

Tucana 94^{GHz} Antenna

TU-WRT94-6-10

6 Beam Rotman Lens Antenna*

Overview

The TU-RT94-6-10 is a beam forming Rotman lens antenna optimised for use in the 92-96 GHz band. The assembly is milled out of high quality low loss materials to realise a waveguide module.

It can be supplied with a low loss switch matrix to enable switching and therefore electronic scanning.

This lens antenna overcomes the problems of scanning electronically at high frequencies where mechanical scanners are big and heavy and phase shifters are too large and lossy.

*This product is filed under EU Patent Application EP15159261 and is subject to an EU Export License.



Features

- Complete Waveguide Assembly
- Gain 14dB Typical
- Low Sidelobes
- Matching Switch and Horn Modules



No licence is granted under any patent or any patent rights of Arralis. Information furnished by Arralis is believed to be accurate. No responsibility is assumed by Arralis for its use, nor for any infringements on the rights of other parties that may result for the use of the information herein. All specification are subject to change without notice.



Specification Overview

*Option 01 (open waveguide elements) is baseline for other options unless otherwise specified.

Parameter	-01	-02	Units
Frequency Range	92 – 96	92 – 96	GHz
Angular Range	±20	±20	Degrees
No of Beams	6	6	
Scan Angle Step	8	8	Degrees
HPBW	10	10	Degrees
Lens Loss	< 3	< 3	dB
Gain	14	21	dB
Dimensions	85 x 87 x 23	110 x 87 x 23	mm
Operating Temperature	-10 to +40	-10 to +40	°C

Options

- | | |
|---|---|
| 01 Open waveguide antenna elements | 04 Gold-plated construction |
| 02 Integrated horn antennas | *all options can be combined except -01 and -02 |
| 03 Waveguide switch module | |

Measured Performance Data Gain (Option -01)

