Black Link Parameters Discussion

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Transmitter Parameters

From G.698.2

Interface at point S_S	Units
Maximum mean channel output power	dBm
Minimum mean channel output power	dBm
Minimum central frequency	THz
Maximum central frequency	THz
Maximum spectral excursion	GHz
Minimum side mode suppression ratio	dB
Minimum channel extinction ratio	dB
Eye mask	–
Maximum transmitter (residual) dispersion OSNR penalty	dB

From P802.3cs

Parameter Name	Units
Central channel frequencies	THz
Maximum spectral excursion	GHz
Side-mode suppression ratio (SMSR) (min)	dB
Average launch power (max)	dBm
Average launch power (min)	dBm
Average launch power of OFF transmitter (max)	dBm
Extinction ratio (min)	dB
$RIN_{15}OMA$ (max)	dB/Hz
Transmitter and dispersion penalty (TDP) @ 0 to 1000 ps/nm residual CD	dB
Optical return loss tolerance (max)	dB
Transmitter reflectance (max)	dB
Transmitter eye mask definition {X1, X2, X3, Y1, Y2, Y3}	UI

Receiver Parameters

From P802.3cs

Parameter Name	Units
Channel frequency range	THz
Bit error ratio (max)	
~~Average receive power (max)~~	dBm
Damage Threshold	dBm
~~Receiver sensitivity (max)~~	dBm
~~Receiver reflectance (max)~~	dB
Signal detect threshold (min)	dBm
~~Stressed receiver sensitivity (max)~~	dBm
~~Minimum received OSNR~~	dB

From G.698.2

Interface at point R_S	Units
Maximum mean input power	dBm
Minimum mean input power	dBm
Minimum OSNR	dB (0.1 nm)
Receiver OSNR tolerance	dB (0.1 nm)
Maximum reflectance of receiver	dB

Black Link Parameters

From G.698.2

Optical path from point S_S to R_S	Units
Maximum ripple	dB
Maximum (residual) chromatic dispersion	ps/nm
Minimum (residual) chromatic dispersion	ps/nm
Minimum optical return loss at S_S	dB
Maximum discrete reflectance between S_S and R_S	dB
Maximum differential group delay	ps
Maximum inter-channel crosstalk	dB
Maximum interferometric crosstalk	dB
Maximum optical path OSNR penalty	dB

P802.3cs Super-PON Architecture