電波迴響室之場均勻度與等向性之分析研究

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摘 要

近年來，電波迴響室（RC）技術受到矚目與歡迎，也因此逐漸成為開放測試場與半電波無響室（Semi-anechoic Chamber）的替代測試場地。然而，電波迴響室能被全世界接受不單只是因為較低的成本，最重要的是它能在輻射耐受測試（EMS）時，產生一個統計上等效的等向性和均勻，以及隨機極化的電磁測試環境。尤其是當電子裝置具有複雜的電磁干擾輻射場型時，電波迴響室測試法被認為將會比傳統的開放測試場或電波無響室測試法得到更嚴謹且精確的量測結果。 本文主要是在研究和探討，藉著增加迴旋扇葉的取樣數量，即縮小取樣角度，接著藉著兩支迴旋扇葉作同時旋轉相同角度，以及不同比例旋轉角度的組合，對電波迴響室測試區域內的等向性和場均勻度有何影響。再利用電磁數值模擬和實際量測做比對，進而調整激發天線的位置，讓原先無法滿足場均勻度要求的旋轉角度組合，也能在調整後達到預期的效果。

關鍵詞 : 電波迴響室 ; 場強均勻度 ; 等向性 ; 隨機極化 ; 迴旋扇葉

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