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Document Title:**RMP400S Antenna Performance****Summary / Scope:**

This document provides the details required by Type Approval Authorities to process the Radio Type Approval application for RMP400S.

Reason for Issue / Nature of Change:

First issue.

Distribution

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1 Antenna Design

The RMP400S antenna is a copper structure on the flexi-rigid PCB. A view of the layout design is given in Figure 1. The drive between the radio transceiver and the antenna consists of 50-Ohm microstrip transmission line. The radiating section is a slot antenna. These are inherently broad band and are relatively insensitive to de-tuning.

The slot antenna is 66mm in total length.

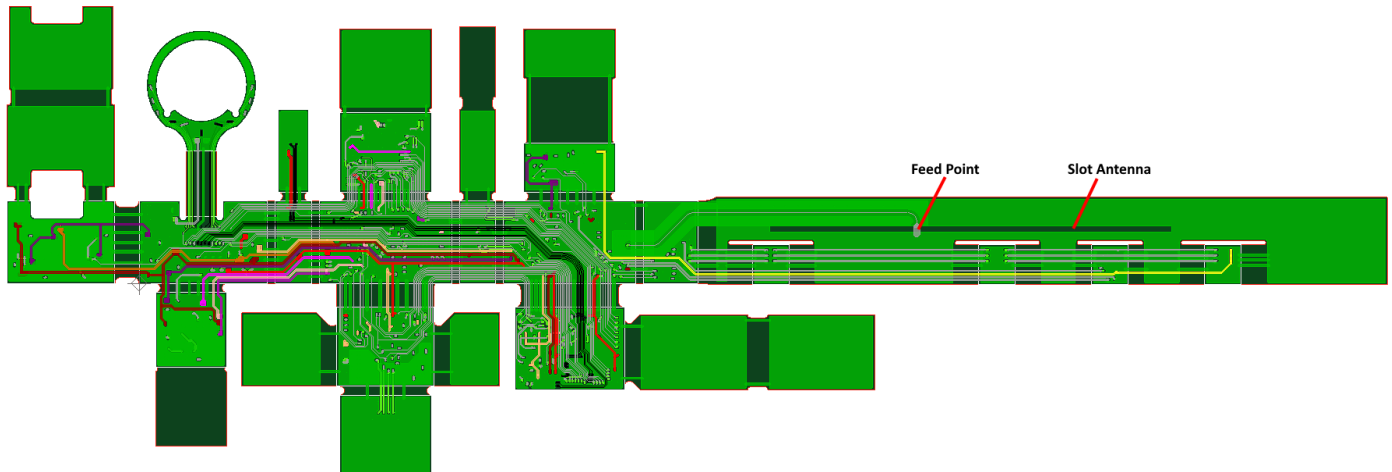
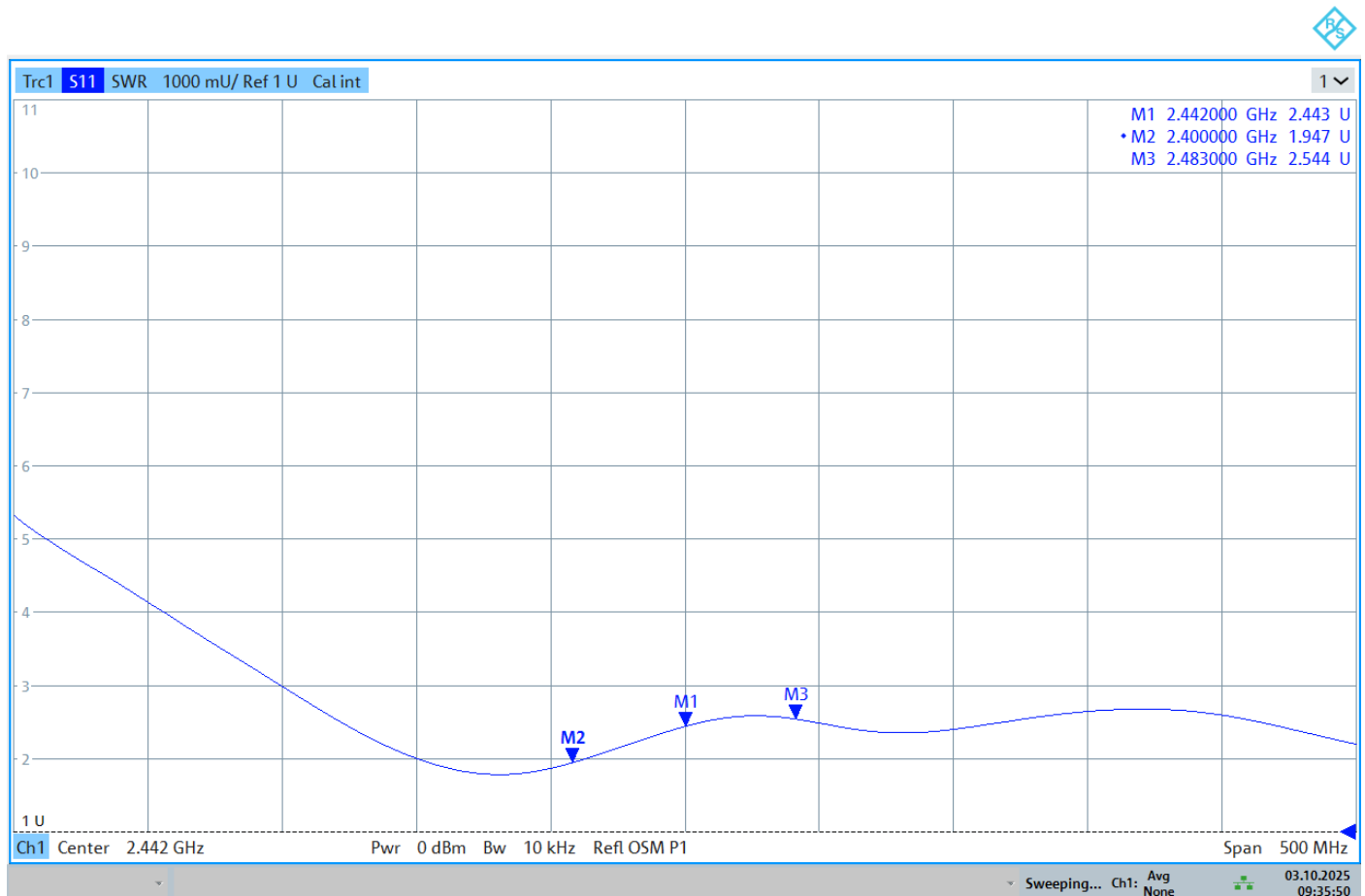


