7.1 Configure Crystal Trim

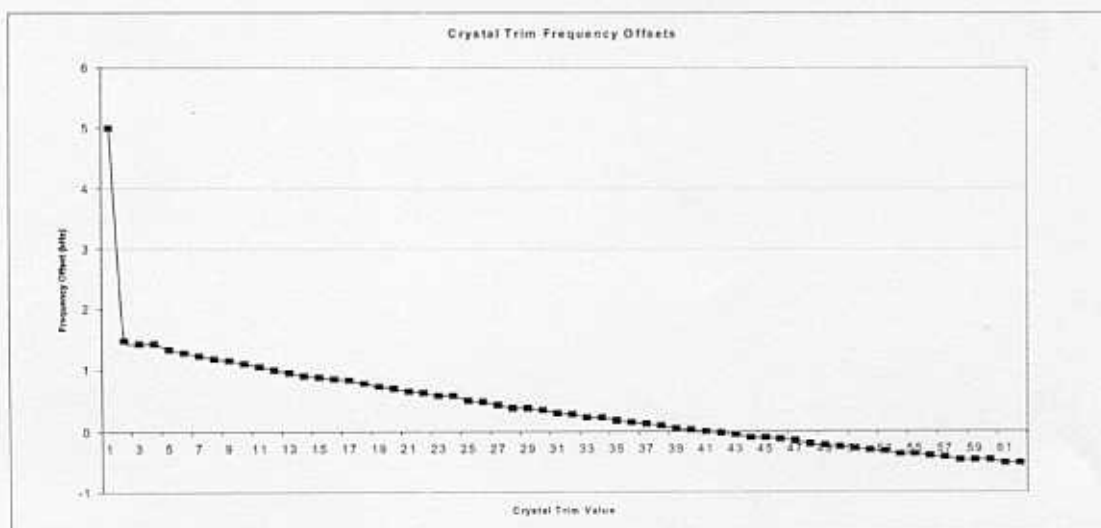| Test	Comment
Description	Trim out the initial tolerance of the crystal. This is an absolute requirement when testing BlueCore modules. Once determined, the trim value is written to the PS key.
Equipment Requirements	Spectrum analyser capable of measuring at the 2.4GHz band. The following settings are used: • Video band width (VBW) 10kHz • Resolution band width (RBW) 10kHz • Span 1MHz • Sweep time 27.5ms Personal computer (PC) with UART/USB links to device under test.
Method	Set-up spectrum analyser Open host connection to BlueCore module Use CFG_XTAL_FTRIM to set the trim value to 0 (zero) Start TXSTART at frequency 2441MHz. This is the wanted frequency Read initial frequency from the spectrum analyser (use "peak search"). Determine the frequency offset.
Software Requirement	Host side software with CSR's manufacturer's extension command set implemented
Coverage	Pullability of the crystal Resolution of the capacitor digital to analogue converter (DAC) Tank capacitors fitting Crystal circuit Crystal drive circuit fault PS key PSKEY_ANA_FREQ (0x01fe)
Test Times	Brute force approach – 12.34s with a SD of 0.076s Search approach – 5.13s with a SD of 0.056s

Table 7.1: Configure Crystal Trim Test

Figure 7.1: Typical Crystal Trim Test Output For Module

BlueCore™ Production Test Guidelines and Generic Module Test Plan