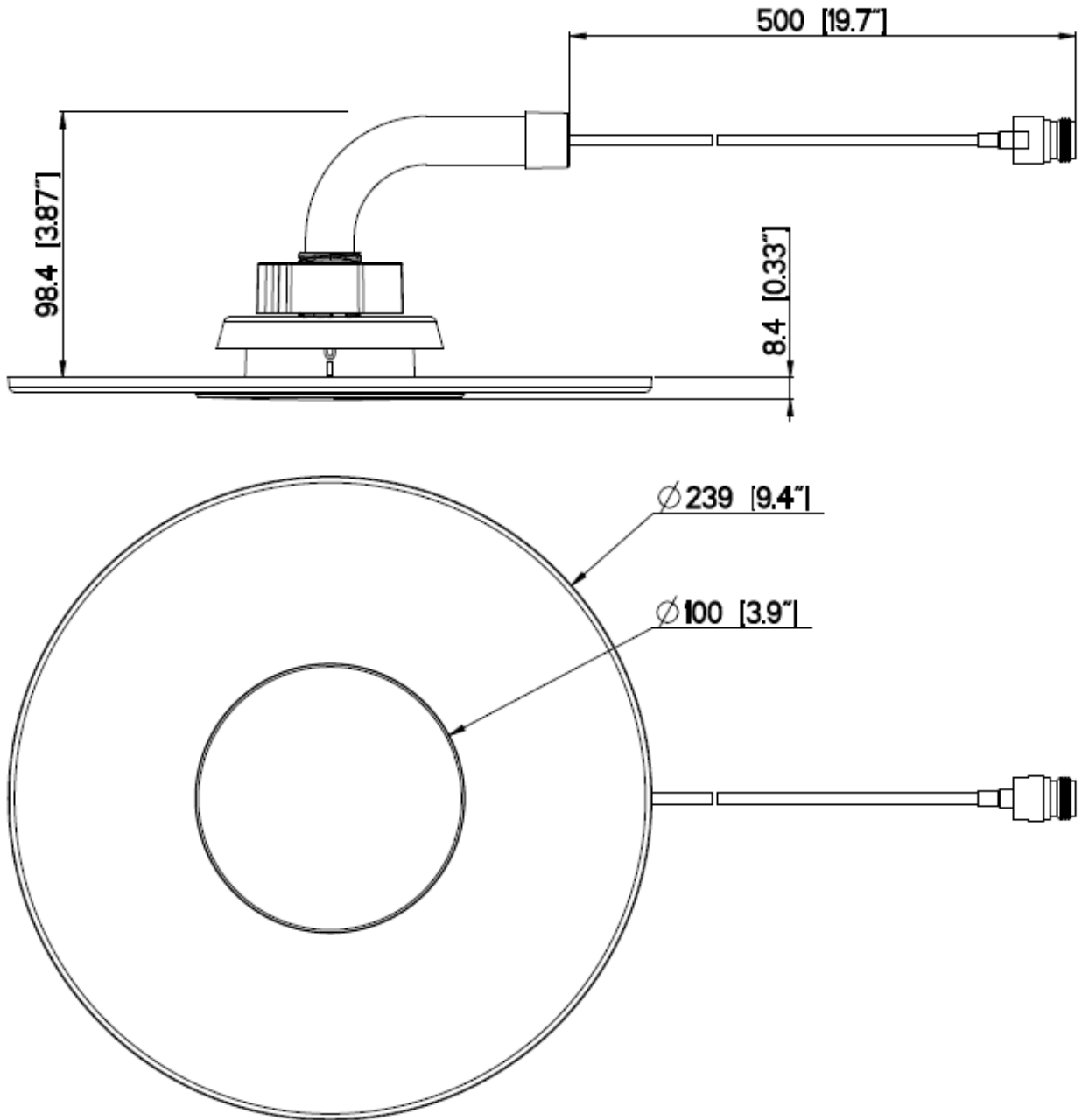
Operating temperature	-40~+85° C
-----------------------	------------

Description: DAS, Ultra Thin, Low Clearance Antenna

Series: Clarity

PART NUMBER: DASUTLC500NF

MECHANICAL DRAWING



Issue: 1649

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

CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse Electronics, Inc. (Pulse) and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse is strictly forbidden.