Figure 1. RMP400S PCB Antenna

2 Antenna Electrical Characteristics

Below is a VSWR plot of the antenna when it is fitted within a probe.



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Figure 2. Antenna VSWR

Below is a polar plot showing the antenna gain around 360 degrees in the horizontal plane. The gain values for the RMP400S antenna are relative to the reference antenna (3.0 dBd).

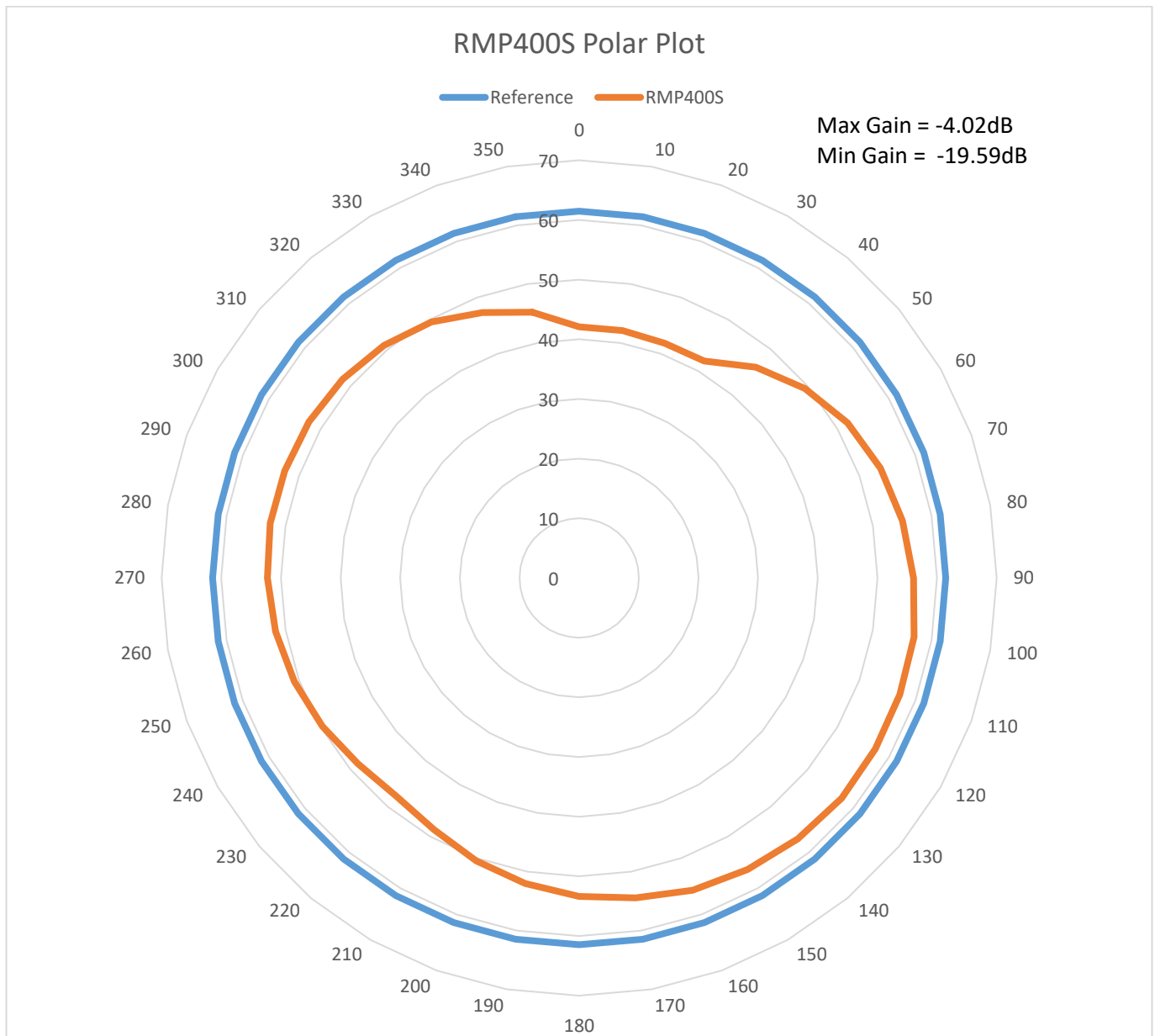


Figure 3. Antenna directional gain plot

The antenna has a peak gain of -4.87dBi.

3 Test Equipment

R&S ESR 26 EMI Test Receiver - Serial Number: RUK21686

R&S ZNLE6 Vector Network Analyser – Serial Number 1323.0012K56-101490-GL

Teseq Bilog antenna : Model CBL 6144 (26MHz-3GHz) - Serial Number 24722

MTP Small Turntable

2.4GHz $\lambda/4$ Reference Antenna

RF Anechoic Chamber