



Measurement Results Sheet
Report # 09-11495-4-19 Iss.01

Authorised by:
Technical
Director

SUMMARY

Polar Plotting of Long Reach Units - MMTR Repeater

Test date: 3rd September 2019.

Test equipment for measurement:

E213 Rohde & Schwarz Log-periodic Antenna

E285 Agilent Receiver

E131 Agilent Signal Generator

E312 MI Power Head

E392 MI Power Meter

TMS814 Anritsu Calibration dipole

Test method: 3.5m test range

Test Standard: Customer Test Plan

Test Engineers: Roger Ray, Ben Hodges

Test items: Control Panel, Pest Connect Radar, Rat Trap, Little Pete, Repeater

Sample plan: 3 frequencies, horizontal and vertical polarisation

Customer: Sabre Technology (Hull) Ltd

Address: Lakeside House, Woodmansey Business Park, Plaxton Bridge Road, Beverley, East
Riding of Yorkshire, HU17 0RT.

Equipment details, and abbreviations on plots:

MMTR Repeater

Units mounted as photographed.

RESULTS

Measurement made in 5 degree increments, over 360 degrees azimuth.

Polar Plots:

Plots are orientated as per photograph. The zero degree straight on position on the table in the chamber, is at the top of the plot, at the 12 O'clock position. Plotting is anti-clockwise, 5dB per division (ring).

The frequency and measurement is shown in the title. Measurement antenna polarisation in the Key

Measurements:

(0dbm referenced to an isotropic antenna).



Antenna Gain

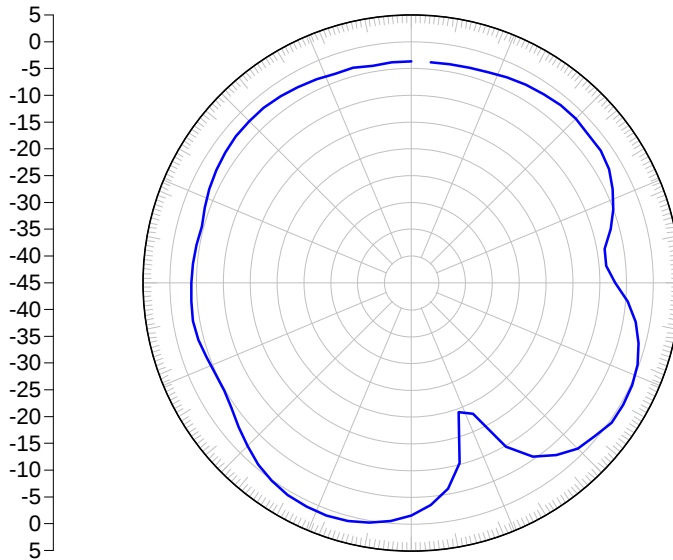
MMTR (Repeater)