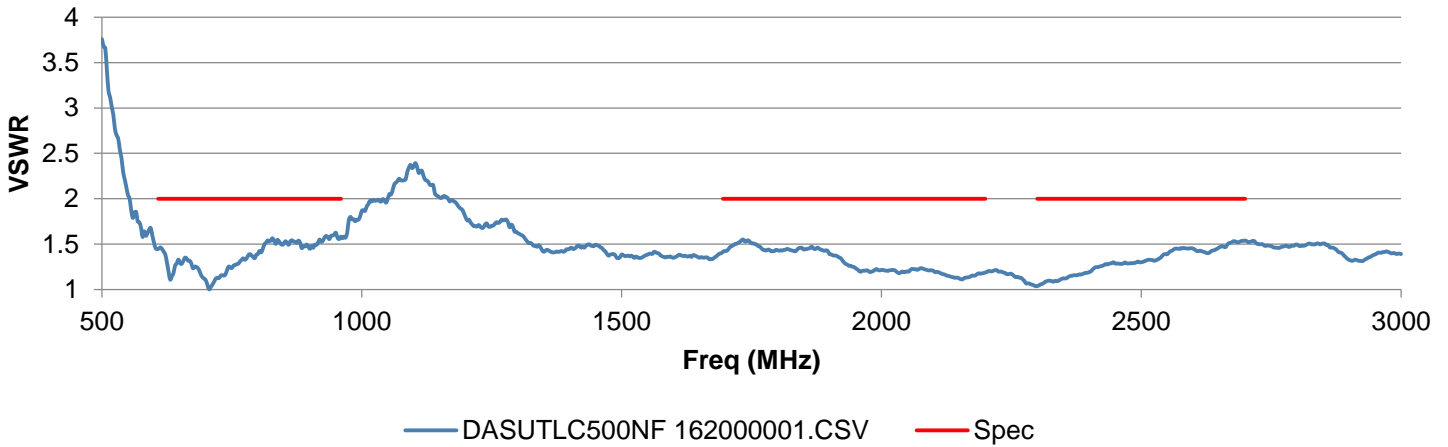
Description: DAS, Ultra Thin, Low Clearance Antenna

Series: Clarity

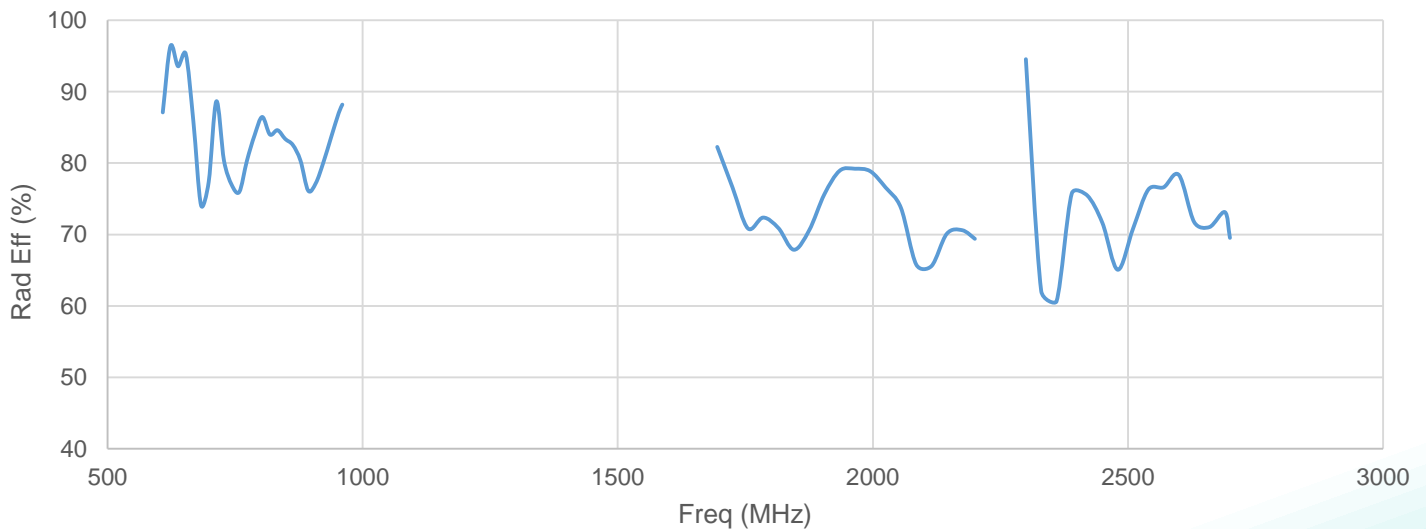
PART NUMBER: DASUTLC500NF

CHARTS

DASUTLC500NF, DASUTLC500MD and DASUTLC5004310 i.e. antennas



Total Efficiency



Issue: 1649

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

CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse Electronics, Inc. (Pulse) and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse is strictly forbidden.

