Comment r01-18

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Changes to Table 121-7

Receiver sensitivity (OMA$_{outer}$), each lane[c] (max)	~~6.6~~ Equation (121–13)	dBm
Stressed receiver sensitivity (OMA$_{outer}$), each lane[d] (max)	−4.1	dBm
Conditions of stressed receiver sensitivity test:[e]		
Stressed eye closure for PAM4 (SECQ), lane under test	3.4	dB
OMA$_{outer}$ of each aggressor lane	2.8	dBm

[a] The receiver shall be able to tolerate, without damage, continuous exposure to an optical input signal having this average power level. The receiver does not have to operate correctly at this input power.

[b] Average receive power, each lane (min) is informative and not the principal indicator of signal strength. A received power below this value cannot be compliant; however, a value above this does not ensure compliance.

[c] Receiver sensitivity (OMA$_{outer}$), each lane (max) is informative and is defined for a transmitter with a value of SECQ ~~of 0.9~~ up to 3.4 dB.

[d] Measured with conformance test signal at TP3 (see 121.8.9) for the BER specified in 121.1.1.

[e] These test conditions are for measuring stressed receiver sensitivity. They are not characteristics of the receiver.

Changes to 121.8.8

121.8.8 Receiver sensitivity

Receiver sensitivity, which is defined for an input signal with SECQ of 0.9 dB (e.g., an ideal input signal without overshoot), is informative and compliance is not required. If measured, the test signal should have negligible impairments such as intersymbol interference (ISI), rise/fall times, jitter and RIN. Instead, the normative requirement for receivers is stressed receiver sensitivity.

Receiver sensitivity is informative and is defined for a transmitter with a value of SECQ up to 3.4 dB. Receiver sensitivity should meet Equation (121–13), which is illustrated in Figure 121–7.

$$RS = \max(-6.1, SECQ - 7.5) \quad (dB) \tag{121-13}$$

where
RS is the receiver sensitivity
$SECQ$ is the SECQ of the transmitter used to measure the receiver sensitivity

The normative requirement for receivers is stressed receiver sensitivity.
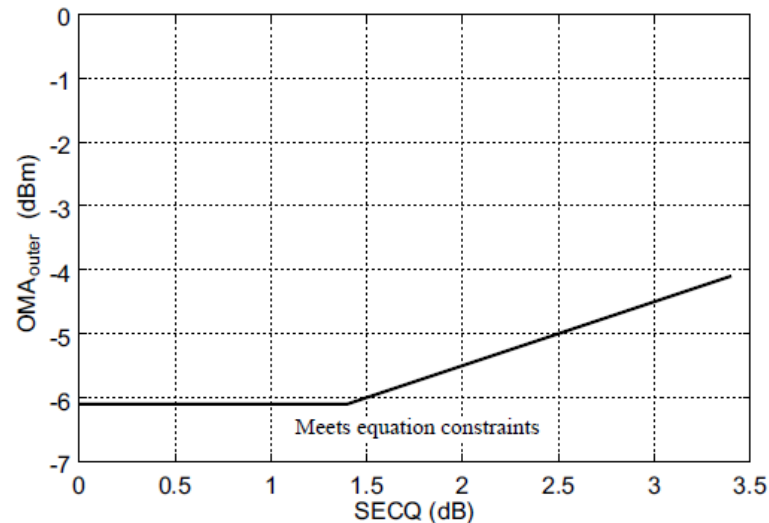

Figure 121–7—Illustration of receiver sensitivity

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Changes to Table 122-11

Receiver sensitivity (OMA$_{outer}$), each lane[c] (max)	~~−6~~ Equation (122−1)	~~−7.7~~ Equation (122−2)	dBm
Stressed receiver sensitivity (OMA$_{outer}$), each lane[d] (max)	−3.6	−5.2	dBm
Conditions of stressed receiver sensitivity test:[e]			
Stressed eye closure for PAM4 (SECQ), lane under test	3.3	3.4	dB
OMA$_{outer}$ of each aggressor lane	0.5	−1	dBm

[a] The receiver shall be able to tolerate, without damage, continuous exposure to an optical input signal having this average power level.

