Opti Max™ Optical Node Series

OM2741, OM4, OM6

1.2 GHz HFC Forward Receiver

FEATURES

- Supports 1.2 GHz forward path operation in HFC networks
- Supports status monitoring
- Optimizes RF output performance via user selectable AGC switch settings
- Non-interruptible plug-in adjustable PAD
- Adjustable optical input threshold levels
- Compatible with OM2741, OM4 series, and OM6 series nodes

PRODUCT OVERVIEW

The highly versatile ARRIS 1.2 GHz Forward Receiver provides full support for up to 1.2 GHz forward path operation in HFC networks. The receiver is fully compatible with Opti Max OM2741, OM4100, OM4120, and OM6000 nodes, and provides end users with a selectable AGC option to maximize network performance. The AGC switch allows end users to select a manual or Automatic Gain Control mode: the AGC setting allows the receiver to operate between –6 to +3 dBm, while the manual setting allows end users to select a value that best supports their network configuration. The receiver also allows end users to adjust optical input threshold levels to maintain consistency with their system design parameters.

SPECIFICATIONS

Optical	Units	Specification
Optical Wavelength	nm	1260 to 1620
Optical Input Return Loss	dB	40 (min.)
Equivalent Input Noise Current	dB	3.5 pA/H1/2
Optical Input Range[1]	dBm	–6 to +3
Optical Power Threshold Alarm Limits (min)	dBm	–10 to 0 (user settable)
Test Points	dB	20 (± 1.0 dB)
RF	**Units**	**Specification**
Impedence	Ohms	75
Frequency Range	MHz	54–1218
Band Edge Roll-off, 50–54 MHz	dB	0.5 (max)
Slope	dB	+10 (± 1.0)
Flatness[2]	dB	± 0.75
Return Loss	dB	16 (min)
RF Output Level @ 1218 MHz (virtual)[3]	dBmV	29 (min)
RF Gain	dB	57 (min)
RF Output Test Point	dB	20 (± 1.0)
Stability[4]	dB	± 1.5
Low Frequency Isolation	dB	15 (min)
Performance[4,5]	**Units**	**Specification**
Channel Loading	—	148 ITU-T J.83 Annex B SC-QAM 256 + 1, 192 MHz OFDM Channel SC-QAM from 108–1002 MHz, OFDM from 1026–1218 MHz
MER	dB	46.0 (typical)
BER (Pre-FEC)	—	1E-08 (ITU-T J.83 Annex B SC-QAM 256)
Enviromental and Physical	**Units**	**Specification**
Dimensions (H x L x W)	cm (in)	15.24 x 10.9 x 3.2 (6.0 x 4.3 x 1.25)
Weight	lb (kg)	≤ 1.1 (≤ 0.5)
Operating Temperature (Node)	C (F)	–40° to 60° (–40° to 140°)
Operating Humidity, non-condensing	—	95%

NOTES:

1. Current resiliency to +5 dBm.
2. Flatness is factory aligned with 6 dB of attenuation and measured with respect to slope.
3. RF output level is minimum @ 1218 MHz with –6 dBm received power, a 20 dB PAD, and transmitter OMI of 3% in traditional HFC applications. For optimum operating condition, the users starts the receiver in AGC mode, applies input, and then switches the receiver to Manual mode.
4. Distortion values listed are for the receiver only. To obtain a particular link performance, combine the receiver performance values with the applicable transmitter performance values.
5. Plug-in Pad provides service interruption protection. Attenuation will change after a new value of pad is installed.

ORDERING INFORMATION

Part Number	Description
1510054-002	OM6/OM4 1.2 GHz HFC 24V Forward Path Optical Receiver, SC/APC

RELATED PRODUCTS

CH3 Chassis	CHP Chassis
Remote PHY Device (RPD)	XE4202M Remote OLT (R-OLT)
Power Supplies	Optical Service Cables

Customer Care

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
- International: +1-678-473-5656

Note: Specifications are subject to change without notice.

1513400-RevC_1.2 GHz HFC Fwd Rx_DS_23APR20 (rev 04-2020)