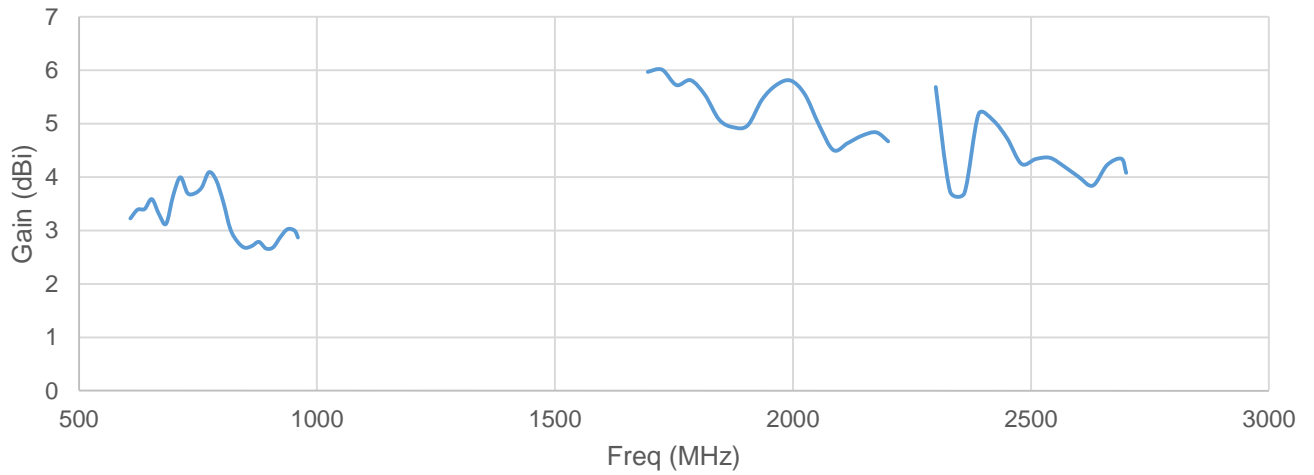
Description: DAS, Ultra Thin, Low Clearance Antenna

