802.3da Mixing Segment Specifications

June 2024

Chris DiMinico
PHY-SI LLC/ MC Communications/SenTekse
cdiminico@ieee.org

10 Mb/s SPMD Enhancement TG

Purpose

- **Comments D1.2**
- **Error in 168-5**

168.9.1.1 TCI insertion loss

With the PMA (or PMA load specified for the TCI) present at TC3, the differential insertion loss of the TCI between TC1 and TC2 shall meet the values determined using Equation (168–5) in each direction, measured into 100 Ω.

```
Suggested Remedy:
Change equation 168-5.
IL  </= 0.16 dB 1 </= f <10
 -0.454+(0.22/f)+0.63*SQRT(f)-0.18*f+0.004*f^2 10 </= f < 24

    IL </= 0.3 </= f < 1 (TBD) 24 </= f </= 40 (TBD)

f=MHz

See diminico_SPMD_01_0624.pdf for TBD
```

Suggested Remedy

```
Suggested Remedy:
Change equation 168-5.
IL  </= 0.16 dB 1 </= f <10
 -0.454+(0.22/f)+0.63*SQRT(f)-0.18*f+0.004*f^2 10 </= f < 24

    IL </= 0.3 </= f < 1 (TBD) 24 </= f </= 40 (TBD)

f=MHz

See diminico_SPMD_01_0624.pdf for TBD
```

TCI IL =
-0.6286*fMHz+0.7886 [0.3 MHz </= fMHz < 1 MHz]
.0.145*fMHz-2.86 [24 MHz </= fMHz </= 40 MHz].

Suggested Remedy

TCI IL

10 Mb/s SPMD Enhancement TG