CHP Max™ Headend Optics Platform

Forward Path QAM Transmitter

CHP GQTX

Specifications

RF			
Bandwidth (Note 1)	550 to 1002 nm		
Response Flatness, P-V, typ./max. (Notes 2,3)	1.0/2.0 dB		
Response Tilt, max. (Note 2)	± 0.5 dB		
Input Return Loss, min. (Note 2)	16 dB		
Residual Spurs	<65 dBc		
Unit-to-Unit Isolation, min.	>65 dB		
Common Optical			
Wavelength	1529 nm (ITU channel 61) to 1561 nm (ITU channel 21)		
Wavelength Drift	0.15 nm		
Output Power, min./typ./max.	9.75/10.0/10.25 dBm		
Powering	<– 157 dBc/Hz		
Power Consumption, max.	17.4 W		
Performance			
Channel Plan	Up to 75 256-QAM channels		
Nominal Total RF Input Power	37 dBmV for 33 digital QAM channels		
Carrier-to-Intermodulation Noise, min. (Note 4)	63 dB		
Bit error Rate (BER), min. (Note 5)	1×10^{-6}		
Link Range (up to 150 km)	30km	90 km	145 km
CNR, typ. (Notes 5, 6, 7)	51 dB	44 dB	41 dB
CTB, typ. (Notes 5, 6)	–60 dBc	–50 dBc	–45 dBc
CSO, typ. (Notes 5, 6, 8)	–55 dBc	–30 dBc	–25 dBc
Mechanical			
Optical Connector	SC/APC		
RF Connector	F-type		
RF Input Testpoint (Note 9)	–20 ± 1.0 dB		
Dimensions (W x H x D) (Note 10)	3.2 x 8.7 x 47.0 cm (1.25 x 3.4 x 18.5 in.)		
Weight	1.24 kg (2.75 lb.)		

Technical Specification

Environmental	
Operating Temperature (Note 1)	0 to 50 °C (32 to 122 °F)
Storage Temperature	-40 to 70 °C (-40 to 158 °F)
Operating Humidity, non-condensing, max.	85%

Notes:

1. Please contact your ARRIS sales professional if you want to use QAM channels below 550 MHz.
2. Specifications obtained with 0 dB external PAD installed.
3. Typical specifications measured at 25 °C and maximum specifications measured from 0 to 50 °C.
4. CIN measurement obtained using a fiber length of 90km and a power level of –2 dBm at the receiver input.
5. CSO, CTB, and CNR measurements obtained using an input of 22 dBmV/channel with a channel loading of 33 256-QAM signals from 550 to 750 MHz.
6. Test configuration consists of CHP-GQTX-10-S-xx →55 km fiber→ EDFA → 35 km fiber → TF520 receiver. The maximum optical power into the fiber should not exceed 8 dBm. Optical power to EDFA is –3 ± 0.5dBm and input to receiver is –6.5 ± 0.5 dBm. An EDFA with a noise figure better than 5.5 dB must be used.
7. OMI is 4.4% at 33 QAM channel loading.
8. CSO performance for QAM channels measured from 110 to 1002 MHz.
9. Relative to main port with 0 dB pad and 0 dB EQ at a temperature from 0 to 50°C. The tolerance is ± 0.75 dB at a temperature of 25 °C.
10. Includes handles and connectors.
11. Temperature measured at transmitter module's air inlet.
12. Distortions are measured using only CW analog carriers per SCTE recommendation by standard RF test methods. Performance shown represents typical performance for ≥ 85% of production units tested over typical Corning SMF-28 fiber (or equivalent). For minimum CSO and CTB, subtract 2 dB from typical.

Specifications are subject to change without notice.

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