Series: Clarity

PART NUMBER: DASUTLC500NF

CHARTS

DASUTLC500NF, DASUTLC500MD and DASUTLC5004310 i.e. antennas



Description: DAS, Ultra Thin, Low Clearance Antenna

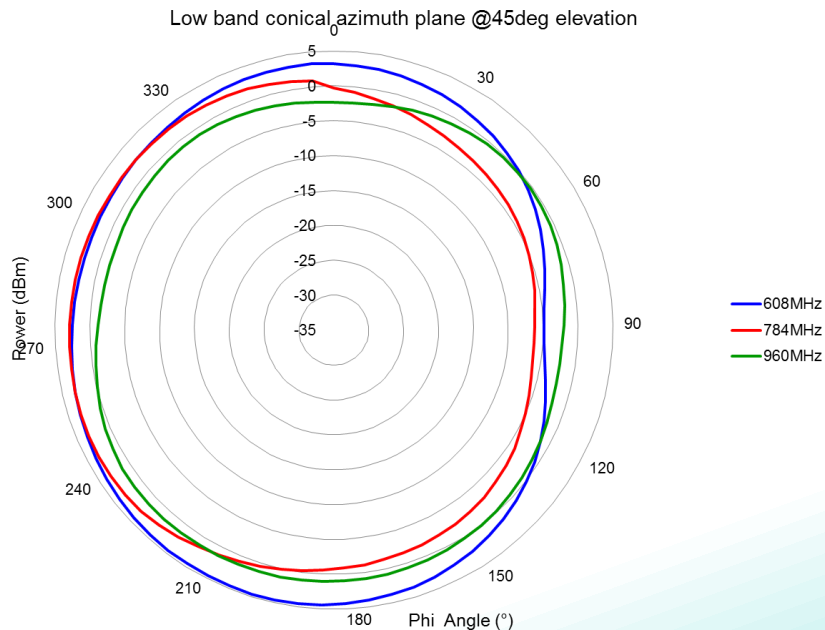
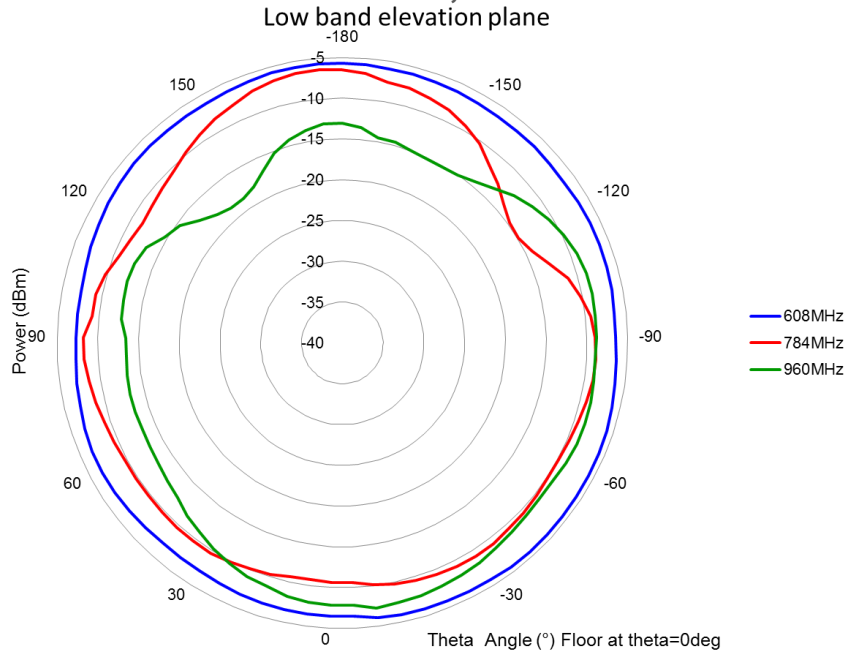
Series: Clarity

PART NUMBER: DASUTLC500NF

CHARTS

DASUTLC500NF, DASUTLC500MD and DASUTLC5004310 i.e. antennas

Radiation Pattern, 608-960MHz



Issue: 1649

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

CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse Electronics, Inc. (Pulse) and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse is strictly forbidden.

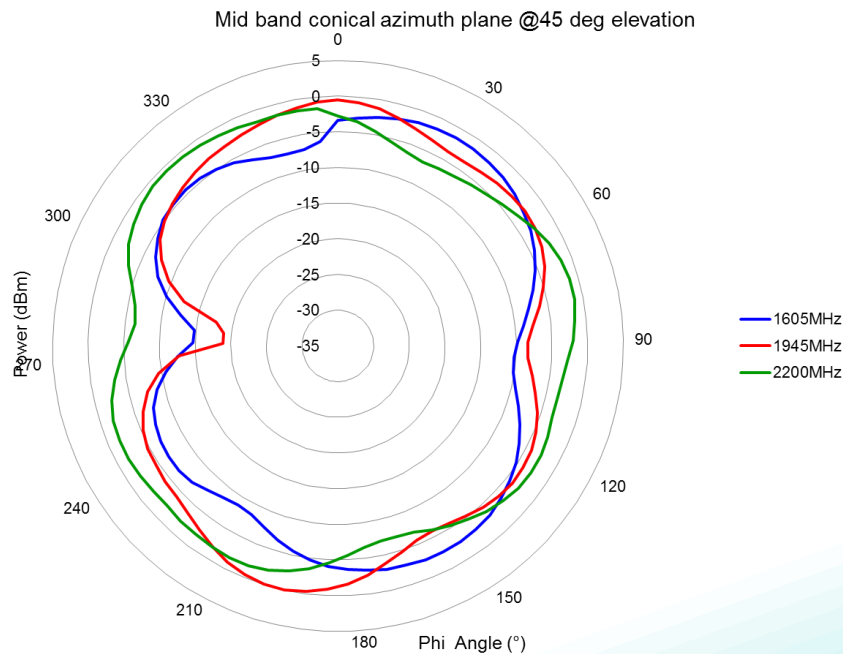
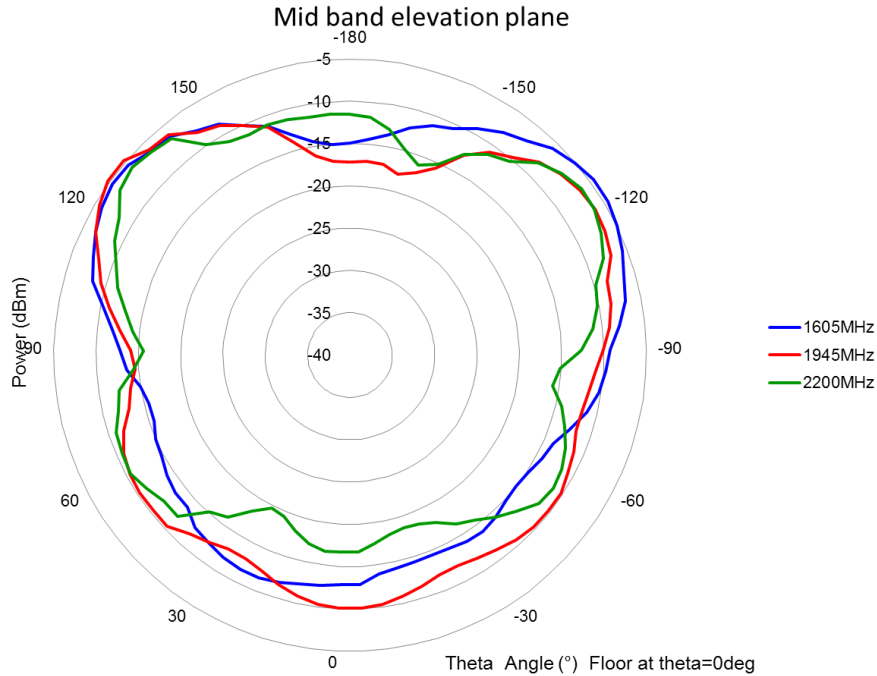
Description: DAS, Ultra Thin, Low Clearance Antenna

