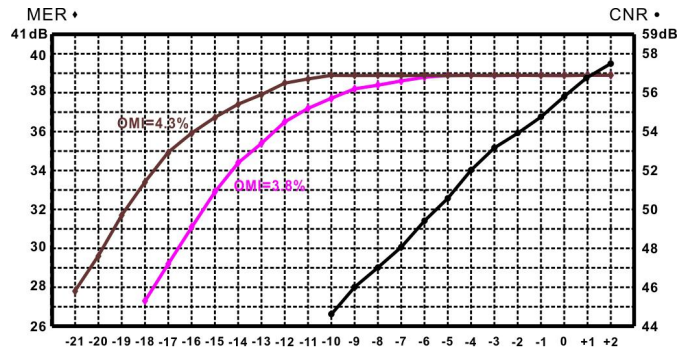


7.0 PRODUCT SERIES

Model	Input wavelength	CATV Operating wavelength	Data pass wavelength	Fiber connector	From
H9122L	1310 or 1550nm	1260~1620nm	-	SC/APC	A-Type
H9122L/WF	1310, 1490/1550nm	1540~1563nm	-	SC/APC	
H9122L/WD	1310, 1490/1550nm	1540~1563nm	1310/1490nm	LC/APC	B-Type

8.0 CNR, MER DEGRADATION TABLE



Note: 1. CNR Test conditions: 59CH PAL-D, OMI = 3.8%

2. MER test conditions: The Original Signal: MER = 39.0dB, BER < 1.0E-9,

Test Frequency: 47 ~ 862MHz Full Channel, (The Curve is: 858. 00MHz).

Red curve: OMI=3.8%

Brown curve: OMI=4.3%

3. Digital television Receiving Low Light, appropriate to increase the system modulation (OMI), can greatly improve the MER degradation.

9.0 MODEL EXPLANATION

H 9 1 22 L / □ □ - □ - □ □

FTTx receiver	Work bandwidth	RF output ports	Output level(Pin=-16dBm)	L	CWDM	Exterior	Optical Connector
H FTTH	9 47~862MHz	1 1port	22 22dBmV(82dBμV)	Low Optical receiver	NC Without	A 38×80×20 nm	LA LC/APC
P FTTP			WD Built-in WDM		LP LC/UPC		
B FTTB			WF Built-in Filter		B 50×88×22 nm	SA SC/APC	SP SC/UPC

10. NOTE

- The power adapter for this equipment: Input 220V, output DC 12V(0.6A)
- Keep the optical connector clean, the bad link will cause too low RF output level
- The built-in RF adjustable attenuator(PAD) of equipment can debug suitable level for system users .User Should not adjust by themselves, to avoid the device damage.

H9122L、H9122L/WD、H9122L/WF

FTTH Digital TV Low Optical Receiver

(Pin=-15dBm、Vo≥84dBμV、MER≥36dB)

47~862MHz



H9122L-A

User Manual

Ver. 2.7 en

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1.0 PRODUCT DESCRIPTION

Huatai H9122L, operating bandwidth of 47 ~ 862MHz, is a suitable digital television FTTH applications, ultra-low optical receiver, Whether used in analog television or digital television. Receiving at high optical power can be adjusted by PAD level, played limiting output, so H9122L within a large dynamic range of the received optical power of +2 dBm ~-22dBm, have excellent characteristics.

H9122L for Analog TV, in Pin =-10dBm when, Vo ≥ 86dB μ V, CNR ≥ 45dB.

H9122L for Digital TV, in Pin =-15dBm when, Vo ≥ 84.1dB μ V, MER ≥ 36.7dB.

H9122L for Digital TV, in Pin =-20dBm when, Vo ≥ 74.8dB μ V, MER ≥ 29.6dB.

Digital TV FTTH applications, the H9122L can save a lot of optical fiber amplifier power resources. For operators, can greatly reduce the cost of building the network. Suitable for rural power digital TV, FTTH, triple play of wide application.

H9122L optical port mode of the following three selection:

H9122L : operating wavelength 1260~1620nm.A-Type

H9122L/WD: built-in CWDM, suitable for single-fiber triple wavelength system, CATV operating wavelength 1550nm, pass wavelength 1310/1490nm, can conveniently connect the ONU of EPON, GPON.B-Type.