[b] Average receive power, each lane (min) is informative and not the principal indicator of signal strength. A received power below this value cannot be compliant; however, a value above this does not ensure compliance.

[c] Receiver sensitivity (OMA$_{outer}$), each lane (max) is informative and is defined for a transmitter with a value of SECQ ~~of 0.9 dB~~ up to 3.3 dB for 200GBASE-FR4 and 3.4 dB for 200GBASE-LR4.

[d] Measured with conformance test signal at TP3 (see 122.8.9) for the BER specified in 122.1.1.

[e] These test conditions are for measuring stressed receiver sensitivity. They are not characteristics of the receiver.

Changes to Table 122-12

Receiver sensitivity (OMA$_{outer}$), each lane[c] (max)	~~−5.3~~ Equation (122−3)	~~−7.1~~ Equation (122−4)	dBm
Stressed receiver sensitivity (OMA$_{outer}$), each lane[d] (max)	−3.1	−4.7	dBm
Conditions of stressed receiver sensitivity test:[e]			
Stressed eye closure for PAM4 (SECQ), lane under test	3.1	3.3	dB
OMA$_{outer}$ of each aggressor lane	1	−0.2	dBm

[a] The receiver shall be able to tolerate, without damage, continuous exposure to an optical input signal having this average power level.

[b] Average receive power, each lane (min) is informative and not the principal indicator of signal strength. A received power below this value cannot be compliant; however, a value above this does not ensure compliance.

[c] Receiver sensitivity (OMA$_{outer}$), each lane (max) is informative and is defined for a transmitter with a value of SECQ ~~of 0.9 dB~~ up to 3.1 dB for 400GBASE-FR8 and 3.3 dB for 400GBASE-LR8.

[d] Measured with conformance test signal at TP3 (see 122.8.9) for the BER specified in 122.1.1.

[e] These test conditions are for measuring stressed receiver sensitivity. They are not characteristics of the receiver.

Changes to Table 122.8.8 part 1

122.8.8 Receiver sensitivity

~~Receiver sensitivity, which is defined for an input signal with SECQ of 0.9 dB (e.g., an ideal input signal without overshoot), is informative and compliance is not required. If measured, the test signal should have negligible impairments such as intersymbol interference (ISI), rise/fall times, jitter and RIN. Instead, the normative requirement for receivers is stressed receiver sensitivity.~~

For 200GBASE-FR4, receiver sensitivity is informative and is defined for a transmitter with a value of SECQ up to 3.3 dB. Receiver sensitivity should meet Equation (122–1), which is illustrated in Figure 122–6.

For 200GBASE-LR4, receiver sensitivity is informative and is defined for a transmitter with a value of SECQ up to 3.4 dB. Receiver sensitivity should meet Equation (122–2), which is illustrated in Figure 122–6.