Series: Clarity

PART NUMBER: DASUTLC500NF

CHARTS

Radiation Pattern, 1695-2200MHz



Issue: 1649

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

CONFIDENTIAL AND PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Pulse Electronics, Inc. (Pulse) and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse is strictly forbidden.

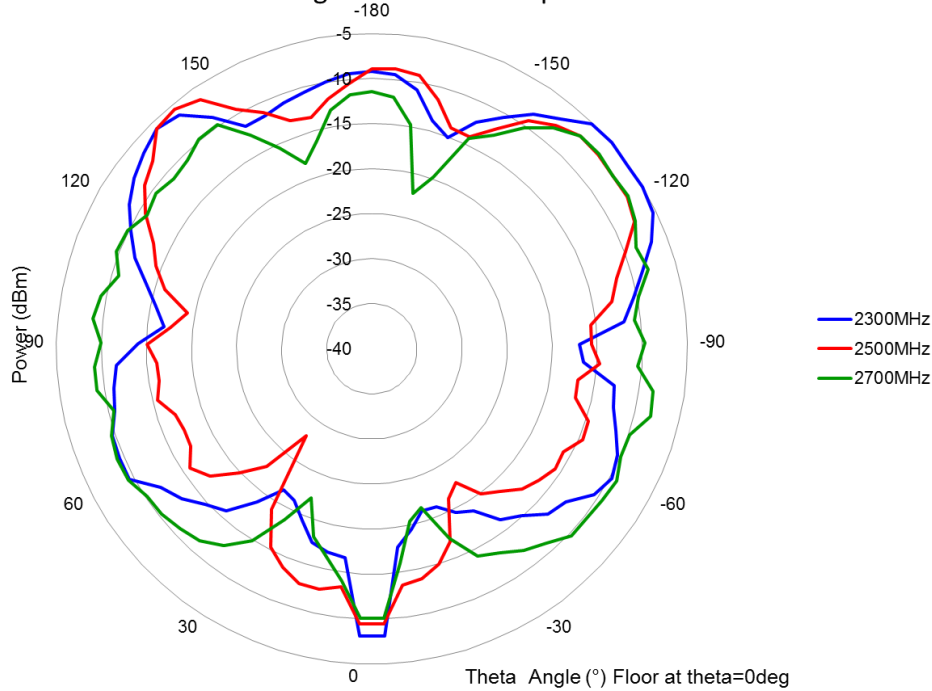
Description: DAS, Ultra Thin, Low Clearance Antenna

