

## Dipole impedance and return loss Validation

| Frequency (MHz) | Return Loss (dB) | Impedance ( $\Omega + j\Omega$ ) | Date       | Return Loss (dB) | Impedance ( $\Omega - j\Omega$ ) | Errors (dB%) | Errors ( $\Omega$ %) | Date       |
|-----------------|------------------|----------------------------------|------------|------------------|----------------------------------|--------------|----------------------|------------|
| 2450            | -21.39           | 47.82 $\Omega$ +5.51j $\Omega$   | 2022.11.25 | -23.57           | 46.33 $\Omega$ +3.07j $\Omega$   | 10.19        | -3.12                | 2023.11.25 |
| 5200            | -22.83           | 55.07 $\Omega$ +1.87j $\Omega$   | 2022.11.25 | -23.01           | 53.90 $\Omega$ +2.08j $\Omega$   | 0.79         | -2.12                | 2023.11.25 |
| 5400            | -26.37           | 50.23 $\Omega$ +0.91j $\Omega$   | 2022.11.25 | -26.79           | 50.71 $\Omega$ +7.19j $\Omega$   | 1.59         | 0.96                 | 2023.11.25 |
| 5600            | -29.30           | 50.77 $\Omega$ +7.90j $\Omega$   | 2022.11.25 | -26.09           | 51.37 $\Omega$ +0.88j $\Omega$   | -10.96       | 1.18                 | 2023.11.25 |
| 5800            | -26.09           | 42.39 $\Omega$ +2.35j $\Omega$   | 2022.11.25 | -27.84           | 40.99 $\Omega$ +3.96j $\Omega$   | 6.71         | -3.30                | 2023.11.25 |

Remark:

Referring to KDB865664D01, if dipoles are verified in retur loss (<-20dBm,within 20% of prior calibration), and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.