868.5MHz	921.25 MHz	922.5 MHz
1.26 dBi	0.30 dBi	1.28 dBi

Polar Plots

J11495-2 MMTR 868.5

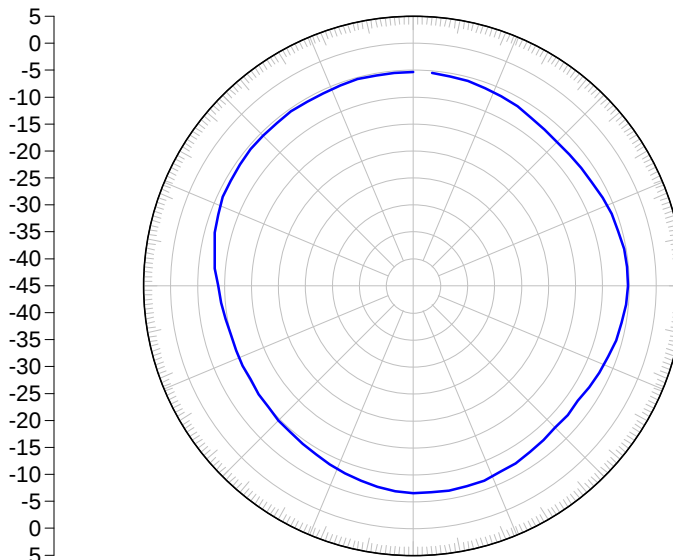
Horiz



J11495-2 MMTR 868.5.spt

J11495-2 MMTR 868.5

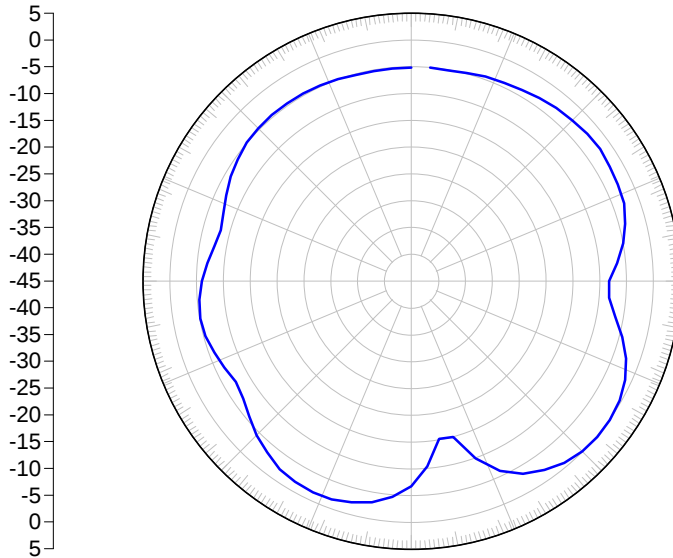
Vert



J11495-2 MMTR 868.5V.spt

J11495-2 MMTR 921.25MHz

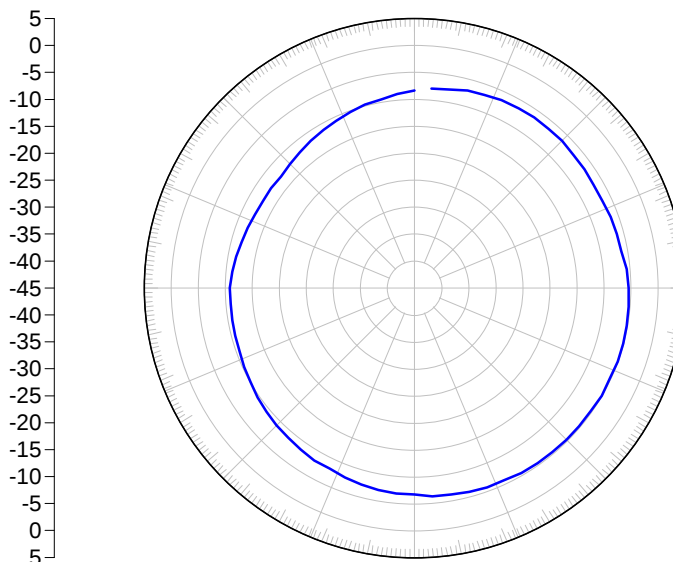
Horiz



J11495-2 MMTR 921.25MHz.spt

J11495-2 MMTR 921.25MHz

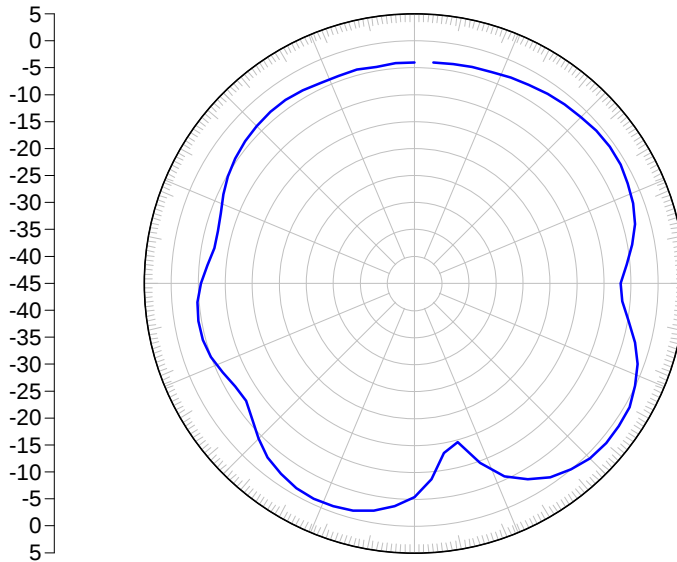
Vert



J11495-2 MMTR 921.25MHzV.spt

J11495-2 MMTR 922.5MHz