Series: Clarity

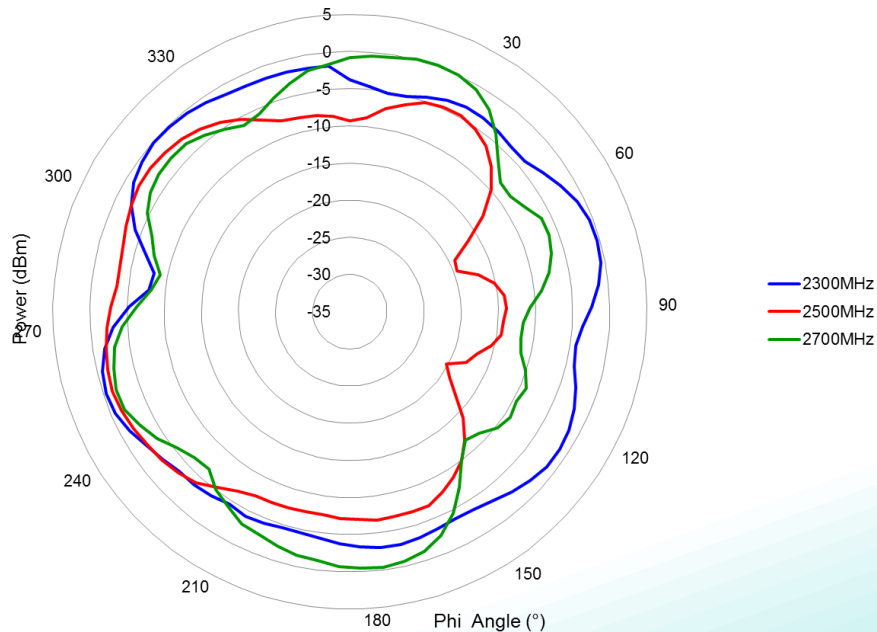
PART NUMBER: DASUTLC500NF

CHARTS

Radiation Pattern, 2300-2700MHz
High band elevation plane



High band conical azimuth plane @45deg elevation



Issue: 1649

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

CONFIDENTIAL AND PROPRIETARY INFORMATION

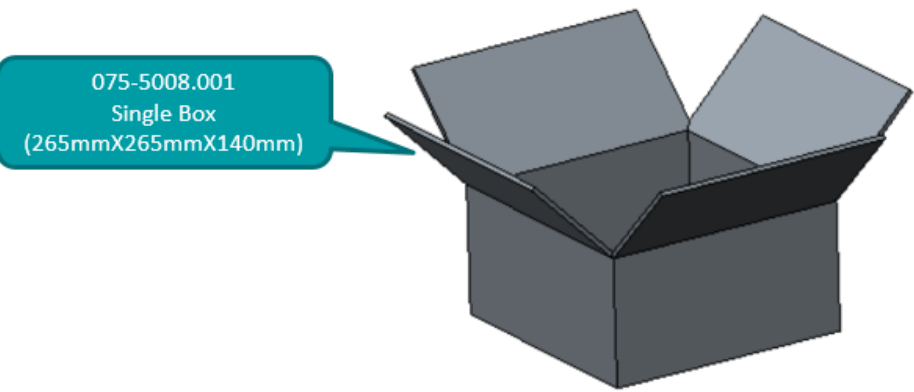
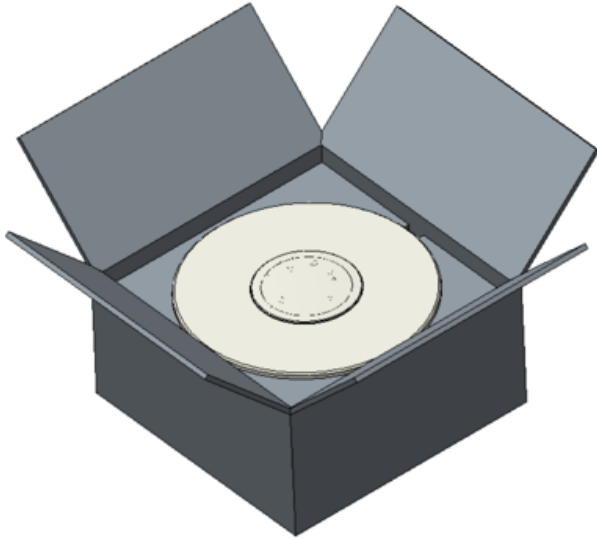
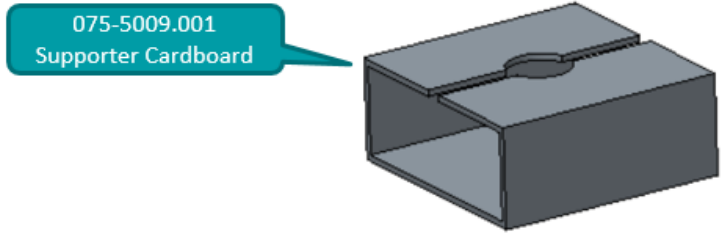
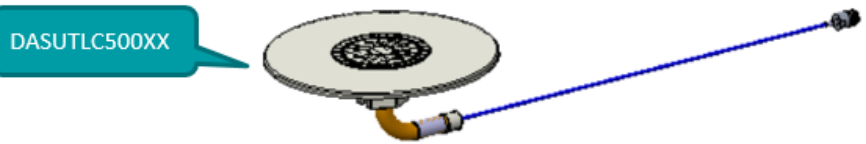
This document contains confidential and proprietary information of Pulse Electronics, Inc. (Pulse) and is protected by copyright, trade secret and other state and federal laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything it may describe. Reproduction, disclosure or use without specific written authorization of Pulse is strictly forbidden.

