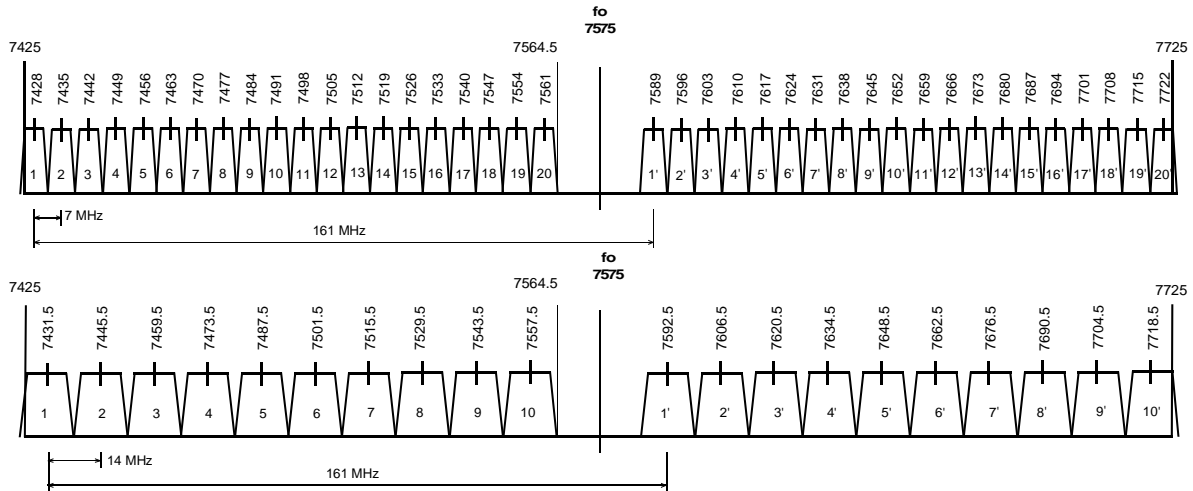


THE 7.5 GHz BAND (7425 - 7725 MHz)

RF CHANNEL ARRANGEMENTS



ASSIGNMENT INSTRUCTIONS

This band is designated for use by low-medium capacity fixed point-to-point links.

Typical Use	: 2-17 Mbit/s data
Assignment Priority	: See Note 1.
Minimum Path Length	: 20 km
Antenna Requirements	: refer to Appendix 11

Notes:

1. Assignment priorities are defined as follows:
 - 14 MHz channels - from the highest channel downward;
 - 7 MHz channels - from the lowest channel upward.
2. Co-ordination with Defence is required for assignments in Canberra. All Defence co-ordination requirements should be addressed through ACA Central Office.
3. Assignments should not be made on the 7 MHz Ch1 to avoid band edge interference.
4. Potential for interference to and from adjacent 8 GHz band fixed services.

References

1. Rec. ITU-R F.385-6, "Radio-frequency channel arrangements for radio-relay systems operating in the 7 GHz band".

THE 7.5 GHz BAND (7425 - 7725 MHz)

PROTECTION RATIOS

- Protection ratios required between digital systems operating on the same channel raster.

Co Channel:	60 dB
1st Adjacent Channel	30 dB
2nd Adjacent Channel	0 dB

- Protection ratios between systems using 3.5 MHz channels and systems using either 7 MHz or 14 MHz channels - see note 2.

Frequency Offset (MHz)	PROTECTION RATIO (dB)					
	3.5 MHz*	7 MHz	3.5 MHz*	14 MHz	3.5 MHz*	18 MHz*
	↓ 7 MHz	↓ 3.5 MHz*	↓ 14 MHz	↓ 3.5 MHz*	↓ 18 MHz*	↓ 3.5 MHz*
1.75	60	60	60	60	60	60
5.25	55	48	60	55	60	60
8.75	18	20	55	40	60	55
12.25			30	30	55	40
15.75				10	30	30

- Protection ratios between systems using either 7 MHz or 14 MHz channels and systems using 18 MHz channels - see note 3.

Frequency Offset (MHz)	PROTECTION RATIO (dB)					
	7 MHz	14 MHz	7 MHz	18 MHz*	14 MHz	18 MHz*
	↓ 14 MHz	↓ 7 MHz	↓ 18 MHz*	↓ 7 MHz	↓ 18 MHz*	↓ 14 MHz
0	60	60	60	60	60	60
7	50	45	60	55	60	60
14	36	27	45	30	55	50
21					30	30

- Protection ratios required between digital systems in the adjacent 8 GHz band.