$$RS = \max(-5.5, SECQ - 6.9) \quad (dB) \tag{122–1}$$

$$RS = \max(-7.2, SECQ - 8.6) \quad (dB) \tag{122–2}$$

where
  RS is the receiver sensitivity
  $SECQ$ is the SECQ of the transmitter used to measure the receiver sensitivity
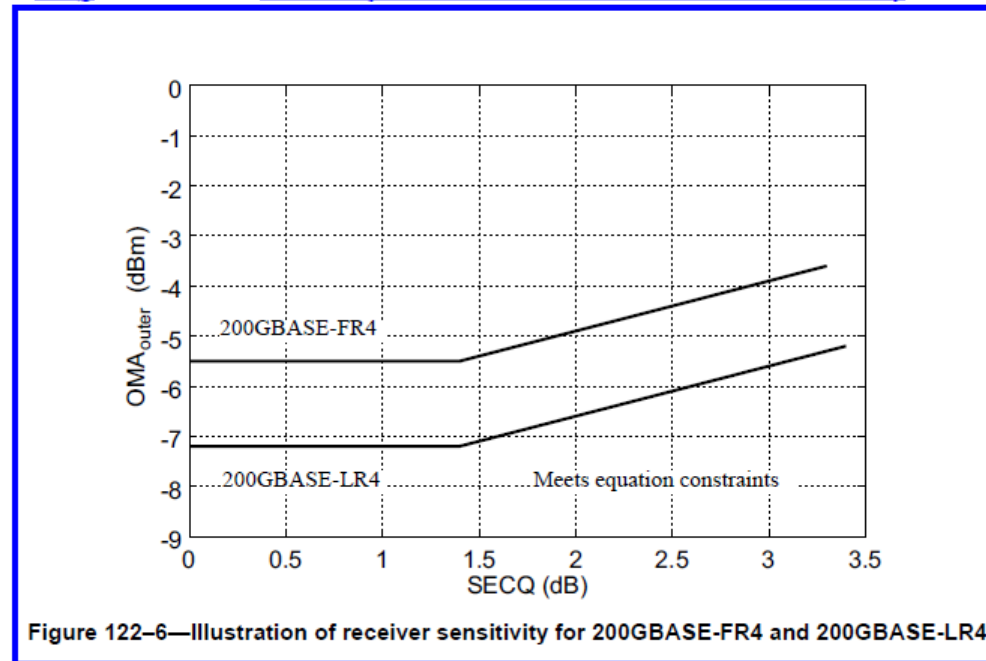

Figure 122–6—Illustration of receiver sensitivity for 200GBASE-FR4 and 200GBASE-LR4

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Changes to Table 122.8.8 part 2

For 400GBASE-FR8, receiver sensitivity is informative and is defined for a transmitter with a value of SECQ up to 3.1 dB. Receiver sensitivity should meet Equation (122–3), which is illustrated in Figure 122–7.

For 400GBASE-LR8, receiver sensitivity is informative and is defined for a transmitter with a value of SECQ up to 3.3 dB. Receiver sensitivity should meet Equation (122–4), which is illustrated in Figure 122–7.

$$RS = \max(-4.8, SECQ - 6.2) \quad (dB) \qquad (122–3)$$

$$RS = \max(-6.6, SECQ - 8) \quad (dB) \qquad (122–4)$$

where
  RS is the receiver sensitivity
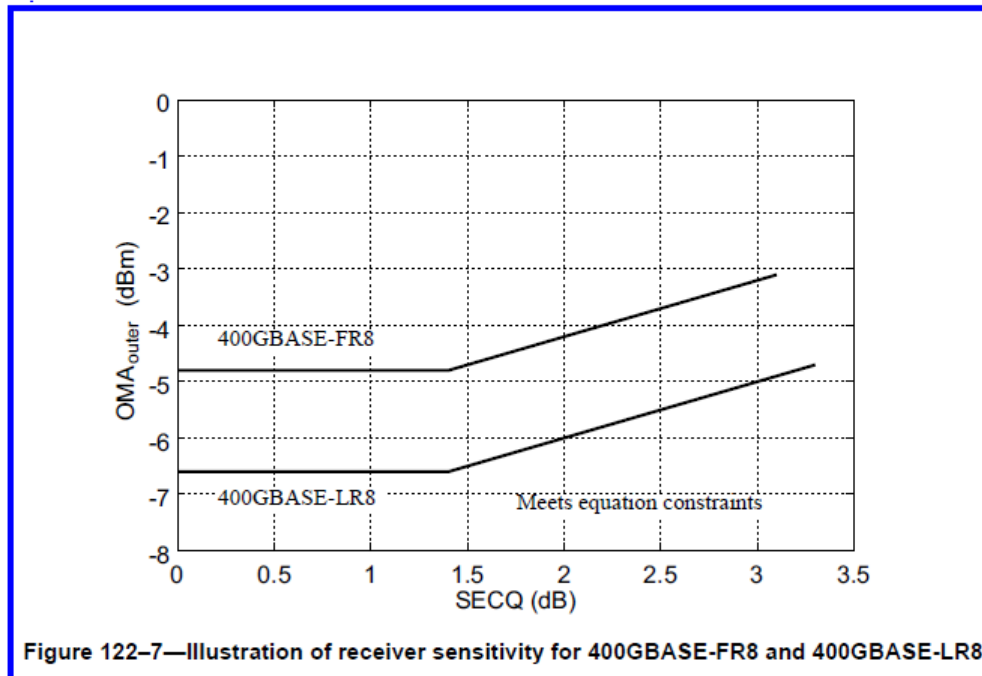 $SECQ$ is the SECQ of the transmitter used to measure the receiver sensitivity

Figure 122–7—Illustration of receiver sensitivity for 400GBASE-FR8 and 400GBASE-LR8

The normative requirement for receivers is stressed receiver sensitivity.

