RF Mini Optical Receiver F-RF-RX

Technical Specification

CONTENT

1.0 PRODUCT DESCRIPTION

F-RF-RX, typical output level ⩾ 22 dBmV when the receiving optical power is -2dBm (see section 6 and 7). Receiver is generally used in FTTH applications, for residential and business applications, and may also serve as a technicians handheld tool for testing and troubleshooting. Works well for School, Hospitality and Government applications. As an RF/ Cable TV optical receiver unit, it provides a high index, low power consumption and good performance at a very low cost.

This series product adopts high sensitivity receiving tube and special low noise matching circuit. Under 3.8% modulation, when transmitting at full channel capacity and with receiving power of -10dBm, the CNR can still reach a high index of 45dB. Therefore, wwhen adopting the F-RF-RX, it requires a very low optical power to reach 45dB CNR required by the user.

The F-RF-RX optical receiver operates wwith a wwideptical input range in the 1210~1600nm wavelength.

Receiver is also capable of receiving return path 5-42MHz signals

2.0 PRODUCT FEATURES

- Extra-low noise(3.8% modulate, -10dBm receive, CNR ⩾ 45dB)
- All receiving optical power in the range of +3dBm to -12dBm offer good linearity
- In the range of 47~862MHz, excellent flatness (FL⩽± 1.0dB)
- *Expanded bandwidth capability offers return path 5-42MHz range
- Metal shell, supply safeguards to opto-electrical sensing device
- High output level can supply many users/TV's

  Low power consumption, high cost performance

3.0 MAIN APPLICATION

- FTTH
- FTTP, FTTO

4.0 STATUS INDICATOR

- Input optical power status indicator:

≤-13dB	LED off
+3dBm ~ -12dBm	Green
+3dBm	Red

5.0 Illustration

6.0 TECHNICAL INDEX

Performance Index				Supplement
Optic features				
	CATV input wavelength	(nm)	1210~1600	F-RF-RX
	Receiving power	(dB)	+3 ~ -12	
	Channel Isolation	(dB)	≥40	
	Optical return loss	(dB)	≥55	
	Optical fiber connector		SC/APC	F-RF-RX
RF features	Standard bandwidth	(MHz)	5 ~ 862	
	Flatness	(dB)	≤±1.0	
	Output level (Vo1)	(dBmV)	32	@ optical in: +3dBm
	Output level (Vo2)	(dBmV)	22	@ optical in: -2dBm
	Output level adjust	(dB)	0 ~ 18	MGC
	Return loss	(dB)	≥12	47 ~ 862MHz
	Output impedance	(Ω)	75	
	Output port number		1	
	RF tie-in		F-Female	
Link feature	Test channel	CH	59CH (PAL-D)	NTSC/80CH
	OMI	(%)	3.8	
	CNR1	(dB)	56.6	@ -2dBm input
	CNR2	(dB)	48.5	@ -8dBm input
	CTB	(dB)	≤-70	@ -2dBm input
	CSO	(dB)	≤-66	@ -2dBm input
	HUM	(dB)	≤-60	
General features	Power supply	(V)	+12VDC	±1.0V
	Power Consumption	(W)	≤2	+12VC, 100mA
	Working temp	(℃)	-20 ~ +50	
	Storage temp	(℃)	-40 ~ 85	
	Working relative temp	(%)	5 ~ 59	
	Size	(mm)	59×98×23	(W)×(D)×(H)

7.0 TEST DATA

Opt in(dBm)	+3	+2	+1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
RF out(dBmV)	32.2	30.2	28.2	26.2	24.2	22.2	20.2	18.2	16.2	14.2	12.2	10.2	8.2	6.2
CNR(dB)	60	59	58.6	57.7	56.7	55.6	54.4	53.2	51.9	50.8	49.3	48.5	46.4	45.2
CTB(dB)	66	68	70	70	70	70	72	70	68	68	66	65	65	64

CSO(dB)	65	65	65	65	65	66	68	66	65	65	65	63	63	62

Remark:1. Test condition: PAL-D59CH, OMI=3.8%

2. Built-in PAD is 0dB attenuate

3. Test sample: F-RF-RX

8.0 PRODUCT SERIES

Model	Input wavelength	Operating wavelength	Pass wavelength	Fiber connector
F-RF-RX	1310/1550nm	1250~1600nm	-	SC/APC