
Comment IEEE P802.3cy/D0.4

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Comment

- **165A.3 TP0 to TP5 channel insertion loss is determined using Equation (165A–3), Equation (165A–4), and Equation (165A–5).**

The channel insertion loss from TP0 to TP5 is determined using Equation (165A–3), Equation (165A–4), and Equation (165A–5).

$$IL_{Channel}(f) \leq 2 \times IL_{PCBmax}(f) + 2 \times IL_{MDIConnector}(f) + IL_{LinkSegment}(f) dB \quad (165A-3)$$

$$IL_{MDIConnector}(f) \leq 0.1 \sqrt{\frac{f}{2500}} dB \quad (165A-4)$$

$$IL_{LinkSegment}(f) \leq 0.00135(f) + 0.3564(f)^{0.45} + 0.495\left(\frac{f}{7500}\right)^6 dB \quad (165A-5)$$

where

f is the frequency in MHz; $1 \leq f \leq 9000$

- **165.7.1.1 link segment insertion loss is determined using Equation (165–25).**

$$Insertion\ loss(f) \leq 0.00135(f_{MHz}) + 0.3564(f_{MHz})^{0.45} + 0.495\left(\frac{f_{MHz}}{7500}\right)^6 \quad (dB) \quad (165-25)$$

where

f is the frequency in MHz; $10 \leq f \leq 9000$

Remedy

- Link segment Equation (165–25) is a requirement.
- Channel IL is for information (165A-3).
- **Change link segment Equation (165A–5) parameter name to differentiate link segment requirement ($10 \leq f(\text{MHz}) \leq 9000$) from link segment information ($1 \leq f(\text{MHz}) \leq 9000$) used to calculate channel IL.**

$$IL_{\text{Channel}}(f) \leq 2 \times IL_{\text{PCBmax}}(f) + 2 \times IL_{\text{MDIConnector}}(f) + IL_{\text{LinkSegment1MHz}}(f) \text{dB} \quad (165A-3)$$

$$IL_{\text{LinkSegment1MHz}}(f) = 0.00135 * A^2^{0.45} + 0.3564 * A^2^{0.45} + 0.495 * (A^2/7500)^6 \quad (165A-5)$$

where

f is the frequency in MHz; $1 \leq f(\text{MHz}) \leq 9000$

The IL link segment values <10MHz are provided for information only.