Ver. 1.0en

FTTx series product • H9122 Series

Technical Specification

CONTENT

1.0 PRODUCT DESCRIPTION

H9122, output level ⩾ 82dB μ V when the receiving optical power is -2dBm, is mainly used in FTTH. As RFTV broadcast network's RX unit, it is a kind of high index, Low power consumption and high cost performance RFTV optical receiver.

This series product adopts high sensitivity receiving tube and special low noise matching circuit. Under 3.8% modulation, when transmitting in full channels and with receiving power of -10dBm, the CNR can still reach high index of 45dB. Therefore, if adopting H9122, it is only need very low optical power to reach 45dB CNR required by the user.

H9122 RFTV operate in 1210~1600nm wavelength.

H9122/WF: built-in channel filter, RFTV operating in1550nm wavelength.

H9122/WD: built-in CWDM, RFTV operating in 1550nm wavelength, reach GEPON ONU through 1310/1490nm wavelength.

2.0 PRODUCT FEATURE

- Extra-low noise(3.8% modulate, -10dBm receive, CNR ⩾ 45dB)
- All receiving optical power in the range of +3dBm to -12dBm has good linearity
- In the range of 47~862MHz, all have good flatness (FL ⩽± 1.0dB)
- Metal shell, supply safeguards to opto-electrical sensing device
- High output level can supply for many users
- 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 PRINCIPLE

6.0 TECHNICAL INDEX

Performance			Index	Supplement
Optic feature	Input wavelength	(nm)	1310, 1490/1550	
	CATV work wavelength	(nm)	1250~1600	H9122
			1540~1560	H9122/WF, H9122/WD
	Pass wavelength	(nm)	1310, 1490	H9122/WD
	Receiving power	(dB)	+3 ~ -12	
	Responsibility	(A/W)	1310nm≥0.85	
			1550nm≥0.9	
	Channel Isolation	(dB)	≥40	1550 &1490nm, H9122/WF,
	Optical return loss	(dB)	≥55	
	Optical fiber connector		SC/APC	H9122/WD: LC/APC
RF feature	Work bandwidth	(MHz)	47 ~ 862	
	Flatness	(dB)	≤±1.0	
	Output level (Vo1)	(dBμV)	92	Pin: +3dBm
	Output level (Vo2)	(dBμV)	82	Pin: -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	Pin: -2dBm
	CNR2	(dB)	48.5	Pin: -8dBm
	CTB	(dB)	≤-70	Pin: -2dBm
	CSO	(dB)	≤-66	Pin: -2dBm
	HUM	(dB)	≤-60	
General feature	Power supply	(V)	+12VDC	±1.0V
	Power Consume	(W)	≤2	+12VC, 100mA
	Work temp	(℃)	-20 ~ +50	
	Storage temp	(℃)	-40 ~ 85	
	Work relative temp	(%)	5 ~ 59	
	Size	(mm)	59×98×23	(W)×(D)×(H)

7.0 TEST DATA

Pin(dBm)	+3	+2	+1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
Vo(dBμV)	92.2	90.2	88.2	86.2	84.2	82.2	80.2	78.2	76.2	74.2	72.2	70.2	68.2	66.2
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: H9122

8.0 PRODUCT SERIES

Model	Input wavelength	Operating wavelength	Pass wavelength	Fiber connector
H9122	1310/1550nm	1250~1600nm	-	SC/APC
H9122/WD	1310, 1490/1550nm	1540~1560nm	1310~1490nm	LC/APC
H9122/WF	1310, 1490/1550nm	1540~1560nm	-	SC/APC