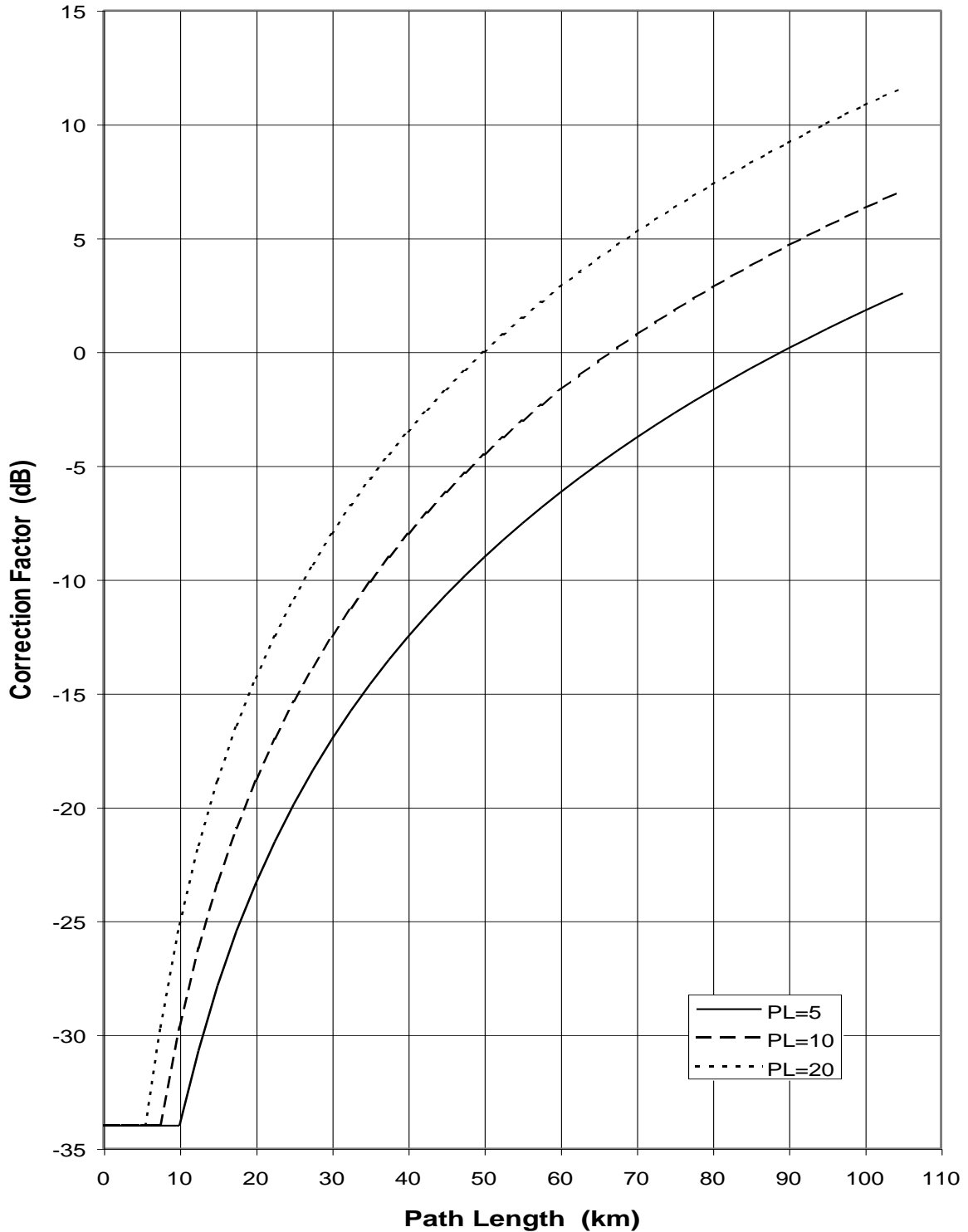
Frequency Offset (MHz)	PROTECTION RATIO (dB)			
	Digital Interferer Tx → Digital Victim Rx			
	7 MHz	7 MHz	14 MHz	14 MHz
	↓ 29.65 MHz	↓ 59.3 MHz	↓ 29.65 MHz	↓ 59.3 MHz
10.875	58			
14.375			54.5	
25.7		64		
29.2				61

Notes:

1. Protection ratio for digital systems are based on a 50 km path length and P_L (*Percentage of time that the average refractivity gradient in the lowest 100 m of the atmosphere is less than or equal to -100 N units/km*) of 20, for other path lengths and P_L values refer to the appropriate path length correction factors graph on the following page.
2. The 3.5 MHz* table heading denotes systems operating under earlier arrangements which require 3.5 MHz bandwidth, new assignments are to be coordinated around these systems.
3. The 18 MHz* table heading denotes systems operating under earlier arrangements which require 18 MHz bandwidth, new assignments are to be coordinated around these systems.

THE 7.5 GHz BAND (7425 - 7725 MHz)

PROTECTION RATIO CORRECTION FACTORS



MULTI PATH

P_L : Percentage of time that the average refractivity gradient in the lowest 100 m of the atmosphere is less than or equal to -100 N units/km.

For further details refer to Annex A to Appendix 1.