



# CHP Max5000™ Front Fiber Redundant Dual Return Path Receivers Technical Specification

## CHP-R2RRFF-S Specifications

	CHP-R2RRFF-S
<b>Optical Specifications</b>	
Input Wavelength Range	1200 to 1620nm
Optical Input Range	-13 to 3dBm
Optical Return Loss	≥55 dB
<b>RF Specifications</b>	
RF Output Bandwidth	5 to 200MHz
RF Output Power Level, min., per channel (Note 1)	38dBmV, with -13 dBm input and 7% OMI from return TX
Flatness, peak-to-valley	±0.75 dB with respect to gain slope
Gain Slope	±1.0dB
RF Gain Adjustment Range (Note 2)	0 to -31.5 in 0.5 dB steps
RF Output Return Loss, min.	≥16dB
RF Testpoint	-20 ± 0.5dB
<b>Performance Specifications</b>	
Equivalent Input Noise	<7 pA/Hz <sup>0.5</sup>
Maximum Peak NPR Variation (Notes 3 through 7)	4dB
Noise-Power Ratio (NPR)/Dynamic Range (Notes 3 through 7)	41/15 dB
BER Dynamic Range (Notes 3 through 7)	>40dB
Optical Input to RF Output Terminated Isolation	≥70dB
Channel-to-Channel Isolation, 5 to 200MHz	≥65 dB
Redundant Switching Time	≤50msec
Power Consumption	16W

## CHP-R2RRFF-S Specifications

### Mechanical Specifications

Dimensions (W x H x D) in(cm) 1.25 x 3.44 x 18.5 in (3.18 x 8.74 x 46.99 cm)

### Environmental Specifications

Operating Temperature Range 0 to 50°C (32 to 122°F)

Operating Humidity, Noncondensing 10 to 90%

#### Notes:

- RF output for CHP-R2RRFF-S is based on 23 16-QAM channels with an optical input of -13 dBm at 7% OMI.
- The attenuator for each channel in the CHP-R2RRFF module may be adjusted in 0.5 dB steps from 0 to 31.5 dB. However, the RF output level stability specification may not be met at the attenuator setting of 30.5, 31.0, or 31.5 dB over the operating temperature range.
- Test performed using a C-COR lumaCOR RPT5200V Return Path Transmitter (RPT) over an optical link of 6 dB.
- The optimum RF input level to the RPT is 17 dBmV (-51 dBmV/Hz).
- Dynamic range specified at a BER of  $< 1 \times 10^{-6}$ .
- Specified with 40 MHz NPR loading with one QAM16 modem in notch at 22.5 MHz.
- Assumes an initial RPT RF input reference level of 17 dBmV and the R2RRFF internal attenuator will be adjusted so the reference RF output level can be varied from 36 to 44 dBmV. For each NPR/BER performance test, the R2RRFF internal attenuator will not be adjusted once the reference RF output level is set.

## Ordering Information

### Redundant Dual Return Path Receiver

					1	2	3	4	5	6	7
C	H	P	-	R	2	R	R	F	F	-	S

  

<b>1</b>	<b>Type of Receivers</b>
R	Redundant receivers

  

<b>2</b>	<b>Number of Receivers</b>
2	Dual receivers

  

<b>3-6</b>	<b>Receiver Type</b>
RRFF	Return receiver with front fiber access

  

<b>7</b>	<b>Connector Type</b>
S	SC/APC

Note: Requires two modules for redundant operation. Must use CHP-RCL2-xx cable interconnected between modules for redundant operation.

### Redundancy Cable

										1	2
C	H	P	-	R	C	L	2	-	x	x	

  

<b>1-2</b>	<b>Length of Redundancy Cable</b>	
E0	Two inch redundancy cable	a
01	One foot redundancy cable	
05	Five foot redundancy cable	
10	Ten foot redundancy cable	
20	Twenty foot redundancy cable	
a) European installations must only use the CHP-RCL2-E0 redundant cable		

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