Description: DAS, Ultra Thin, Low Clearance Antenna

Series: Clarity

PART NUMBER: DASUTLC500NF

PACKAGING



P.S.: Antenna DASUTLC500NF should be packed by PE bag(075-4692.001) first.

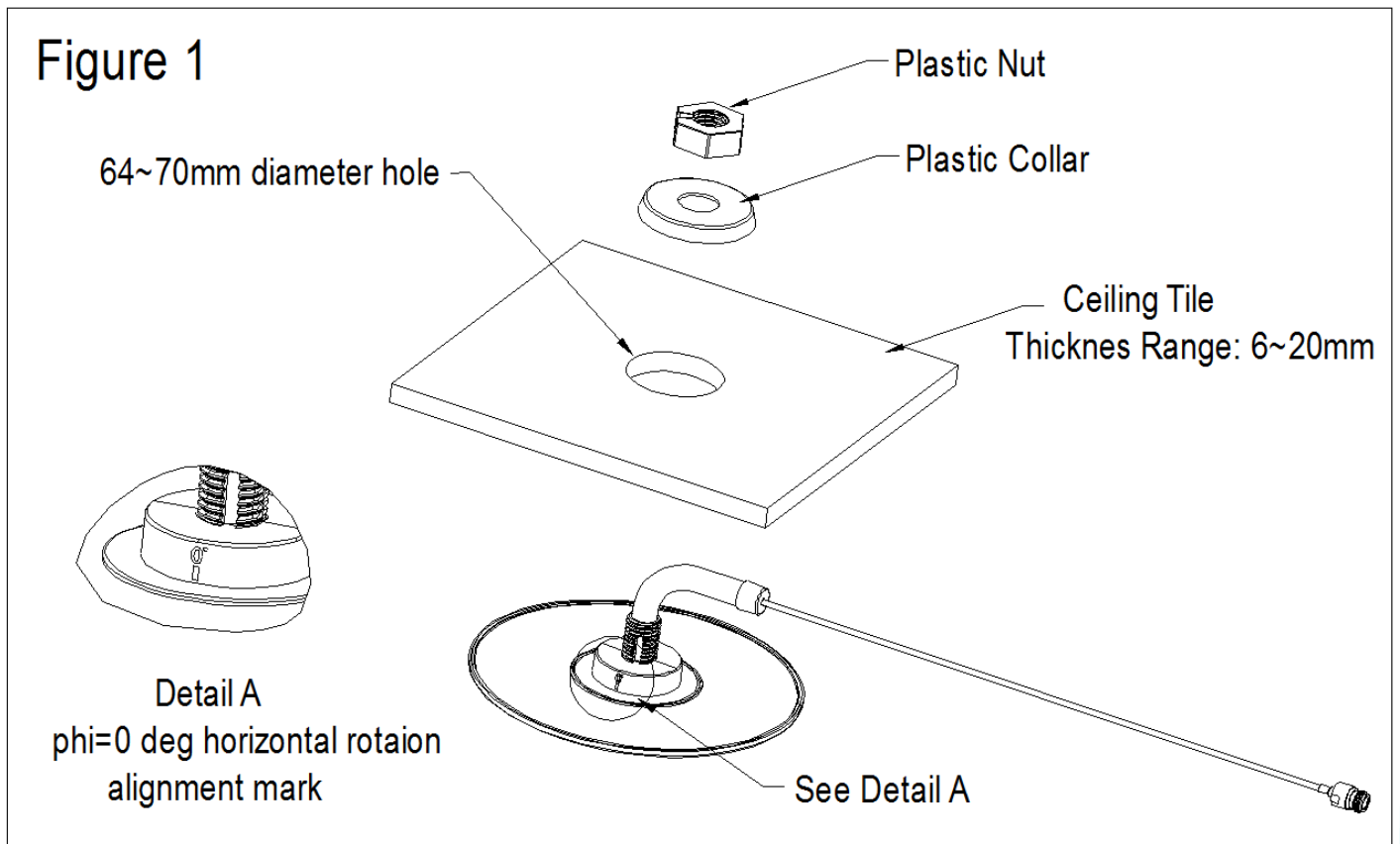
Description: DAS, Ultra Thin, Low Clearance Antenna

