

WF-1100KLE Bidirectional Amplifier

1. Product Summary

Outdoor trunk bidirectional amplifier is mainly used for bidirectional trunk transmission of CATV television image signal, digital TV signal, telephone voice signals and data (or compressed data) signal. Advanced and mature circuits, scientific and reasonable process structures and high quality materials, ensure the excellent performance. It is the first choice equipment to build large or middle-sized CATV bidirectional transmission network.



2. Performance Characteristics

- 1003MHz bandwidth design.
- Forward path: The pre-stage adopts GaAs MMIC, output stage adopts the newest imported high index power doubler module, achieve high output level, low distortion and high SNR.
- It is more convenient to debug because of the plug-in duplex filter, equalizer, attenuator, output tap and the scientific and reasonable on-line detection ports.
- The equipment can long time continuous work steadily under outdoor bad environmental condition. Because of the aluminum waterproof housing, high reliability switching power supply and strict lightning protection system.

3. Technique Parameter

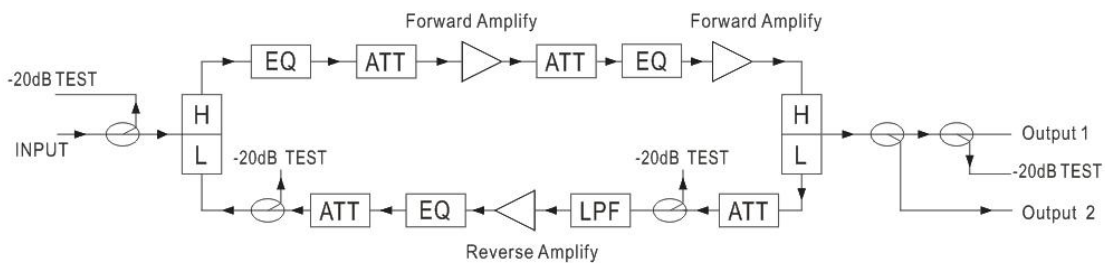
Item	Unit	Technical Parameter	
Forward Path			
Frequency range	MHz	45 (87) ~ 862/ 1003 (optional)	
Rated gain (@FZ110)	dB	32 (pre-stage adopts low gain MMIC)	38 (pre-stage adopts high gain MMIC)
Rated input level	dBμV	72	70
Rated output level	dBμV	102	108(EQ6dB)
Flatness in band	dB	±0.75	±0.75
Noise figure	dB	≤10	≤10
Return loss	dB	≥16	
C/CTB	dB	≥70	≥66
C/CSO	dB	≥67	≥64
Group delay	ns	≤10 (112.25 MHz/116.68 MHz)	
Signal to hum ratio	%	< 2	

Gain stability	dB	-1.0 ~ +1.0
Return Path		
Frequency range	MHz	5 ~ 65(or specified by user)
Rated gain (@FZ110)	dB	24 (Different modules, different gain. Can be specified by the users.)
Maximum output level	dB μ V	110
Flatness in band	dB	$\leq \pm 0.75$
Noise figure	dB	≤ 8
Return loss	dB	≥ 16
Signal to hum ratio	%	< 2

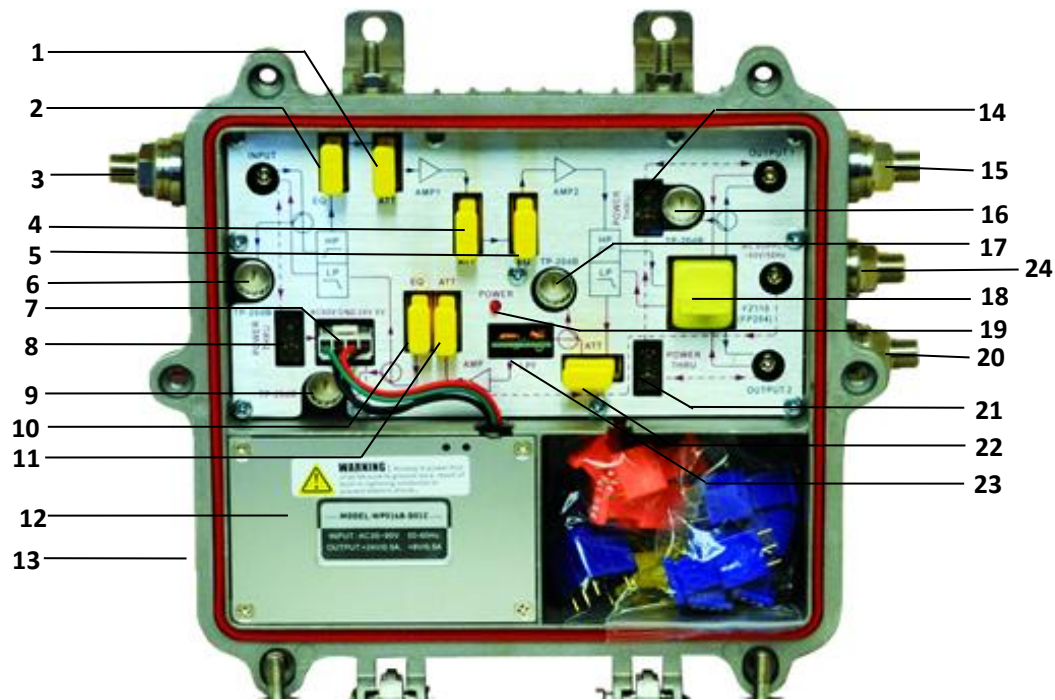
General Performance		
Characteristic impedance	Ω	75
Power supply voltage	V	A: AC (150~250)V; B: AC (35~90)V
Impulse withstand voltage	kV	> 5 (10/700 μ s)
Power consumption	W	≤ 20
Dimension	mm	220 (L)* 205 (W)* 65 (H)

Note: The parameters of this manual are measured when adopting imported NEC module. Use other module, the indexes will be a little different. Attention when use!

4. Block Diagram



5. Structure Diagram



1. Forward path ATT inserter	2. Forward path EQ inserter
3. RF input	4. Forward path ATT inserter
5. Forward path EQ inserter	6. Input RF test (-20dB)
7. Power interface	8. Power-pass inserter
9. Return path output RF test (-20dB)	10. Return path EQ inserter
11. Return path ATT inserter	12. Switching power supply
13. Power cord in (AC220 power supply)	14. Power-pass inserter
15. RF output 1	16. Output RF test (-20dB)
17. Return path RF test (-20dB)	18. FZ110 or FP204
19. Working indicator	20. RF output 2
21. Power-pass inserter	22. Return path ATT inserter
23. Low pass filter	24. 60V feed port (AC60V power supply)


6. Notes

1. Strictly control the output level when use. When there are too many channels or concatenations, the output level should be appropriately reduced to ensure the transmission quality. Generally speaking, a dozen programs can be controlled in about 93 ~ 105dB μ V.
2. Please rational use the EQ inserter to ensure the flatness of long-distance transmission and the low-frequency side SNR.
3. Strictly waterproof when use in outdoor. Please tighten the cover screws.
4. B type (AC60V power supply) equipment is strongly recommended to use power supply with overcurrent, overvoltage and lightning protection device.
5. Please pull off the overcurrent fuse when no need overcurrent! Check if there is short circuit first when need overcurrent!

Repair items: The product installed or maintained by professionals.

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Hangzhou Prevail Optoelectronic Equipment Co., Ltd

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