



TKS1200AOA-RP
Ultra-thin Modular Bi-directional Amplifier



1. Product Summary

TKS1200AOA-RP 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 (1218MHz bandwidth optional).
- Forward path: The pre-stage adopts GaAs MMIC; Return path: MMIC or module (optional). The 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 ultra-thin modular aluminum waterproof housing, high reliability switching power supply and strict lightning protection system.

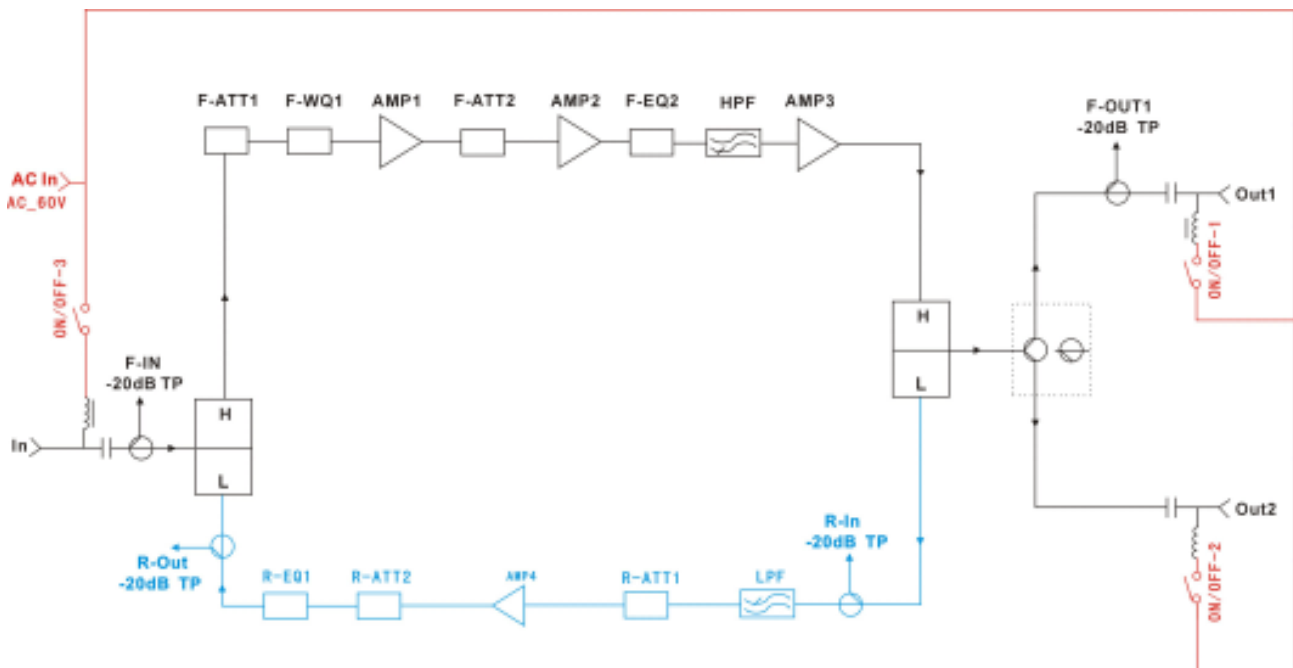
3. Technique Parameter

Item	Unit	Technical Parameter	
Forward Path			
Frequency range	MHz	87 ~ 1003/1218 (optional)	
Rated gain (@FZ110)	dB	30	38
Rated input level	dBμV	72	72
Rated output level	dBμV	102	110
Flatness in band	dB	±0.75	±0.75
Noise figure	dB	≤10	≤10
Return loss	dB	≥16	
C/CTB	dB	≥ 72	≥ 70
C/CSO	dB	≥ 70	≥ 68
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	
Rated gain	dB	20/24	
Maximum output level	dBμV	110	