Series: Clarity

PART NUMBER: DASUTLC500NF

INSTALLATION INSTRUCTION

Drill or cut a hole 2.5-2.75 inches (64-70 mm) diameter at the center of the ceiling tile or at the desired location. Slide the antenna cable/connector assembly through the hole. Slide the Collar and Nut onto the cable. Turn the Nut, tightening the antenna against the ceiling tile. See Figure 1 and Figure 2



Description: DAS, Ultra Thin, Low Clearance Antenna

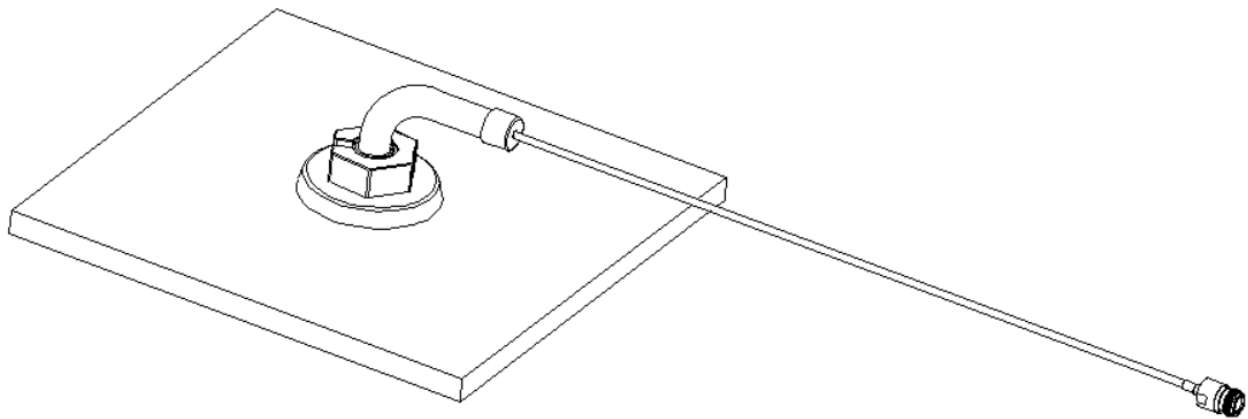
Series: Clarity

PART NUMBER: DASUTLC500NF

Figure 2

Note:

Fiberboard ceiling tile is soft; tighten the nut just enough to hold the antenna firmly in place.



ADDITIONAL NOTES:

Some customers may chose to take into consideration the antenna propagation orientation during their planning process. The Horizontal rotation alignment mark ($\Phi=0$ deg), along with data from iBwave file will support this.

For Optimum Performance, Metal ceiling rails need to be a minimum 200mm from the - antenna center as the antenna requires 400mm x 400mm space free of any metal.

Description: DAS, Ultra Thin, Low Clearance Antenna

Series: Clarity

PART NUMBER: DASUTLC500NF

CONNECTOR TORQUE REQUIREMENTS

N Female: Maximum Torque 6.2-9.74 in-lbs (0.7-1.1Nm)

Mini-DIN: Maximum torque 12-16 ft Lbs (17-22Nm)

4.3-10 DIN: Maximum torque 45-70 in-lbs (5-8Nm)