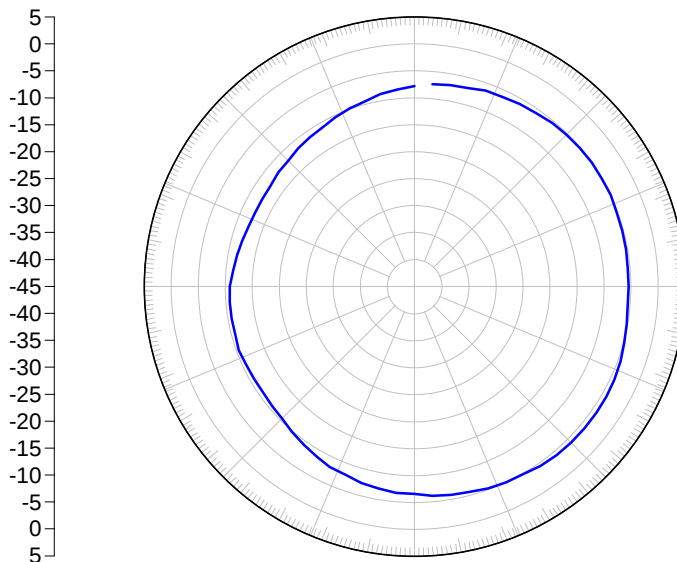
Horiz



J11495-2 MMTR 922.5MHz.spt

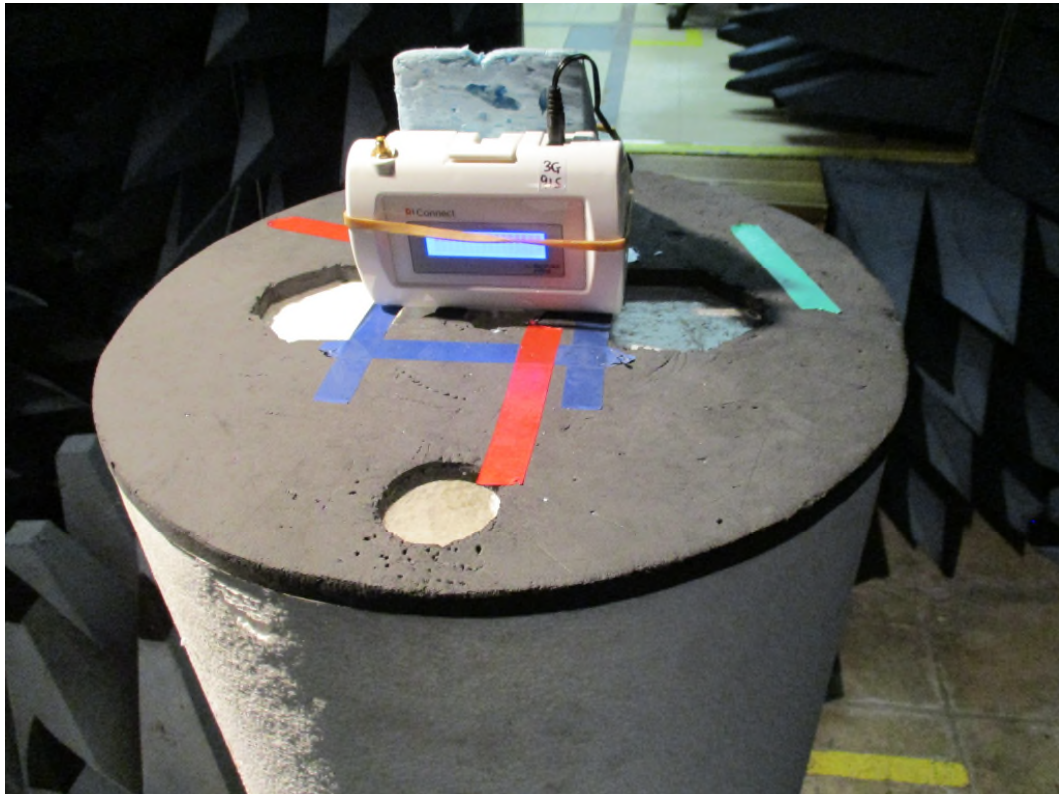
J11495-2 MMTR 922.5MHz

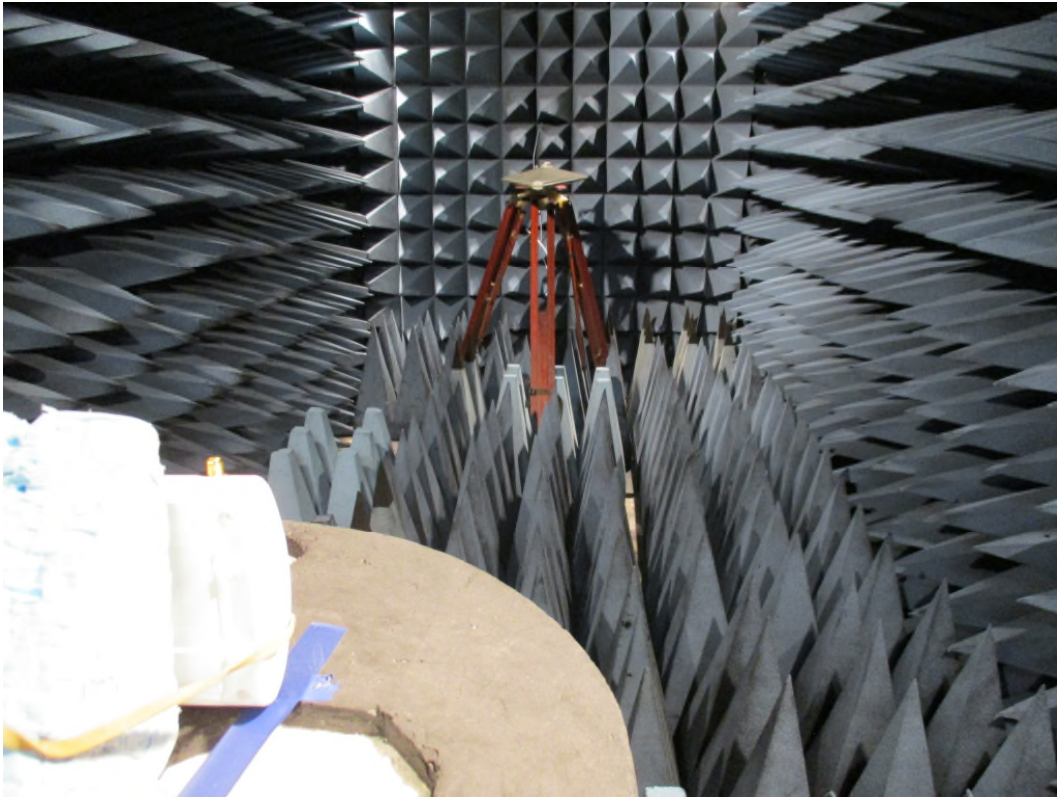
vert



J11495-2 MMTR 922.5MHzV.spt

Photographs of test setup for multiple units





View to measurement antenna

This report relates only to the units tested as identified by unique serial numbers and in the condition at the time tested. It does not relate to any other similar equipment and performance of the product before or after the test cannot be guaranteed. Any compliance statements are made reliant on the modes of operation as instructed to us by the manufacturer based on their specific knowledge of the application and functionality of the unit tested. Statements of compliance, where measurements were made, do not include the measurement uncertainty. The measurement uncertainty, where stated, is the expanded uncertainty based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

END