H9122L/WF: built-in 1310/1490nm filter, suitable for single-fiber triple wavelength system CATV operating wavelength 1550nm.A-Type

2.0 PRODUCT FEATURE

1. Extra-low noise(3.8% modulate, -10dBm receive, CNR ≥ 45dB)
2. Wide dynamic receiving optical power range: within Pin=-15, MER≥36.7dB
3. Applicable GPON, EPON, compatible with any FTTH PON technology
4. Can save a large number of optical power resource, greatly reduce the network configuration cost
5. Within 47~862MHz bandwidth, all with excellent flatness feature (FL±0.75dB)
6. Metal case, offer safeguard for optoelectronic sensitive devices
7. Low consumption, high performance, high reliability
8. Excellent cost performance in area

5.0 TEST DATA(Pin=+2.0dBm~-20dBm)

Pin (dBm)	Vo (dBμV)	MER	BER		Pin (dBm)	Vo (dBμV)	MER	BER	
			POST	PER				POST	PER
+2.0	101.6	38.9	<1.0E-9	<1.0E-9	-10.0	94.1	38.9	<1.0E-9	<1.0E-9
+1.0	99.6	38.9	<1.0E-9	<1.0E-9	-11.0	92.0	38.7	<1.0E-9	<1.0E-9
+0.0	97.7	38.9	<1.0E-9	<1.0E-9	-12.0	90.0	38.5	<1.0E-9	<1.0E-9
-1.0	98.5	38.9	<1.0E-9	<1.0E-9	-13.0	88.1	37.9	<1.0E-9	<1.0E-9
-2.0	98.6	38.9	<1.0E-9	<1.0E-9	-14.0	86.4	37.4	<1.0E-9	<1.0E-9
-3.0	98.7	38.9	<1.0E-9	<1.0E-9	-15.0	84.1	36.7	<1.0E-9	<1.0E-9
-4.0	98.7	38.9	<1.0E-9	<1.0E-9	-16.0	82.1	35.9	<1.0E-9	<1.0E-9
-5.0	98.6	38.9	<1.0E-9	<1.0E-9	-17.0	80.4	34.9	<1.0E-9	<1.0E-9
-6.0	98.4	38.9	<1.0E-9	<1.0E-9	-18.0	78.7	33.4	<1.0E-9	<1.0E-9
-7.0	98.5	38.9	<1.0E-9	<1.0E-9	-19.0	76.8	31.7	<1.0E-9	<1.0E-9
-8.0	98.5	38.9	<1.0E-9	<1.0E-9	-20.0	74.8	29.6	<1.0E-9	<1.0E-9
-9.0	96.1	38.9	<1.0E-9	<1.0E-9					

Remark: 1. Teat Signal: MER: 39.0 (dB), BER : <1.0E-9,QAM64 4CH;
2. Tx input level: 87dBμV;3. The T est Frequency: 47 ~ 862MHz

6.0 TECHNICAL INDEX

Performance		Index	Supplement
Optic feature	CATV Work wavelength	(nm)	1260~1620 H9122L (A-Type)
			1540~1563 H9122L/WF,H9122L/WD (A & B-Type)
	Pass wavelength	(nm)	1310, 1490 H9122L/WD (B-Type)
	Channel Isolation	(dB)	≥40 1550nm & 1490nm
	Responsivity	(A/W)	≥0.85 1310nm
			≥0.9 1550nm
	Receiving power	(dBm)	+2~-10 Analog TV (CNR>45dB)
			+2~-22 Digital TV (MER>29dB)
	Optical return loss	(dB)	≥55
	Optical fiber connector		SC/APC H9122L, H9122L/WF
		LC/APC H9122L/WD	
RF Feature	Work bandwidth	(MHz)	47 ~ 862
	Flatness	(dB)	±0.75 47~862MHz
	Output level	(dBμV)	>90 AnalogTV (Pin=-8dBm)
			>82 Digital TV (Pin=-16dBm)
	Output level adjust	(dB)	0~18 MGC
	Return loss	(dB)	≥14 47 ~ 862MHz
	Output impedance	(Ω)	75
	Output port number		1
	RF tie-in		F-Female
	Analog TV Link Feature	Test channel	(CH)
OMI		(%)	3.8
CNR1		(dB)	54..1 Pin=-2dBm
CNR2		(dB)	45.2 Pin=-10dBm
CTB		(dB)	≤65 Pin: 0~-10dBm
DigitalTV Link Feature	CSO	(dB)	≤65 Pin: 0~-10dBm
	OMI	(%)	4.3
	MER	(dB)	≥36 Pin=+15dBm ≥29 Pin=-20dBm
BER	(dB)	<1.0E-9 Pin:+2~-14dBm	
General feature	Power supply	(V)	DC+12V ±1.0V
	Power Consume	(W)	≤5.5 +12VDC,210mA
	Work temp	(°C)	-20 ~ +55
	Storage temp	(°C)	-40 ~ 85
	Work relative temp	(%)	5 ~ 95
	Size	(mm)	38×80×20 A-Type
50×88×22 B-Type			