List of corrections

1. A list of abbreviations is incorporated in the revised thesis after the contents.

2. p.2 : **2nd paragraph, line 1** : The grammatical error has been corrected. a shared aperture antenna.

3. p.4 : **line 3** : "high cross polarization" has been replaced by "**low cross polarization discrimination**".

4. p.26 : **Fig. 2.1 is re-allocated** at the bottom of the page after the referring sentence.

5. p.33 : **Figure caption of Fig. 2.4** : stub length = 7.3mm added.

6. p.40 : **Figure caption of Fig. 2.11** : stub length = 7.6mm added.

7. p.42 : **Figure caption of Fig. 2.15** : Parameters are as mentioned in Fig. 2.11.

8. p.42 : **One sentence is modified.** This deviation is due to the under etching of tuning stubs by about 0.3mm.

9. p.43 : **Figure caption of Fig. 2.16** : Parameters are as mentioned in Fig. 2.11.

10. p.47 : **Table 2.5** is newly introduced.

11. p.67 : **Figure caption of Fig. 3.13** : The realized dimensions of the prototype are provided. \(L = W = 78.3 \text{ mm}, \ a = b = 28.5 \text{ mm}\).

12. p.69 : **Two sentences are added in section 3.4.3.** The fabricated patch dimensions are \(L = W = 78.3 \text{ mm}, \ a = b = 28.5 \text{ mm}\), and stub lengths are reduced by about 1 mm. The measured results with the simulation with the realized dimension.

13. p.71 : **Last paragraph** : Last two sentences, equations (3.1) and (3.2) are added.

14. p.73 : **Table 3.1** : XPD (dB) columns are newly introduced.

15. p.74 : **Table 3.2** is added in the revised thesis.

16. p.82 : **Fig. 4.2 is re-allocated** at the bottom of the page after the referring sentence.
17. p.86 : **Figure caption of Fig. 4.6** : and probe depth $h = 1.75$mm. added.

18. p.92 : **Figure caption of Fig. 4.11** : the following sentence is added. Depths of the probes are $h = 1.65$mm.

19. p.92 : **Fig. 4.12** has been updated with newly measured data and in the **figure caption** : Parameters are as mentioned in **Fig. 4.11**.

20. p.93 : The error in fabrication is mentioned. Depths of the fabricated probes are about $0.1$mm smaller than the depths considered in simulation. The next two sentences of the same paragraph (1st paragraph of section 4.6.2) are modified to incorporate the presently measured results.

21. p.94 : **Figure caption Fig. 4.13** : Parameters are as mentioned in **Fig. 4.11**.

22. p.95 : **Figure caption Fig. 4.14** : Parameters are as mentioned in **Fig. 4.11**.

23. p.96 : **Table 4.2** : Only the Port-1 (LHCP) data are presented and XPD (dB) column is added.

24. p.97 : **Table 4.3** : Only the Port-2 (RHCP) data are presented and XPD (dB) column is added.

25. p.98 : **Table 4.4** is newly included in the revised dissertation.

26. p.102 : the 2nd paragraph (in the earlier version of the thesis) has been split into two smaller paragraphs in this revised dissertation.

27. p.110 : The **2nd sentence in the last paragraph is modified**. Simulated reflection values are examined in **Fig. 5.6**.

28. p.111 : **Fig 5.6** : the Y-axis title has been changed to “Normalized Reflection (dB)”.

29. p.116 : A **sentence is corrected with revised data** : A slight shift of the resonance ($\approx 20$ MHz) towards the lower frequency is revealed.

30. p.117 : **Fig. 5.12** is updated with the measured data using the 2nd prototype.

31. p.119 : **Table 5.1** is revised with the 2nd prototype data.
32. p.122 : **Two sentences are corrected with revised data** : The measured impedance bandwidths \((S_{11} < -10\text{dB})\) of the antenna are better than \(\approx 11.6\% \ (1.8-2.026 \text{ GHz})\) for port-1 and \(\approx 11.6\% \ (1.8-2.022 \text{ GHz})\) for port-2. The achieved inter-port isolation is over 20dB.

33. p.123 : **Fig. 5.16** is modified with the measured data using the 2nd prototype.

34. p.124 : **Table 5.5** is updated with the measured data of the 2nd prototype.

35. p.127 : **Fig. 5.20** in this revised dissertation is updated with the measured data using the 2nd prototype.

36. p.129 : **A sentence is corrected with revised data** : The side lobe is \(\approx 16.9\text{dB}\) below the main peak.

37. p.131 : **Table 5.6** : In the last column \(\text{XPD(dB)}\) is written in place of "Cross Pol. (dB)" and its values are made positive.

38. p.131 : **Table 5.7** : The \(\text{XPD (dB)}\) columns is added.

39. p.133 : **Table 5.8** is newly introduced in the revised thesis.

40. p.149 : **Figure caption of Fig. 6.10** : The fabricated dimensions of the prototype are provided. \(L_1 = 24.8\text{mm}, \ W_1 = 13.4\text{mm}, \ L_2 = 19.9\text{mm}, \ W_2 = 13.8\text{mm}, \) ground plane = \(49\text{mm x 40mm}, \) feed line width = 2.43mm, and \(D_1 + D_2 = 0.98 \text{mm}.\)

41. p.149 : **One sentence is added** : The realized patch dimensions are \(L_1 = 24.8\text{mm}, \ W_1 = 13.4\text{mm}, \ L_2 = 19.9\text{mm}, \ W_2 = 13.8\text{mm}, \) and the gap between the patches is 0.98mm.

42. p.152 : **Table 6.2** is newly included in the revised dissertation.

43. Reply to the quires of the First Examiner is added in the end of the thesis.