

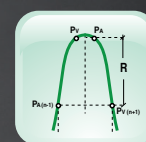
# SZB Series

Modular Headend amplifier  
channel TV and Radio

TV amplifiers single-channels,  
multichannels, modulators and  
Sat-IF combiner ready for digital  
dividend.



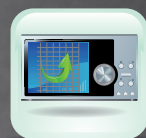
Rejection LTE frequencies



High Selectivity



Gain adjustment.  
Interstage attenuators



High output level



Toolless mounting

*Maximum reliability for 25 years*

## Main Features

### TV Single-channel, FM Radio and DAB Amplifiers

- TV single-channel and multichannel amplifiers, the last ones especially created for amplification of combined analog and digital channels. Z input de-multiplexing and Z output multiplexing. Adjacent channel operation allowed in UHF band.
- FM Radio and DAB Amplifiers.
- It is advisable to place the amplifiers on the base-plate following an increasing order of number of channel (frequency). The RF output of the headend will be taken from the last one of the modules ordered in this way.

Model		SZB-129	SZB-128	SZB-168	SZB-139	SZB-148 *
Ref.		2294	2293	3160	3152	2246
Bandwidth		FM	FM	DAB	1 channel BIII <sup>1</sup>	1 channel UHF <sup>2</sup>
Gain <sup>3,4</sup>	dB	57	30	53	56	52
Noise figure	dB	4	7,5	8	7	9
Output level EN 50083-3, -35dB	dB $\mu$ V		(2x) 113 IMD -50dB			(2x) 121
Z output return loss	dB			$\geq 6$		
Consumption	mA	100	80		100	
Dimensions	mm			190 x 38 x 87		

\* SZB-148 is for general use. **High Selectivity.** Amplification of one analog or digital UHF channel, either non-adjacent or adjacent.

<sup>1</sup> Also 1 channel S3 to S20.

<sup>2</sup> Also 1 channel S21 to S38.

<sup>3</sup> **Adjustable** -20 dB (-30 dB in SZB-148). Interstage attenuator in all models —maintenance of low noise figure—

<sup>4</sup> Subtract 3.5 dB if Z input demultiplexing is used.

Each amplifier is packed with 1 Z bridge Ref. 2247

### Multichannel UHF Amplifier

- Especially created for amplification of combined analog and digital channels. Z input de-multiplexing and Z output multiplexing. Adjacent channel operation allowed in UHF band.
- Power Supply modules, dimensions: 215x35x140 mm. Output voltage +24 VDC is automatically connected to the RF modules through a connecting bar at the base-plate.

Model		SZB-180		
Ref.		2248		
Bandwidth		factory set to: 2 channels UHF	factory set to: 3 channels UHF	factory set to: 4 channels UHF
Gain <sup>1,2</sup>	dB		60	
Noise figure	dB		5	
Output level EN 50083-3, -35dB	dB $\mu$ V	(2x) 118	(2x) 116	(2x) 115
Z output return loss	dB		$\geq 6$	
Consumption	mA		100	
Dimensions	mm		190 x 38 x 87	

<sup>1</sup> **Adjustable** -20 dB. Interstage attenuator in all models —maintenance of low noise figure—

<sup>2</sup> En los de UHF, la cifra de ganancia que se indica es válida tanto si se utiliza demultiplexado como si no (sin demultiplexado, el conector de entrada que queda libre debe cargarse con 75 $\Omega$ ).

Particular ordering instruction: Specify the TV channels.



#### HEADQUARTERS

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Miembro de la Asociación de Marcas Renombradas Españolas

## Programmable TV modulators

- Double Side Band.
- Microprocessor controlled. Access to adjustments and programming can be easily achieved through the SPI-300 programming-unit.
- Designed to deliver a very low broadband noise floor so several SZB-400's can be simply combined together through the two directional RF output ports provided, then fed into a broadband amplifier as the final driver. Only 1 channel gap required.
- One single channel RF output from each modulator, or one multichannel RF output by installing the concentration line. The free output ports need to be terminated using a 75Ω terminator.

Model		SZB-430	SZB-440
Ref.		2238	2239
Selectable TV channel located between:		146 - 470	470 - 890
Selectable TV system (DSB)		B, G, D, K, I, L, M, N	
Audio mode		Mono	
Output level (adjustment potentiometer)	dBμV	65 to 75	
Relación ajustable nivel portadoras	dB	10 to 18	
Video input level	Vpp	0.7 ... 1.4	
Adjustable video modulation depth	%	75 to 85	
Audio input level	Vpp	0.4 ... 4	
Audio input impedance	Ω	600	
Adjustable audio modulation depth	%	10 to 80 (System L)	
Applicable group delay pre-correction		complying with B/G standards	
Weighted S/N ratio	dB	> 60	
Spurious in band	dBc	< -60	
Broadband noise (ΔB = 5 MHz)	dBc	< -60	
Output loop-through loss	dB	≤ 0.8	
Consumption at +24 Vdc	mA	110	
Video connector		(1x) female F	
Audio connector		(1x) female RCA	
RF output connector (TV channel)		(2X) female F	
Programming-Unit connector		USB type	

## Sat-IF Combiner/Amplifier

- Preferential use with the SZB, MZB and MZ6 terrestrial single-channel processing headends. Mounting as any other module.
- 1 satellite input 950-2150 MHz with adjustable gain and sloped response to compensate for cable loss; 1 terrestrial coupling input 5-862 MHz; 1 satellite+terrestrial output.
- Automatic power connection, either via contact terminal (SZB application) or via terrestrial coupling input port (MZB applications).
- LNB coax line powering. The SZB-190 generates the required voltage/tone signals for the selection of H/V polarisation and high/low frequency sub-band.
- Programmable values by micro-switches.

Model		SZB-190
Ref.		1346
Sat-IF Band	MHz	950 - 2150
Gain (7 dB fixed slope)	dB	33 (950 MHz) 40 (2150 MHz)
Gain adjustment	dB	18
Output level (IMD -35dB, EN 50083-3)	dBμV	120
Noise figure	dB	< 8
Terrestrial band	MHz	5 - 862
Terrestrial coupling loss	dB	< 1
Operating voltage	VDC	+ 24
Consumption	mA	120
Insertable voltage/tone to Sat-IF input port		+13 / +18 VDC 0 / 22 kHz
Max LNB power current	mA	350 (at +18 VDC) / 250 (at +13 VDC)



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