Changes to Table 124-7

Receiver sensitivity (OMA_{outer}), each lane[c] (max)	~~−4.4~~ Equation (124−1)	dBm
Stressed receiver sensitivity (OMA_{outer}), each lane[d] (max)	−1.9	dBm
Conditions of stressed receiver sensitivity test:[e]		
Stressed eye closure for PAM4 (SECQ), lane under test	3.4	dB
OMA_{outer} of each aggressor lane	4.2	dBm

[a] The receiver shall be able to tolerate, without damage, continuous exposure to an optical input signal having this average power level. The receiver does not have to operate correctly at this input power.
[b] Average receive power, each lane (min) is informative and not the principal indicator of signal strength. A received power below this value cannot be compliant; however, a value above this does not ensure compliance.
[c] Receiver sensitivity (OMA_{outer}), each lane (max) is informative and is defined for a transmitter with a value of SECQ ~~of 0.9~~ up to 3.4 dB.
[d] Measured with conformance test signal at TP3 (see 124.8.9) for the BER specified in 124.1.1.
[e] These test conditions are for measuring stressed receiver sensitivity. They are not characteristics of the receiver.

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Changes to Table 124.8.8

124.8.8 Receiver sensitivity

~~Receiver sensitivity, which is defined for an input signal with SECQ of 0.9 dB (e.g., an ideal input signal without overshoot), is informative and compliance is not required. If measured, the test signal should have negligible impairments such as intersymbol interference (ISI), rise/fall times, jitter and RIN. Instead, the normative requirement for receivers is stressed receiver sensitivity.~~

Receiver sensitivity is informative and is defined for a transmitter with a value of SECQ up to 3.4 dB. Receiver sensitivity should meet Equation (124–1), which is illustrated in Figure 124–4.

$$RS = \max(-3.9, SECQ - 5.3) \quad (dB) \qquad\qquad (124\text{–}1)$$

where
  RS is the receiver sensitivity
  $SECQ$ is the SECQ of the transmitter used to measure the receiver sensitivity

The normative requirement for receivers is stressed receiver sensitivity.
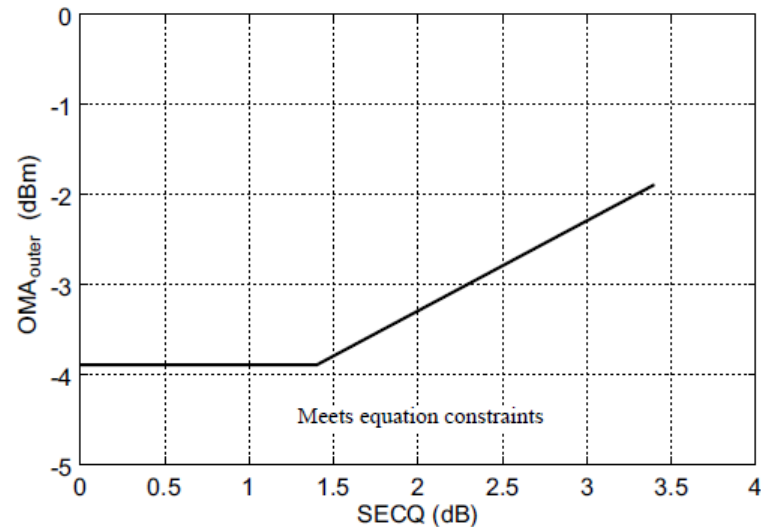

Figure 124–4—Illustration of receiver sensitivity

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