7. Channel Spacing

7.1 Test purpose

To verify that when MS is allocated a channel, the channel space is 200KHz to avoid the adjacent channel interference.

7.2 Conformance requirement

The adjacent channel space of above and below shall be 200KHz.

- 7.3 Method of measurement
- 7.3.1 Initial conditions

A call is set up by the SS according to the generic call set up procedure on a channel in the Mid ARFCN range.

The SS commands the MS to loop back its channel decoder output to channel encoder input.

The SS sends Standard Test Signal C1.

The SS sets the MS to operate at its maximum output power.

7.3.2 Procedure

(a) Initially the test antenna is closely coupled to the MS and any frequency produced by the MS is detected by the test antenna and receiver in the range 30MHz to 2GHz

NOTE: This is a qualitative step to identify the frequencies which are to be measured in subsequent steps.

- (b) The settings of tuned spectrum analyzer are set as follows:
 - Zero frequency scan
 - Resolution bandwidth: 30KHz

- Video bandwidth: 30KHz
- (c) When MS is allocated a channel, the SS sends Standard Test Signal C1 and MS responses and performs frequency hopping mode to establish an ARFCN channel.

Frequency hopping mode includes tree channels in low ARFCN, middle ARFCN and high ARFCN respectively.

By tuning the spectrum analyzer center frequency to the measurement frequencies and measuring the following frequencies:

900MHz band:

 $(FT+n \times 0.2MHz)-[FT+(n-1)\times 0.2MHz]= 0.2MHz$

 $1 \le n \le 124$

1800MHz band:

 $[FT+(n-511)\times 0.2MHz]-[FT+(n-512)\times 0.2MHz]=0.2MHz$ 512 \leq n \leq 885

- Note: FT is equal to the hop pattern center frequency of ARFCN in the low Mid and High ARFCN ranges respectively.
- 7.4 Test requirement

Measurement of any frequencies in 900MHz band shall meet the following table:

Frequency range	Channel space	Channel number	
TX: 890MHz~915MHz	200KHz	1 ≤n ≤124	
RX:935MHz~960MHz	200KHz	1 ≤n ≤124	
(FT+n×0.2MHz)–[FT+(n–1)×0.2MHz]= 200KHz			

Measurement of any frequencies in 1800MHz band shall meet the following table:

Frequency range	Channel space	Channel number	
TX:1710MHz~1785MHz	200KHz	512 ≤n ≤885	
RX:1805MHz~1880MHz	200KHz	512 ≤n ≤885	
[FT+(n-511)×0.2MHz]-[FT+(n-512)×0.2MHz]= 200kHz			