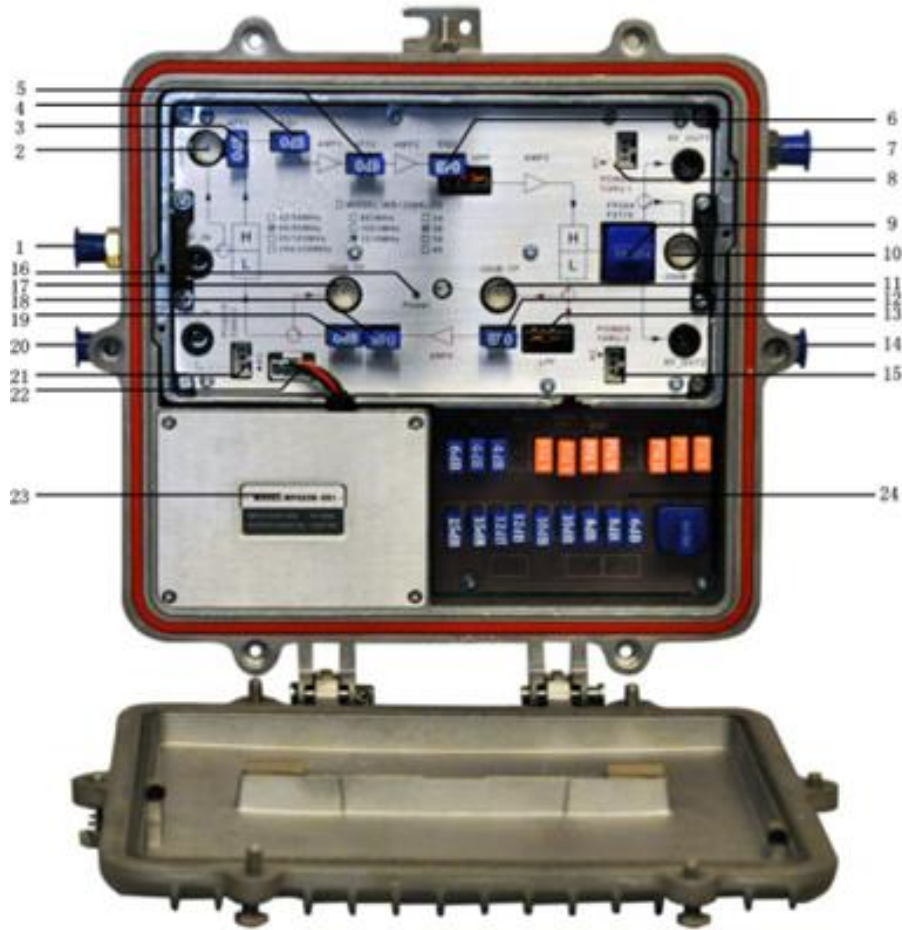
Flatness in band	dB	$\leq \pm 0.75$
Noise figure	dB	≤ 8
Return loss	dB	≥ 16
Signal to hum ratio	%	< 2
General Performance		
Characteristic impedance	Ω	75
Power supply voltage	V	AC: (35 ~ 90)V
Impulse withstand voltage	kV	> 5 (10/700 μ s)
Power consumption	W	≤ 20
Dimension LxWxH	mm	290 x 265 x 75

Note: The parameters of this manual are measured when adopting imported ACA2788 module. If use other module, the indexes will be a little different. Attention when use!

4. Block Diagram



5. Structure Diagram



- | | |
|--|--|
| 1. RF input | 2. Input RF test port (-20dB) |
| 3. Forward path ATT inserter | 4. Forward path EQ inserter |
| 5. Forward path ATT inserter | 6. Forward path EQ inserter |
| 7. RF output port1 | 8. Power-pass inserter |
| 9. FZ110 or FP204 | 10. RF output test port (-20dB) |
| 11. Reverse path RF input test port (-20dB) | 12. Reverse path ATT inserter |
| 13. LPF | 14. RF output port2 |
| 15. Power-pass inserter | 16. Working indicator |
| 17. Reverse path RF output test port (-20dB) | 18. Reverse path ATT inserter |
| 19. Reverse path EQ inserter | 20. 60V feed port (AC60V power supply) |
| 21. Power-pass inserter | 22. Mainboard power interface |
| 23. Switching power supply | 24. Accessories rack |