TBDs in Clause 999

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999.7.12 Receiver sensitivity

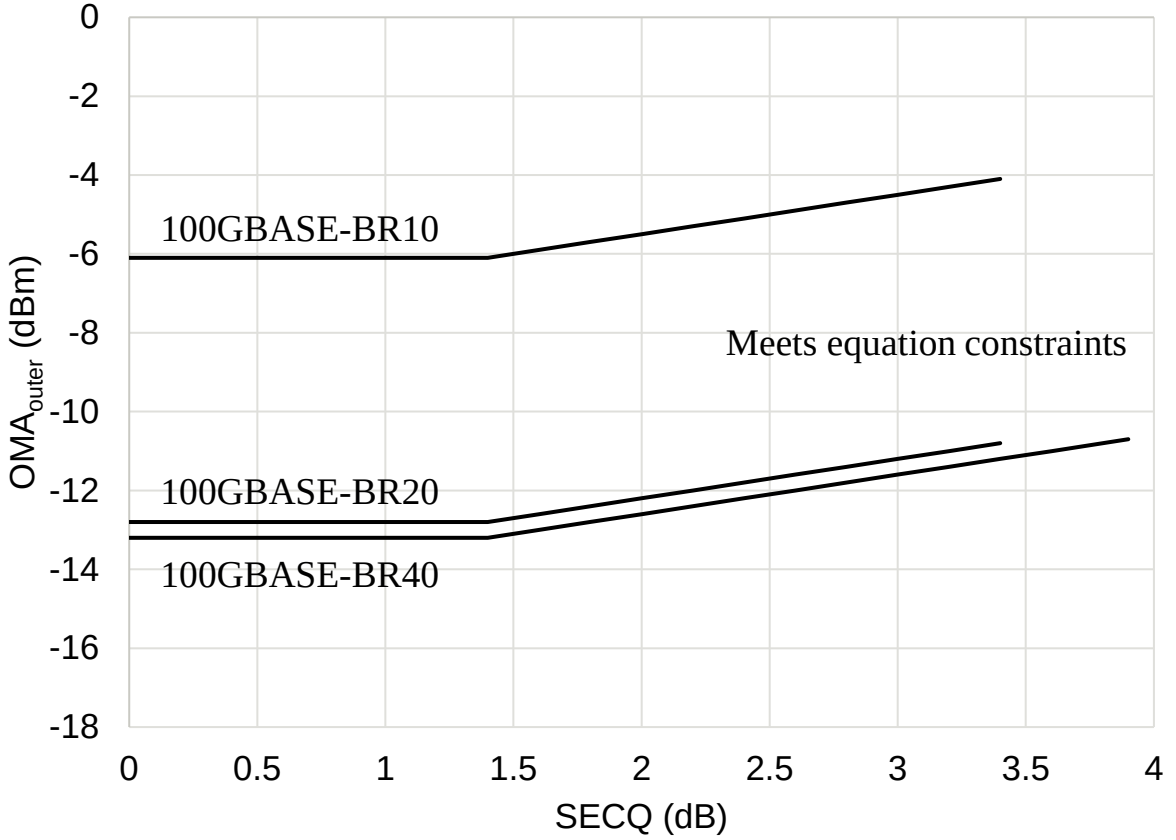

Figure 999–6—Illustration of receiver sensitivity

For 100GBASE-BR10, receiver sensitivity is informative and is defined for a transmitter with a value of SECQ up to ~~3.2~~ 3.4 dB. Receiver sensitivity should meet Equation (999–4), which is illustrated in Figure ~~999–7.~~ 999-6

For 100GBASE-BR20, receiver sensitivity in informative and defined for a transmitter with a value of SECQ up to 3.4 dB. Receiver sensitivity should meet Equation (999-5), which is illustrated in Figure 999-6.

For 100GBASE-BR20, receiver sensitivity in informative and defined for a transmitter with a value of SECQ up to 3.9 dB. Receiver sensitivity should meet Equation (999-6), which is illustrated in Figure 999-6.

$$RS = \max(-6.1, SECQ - 7.5) \quad \text{(dBm)} \qquad (999\text{–}4)$$

RS = max(-12.8, SECQ-14.2) (dBm) (999-5)
RS = max(-13.2, SECQ-14.6) (dBm) (999-6)

where

RS is the receiver sensitivity

SECQ is the SECQ of the transmitter used to measure the receiver sensitivity

999.9 Fiber optic cabling model

Table 999–12—Fiber optic cabling (channel) characteristics

Description	100GBASE-BR10	100GBASE-BR20	100GBASE-BR40	Unit
Operating distance (max)	10	20	40	km
Channel insertion loss[a, b] (max)	6.3	10	18	dB
Channel insertion loss (min)	0	0	10	dB
Positive dispersion[b] (max)	9.2	18.4	37	ps/nm
Negative dispersion[b] (min)	-19.2	-38.4	-77	ps/nm
DGD_max[c]	5	TBD	TBD	ps
Optical return loss (min)	22	22	19	dB

[a] These channel insertion loss values include cable, connectors, and splices.
[b] Over the wavelength range 1303.6 nm to 1310.1 nm.
[c] Differential Group Delay (DGD) is the time difference at reception between the fractions of a pulse that were transmitted in the two principal states of polarization of an optical signal. DGD_max is the maximum differential group delay that the system is required to tolerate.

The DGD value is to be determined by updates in 802.3dj.

999.11 Requirements for interoperation between 100GBASE-BRx PMDs

Table 999–15—Channel insertion loss requirements for interoperation between 100GBASE-BR20 and 100GBASE-BR40

Direction	Min loss	Max loss	Unit
100GBASE-BR20 transmitter to 100GBASE-BR40 receiver	1.7	10	dB
100GBASE-BR40 transmitter to 100GBASE-BR20 receiver	8.3	18	dB

- Min loss = Tx average launch power (max) – Rx average receive power (max)
- Max loss = channel insertion loss (max)

Thank you

Any questions?