

A blurred photograph of a crowd of people crossing a street at a crosswalk. The people are in motion, and the background is out of focus. The crosswalk consists of white stripes on a dark asphalt surface.

802.3cb Comments 272 and 273 Resolutions

Introduction

- In addition to fixing the insertion loss equation and plot, modify Annex 128C to include an insertion loss equation and plot for both 2.5G and 5G
 - Currently, there is only one equation and plot for both rates
 - Equation 128C-7 and Figure 128C-3 will be replaced with the equations and plots in this presentation

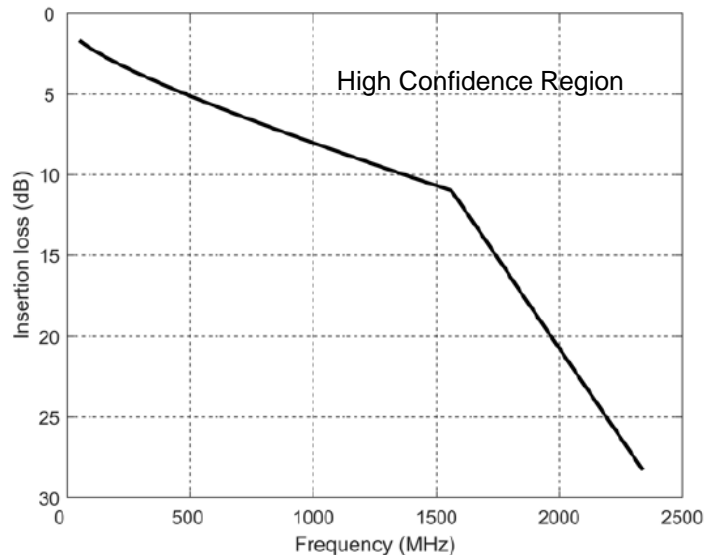
2.5G Insertion Loss Equation and Plot

- Note:

- $0.05 = f_{\min}$
- $1.5625 = f_2$
- This implies the editor should change the following frequencies shown in the equation below:
 - **0.5 to f_{\min}**
 - **1.5625 to f_2**
 - **2.34375 to $1.5 \cdot f_2$**

$$Insertion_loss(f) \leq \left\{ \begin{array}{ll} 0.668 + 3.755\sqrt{f} + 3.608f & 0.05 \leq f < 1.5625 \\ -23.753 + 22.242f & 1.5625 \leq f < 2.34375 \end{array} \right\} \text{ (dB)}$$

where
 f is the frequency in GHz



5G Insertion Loss Equation and Plot

- Note:

- $0.05 = f_{\min}$
- $2.578125 = f_2$
- This implies the editor should change the following frequencies shown in the equation below:
 - **0.5 to f_{\min}**
 - **2.578125 to f_2**
 - **3.8671875 to $1.5 \cdot f_2$**

$$Insertion_loss(f) \leq \left\{ \begin{array}{ll} 0.668 + 3.755\sqrt{f} + 3.608f & 0.05 \leq f < 2.578125 \\ -18.753 + 13.48f & 2.578125 \leq f < 3.8671875 \end{array} \right\} \text{ (dB)}$$

where f is the frequency in GHz, and

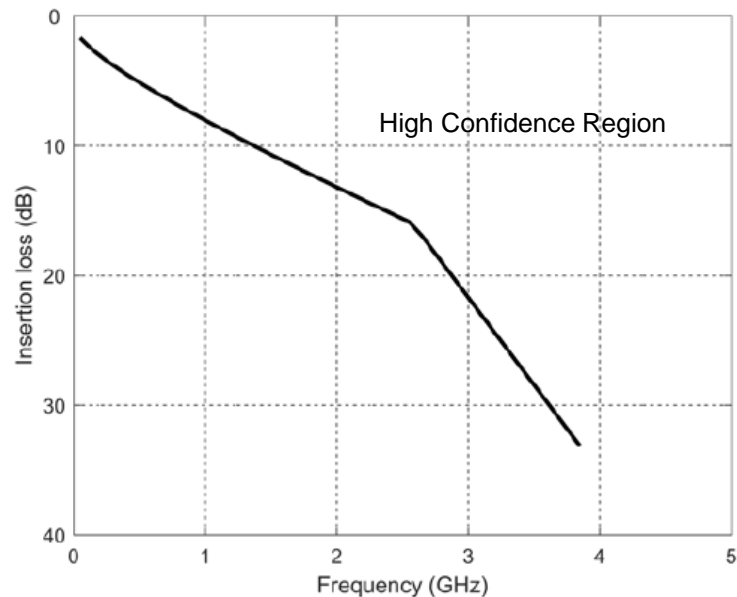


Table 128C-1 Change

- With these changes, the row f_{\max} is no longer needed.
- Remove the row with parameter f_{\max}

Table 128C-1—Insertion loss parameters

Parameter	Value for 2.5GBASE-KX	Value for 5GBASE-KR	Unit
f_{\min}	0.05		GHz
f_{\max}	7		GHz
b_1	2×10^{-5} E-5		
b_2	1.1×10^{-10} E-10		
b_3	4.1×10^{-20} E-20		
b_4	-1.6×10^{-30} E-30		
f_1	0.312	0.5	GHz
f_2	1.5625	2.578125	GHz
f_a	0.1		GHz
f_b	1.5625	2.578125	GHz