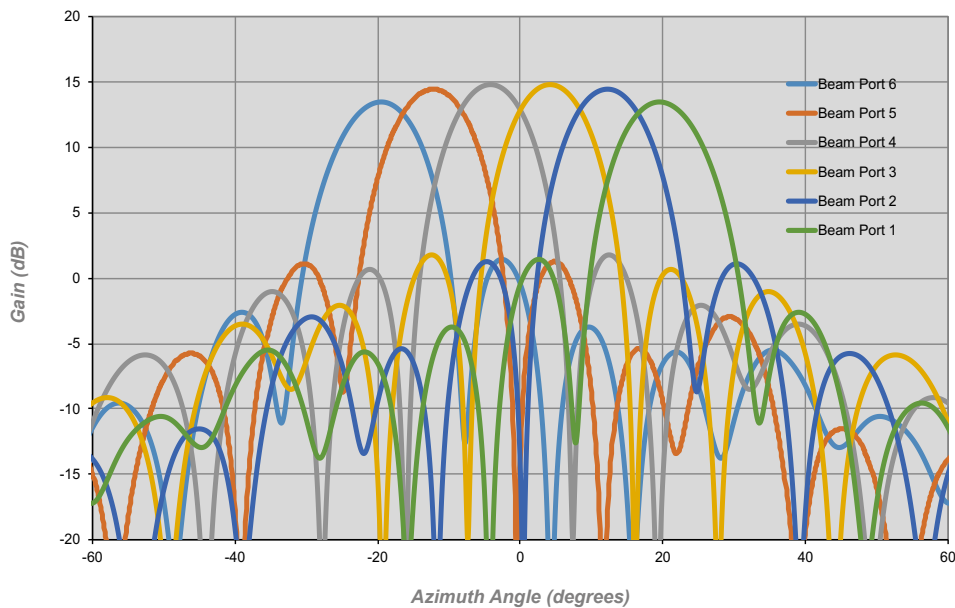
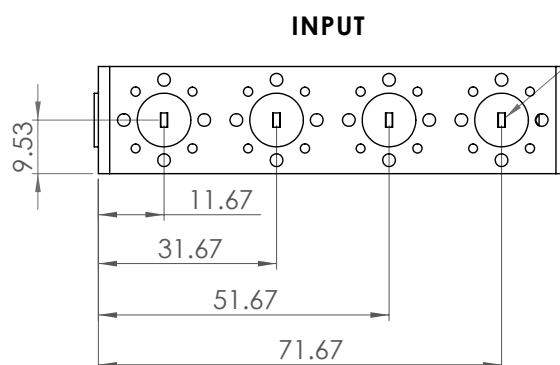
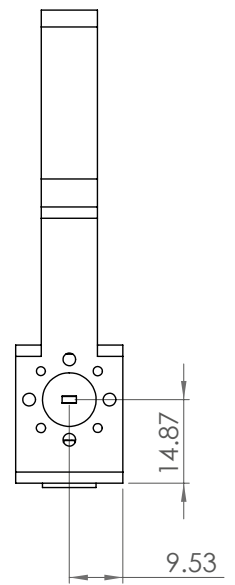
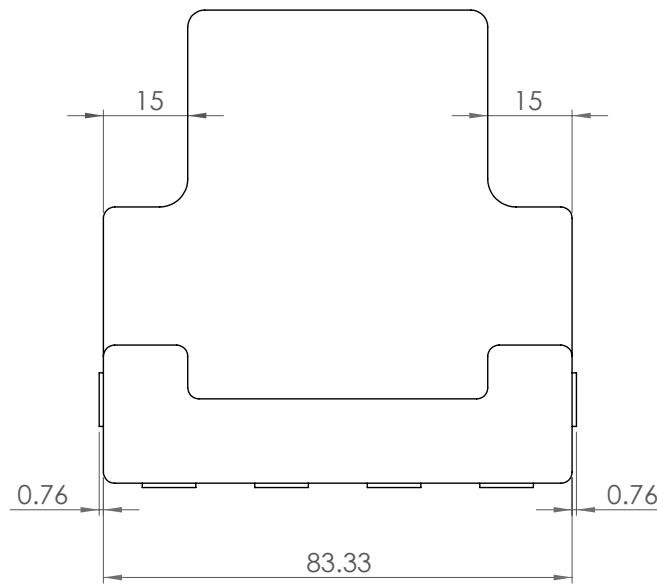
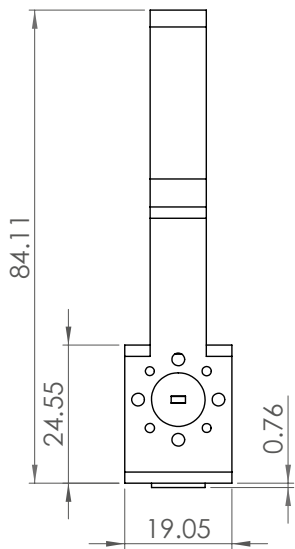
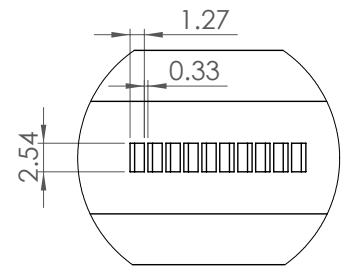
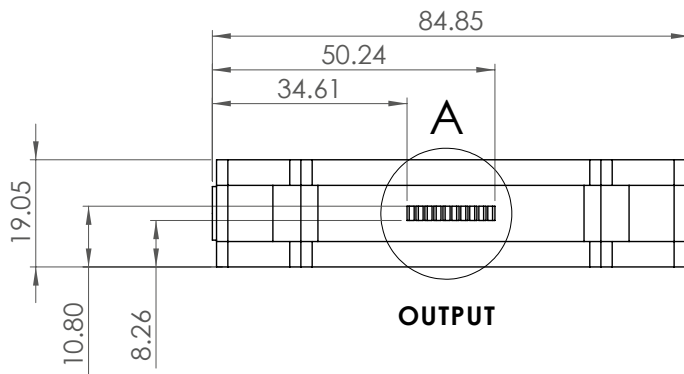


Figure 1
TU-WRT94-6-10
Rotman Gain



Outline Drawing



WR10 WAVEGUIDE
UG387/U-M FLANGE
(QTY 6)



©2016 Arralis Ltd. All rights reserved. Trademarks and registered trademarks are the property of their respective owners.

Arralis, Tierney Building UL, Castletroy, Limerick V94NYD3, Ireland (IRL). Tel: +353 61 748 264

**Arralis, ECIT, Northern Ireland Science Park, Queen's Road, Queen's Island, Belfast BT3 9DT,
United Kingdom (UK). Tel: +44 28 9045 4021**

Email: info@arralis.com **Web:** www.arralis.com

