

- 4 output customer premises amplifier
- Excellent CSO/CTB specifications for downstream signals
- Extremely high intermodulation specifications for upstream signals
- Complies with EN Class A screening requirements
- **■** Excellent RF specifications



Overview

The FRA-752X is a DOCSIS 3.1 compliant 1.218 MHz high quality in-home amplifier with 4 active outputs. It also has an active return path with 2 dB amplification. It has a 65/85 MHz band-split designed to handle high channel loading with excellent intermodulation performance.

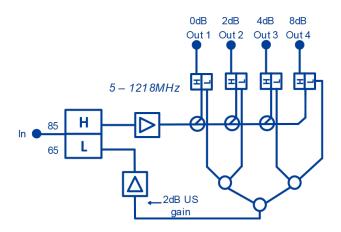
The downstream amplification is incremented per port to support different cable lengths. Modem Safe™ technology protects the amplifier and all connected devices against surge pulses. The high port-to-port isolation and excellent spurious suppression capabilities prevent high level modem signals interfering with radio or TV signals.

This amplifier is designed for applications requiring graduated gain configurations.

Modem Safe™

Modem Safe is a highly effective surge protection solution for sensitive network and in-home CPE. Based on passive circuits, the technology does not rely on discharge tubes, extending the lifespan of the solution.

- Blocks high and low voltage pulses and unwanted DC voltages
- Prevents internal ferrites within the product from becoming magnetised (avoiding deterioration in the performance of CPE)
- Drives fewer reported faults
- Improves customer service
- Reduces truck rolls





Description		MHz	Min	Max	Тур	
Frequency range	Forward path	85 - 1218				
. , -	Return path	5 - 65				
Return loss (dB) ¹	In	5 - 65	18.0			
		85 - 1218	18.0			
	Port 1,2,3,4	5 - 65	18.0			
		85 - 1218	18.0			
Isolation (dB)	Port -> Port	5 - 10	22.0			
		10 - 15	30.0			
		15 - 65	35.0			
		85 - 862	26.0			
		882 - 1218	25.0			
Ripple (dB)	Forward path	85 - 120		+/-1.0		
		120 - 1000		+/-0.75		
		1000 - 1218		+/-1.5		
	Return path	5 - 65		+/-1.0		
Gain (dB)	In -> port 1	85 - 1218			0.0	
	In -> Port 2				2.0	
	In -> Port 3				4.0	
	In -> Port 4				8.0	
	Port 1,2,3,4 -> In	5 - 65			2.0	
Noise figure (dB) ^{2,3}	Forward path	85 - 120		7.0	6.0	
		120 - 1218		6.0	5.0	
	Return path	5 - 65		18.0	14.0	
Nominal Input Level				77dBμV		
Forward Path Distortion	CSO@(77+Gain)dBµV ⁴			-63dBc		
	CTS@(77+Gain)dBµV ⁵			-63dBc		
Reverse Path Distortion (in band) ⁶	Second order IMA (2-tone) @115dBµV input			-50dBc		
	Third order intermodulation distortion (2-tone)@115dBµV input			-50dBc		
Spurious / Oscillation ⁷		5 - 65		20dBμV		
		85 - 1218				
Group delay ⁸	2MHz	5 - 10		30ns		
,	2MHz	10 - 65		10ns		
	4.43MHz	85 - 120		20ns		
	4.43MHz	120 - 1218		10ns		
Surge Protection 9	On input		1KV			
Galvanic Isolation 2120V DC 10	Inner conductor input ->			0.7mA		
	Inner conductor Output					
Galvanic Isolation 230V AC ¹¹	Inner conductor input ->			8.0mA		
	Inner conductor Output			RMS		
Screening Effectiveness ¹²	Class A	5-30	85dB			
		30-300	85dB			
		300-470	80dB			
		470-1218	75dB			
Connectors	In / Port 1,2,3,4		F-fen	nale		
	Power	Via F-Female connector				
Material	Housing	Aluminium die-cast, conductive chromate finish				
	F-spring	NiSn plated Beryllium copper				
Temperature range (°C)	Operating		0°C to +40°C			
Power Consumption			2 W			

Remarks		
1	Where frequency is above 40 MHz, deduct 1.5 dB/octave	
2	From input to port 1,2,3,4 (downstream)	
3	From port 1,2,3,4 to input (upstream)	
4	IEC 60728-3 §4.2.3	
5	IEC 60728-3 §4.2.2	
6	IEC 60728-3 §4.8	
7	To be measured on all in and output ports. All ports terminated. Measuring method – spectrum analyser, no additional signals connected	
8	IEC 60728-3 §5.9	
9	IEC 60728-3 §5.9	
10	IEC 60728-11 §10	
11	IEC 60728-11 §10	
12	IEC 60728-2	

Order Details

Itemcode	Legacy Code	Information	
19008723	FRA-752X	Includes a	
		cover and a	
		power supply.	
19011515	POWER	Power supply	
	SUPPLY	for FRA-752X	

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