



■ Europe: LNBs for Satellite Broadcast

◆ Features

- (1) Wide band type receiving all broadcasting channels (analog & digital) in Europe. [Universal LNB]
- (2) Originally developed feed-horn waveguide makes the wide-band, low-noise characteristics possible.
- (3) One of the industry's most compact and lightweight package.
- (4) Low dissipation current design for energy saving. [95 mA (TYP.): BS1K2EL100A]

◆ Specifications

Destination	Europe, Astra/Eutelsat Satellite etc.			
Receiving polarization	Horizontal/Vertical polarization			
Model No. <Type>	BS1K1EL500A <4-output>	BS1K2EL400A <4-output>	BS1K2EL200A <2-output>	BS1K2EL100A <1-output>
Input frequency (GHz)	10.7 to 11.7 [Low band], 11.7 to 12.75 [High band]			
Output frequency (MHz)	950 to 1 950 [Low band], 1 100 to 2 150 [High band]			
Local oscillation frequency (GHz)	9.75 [Low band], 10.6 [High band]			
NF (dB)	0.4 (TYP.)			0.3 (TYP.)
Conversion gain (dB)	56 (TYP.)		58 (TYP.)	
Phase noise (dBc/Hz)	-55 (TYP.) at 1 kHz		-80 (TYP.) at 1 kHz	
Cross-polar discrimination (dB)	25 (TYP.)			
Supply voltage (V DC) (Polarization switching)	Vertical polarization		11.5 to 14.0 (0/22 kHz)	
	Horizontal polarization		16.0 to 19.0 (0/22 kHz)	
Dissipation current (mA)	200 (TYP.)/250 (MAX.)	135 (TYP.)/300 (MAX.)	200 (TYP.)/250 (MAX.)	95 (TYP.)/120 (MAX.)
Waveguide	Feed-horn (F/D = 0.6)			
Output impedance (Ω)	75			
Output connector (F-type)	4-output (H/H, H/L, V/H, V/L)	4-output (H/V, High and low switching)	2-output (H/V, High and low switching)	1-output (H/V, High and low switching)
Outline dimensions (W) × (D) × (H) (mm)	150 × 70 × 60	159 × 70 × 60	153 × 60 × 60	101 × 60 × 60
Weight (g)	Approx. 190	Approx. 200	Approx. 145	Approx. 75



Notice
In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.



■ Digital DBS Front-End Units

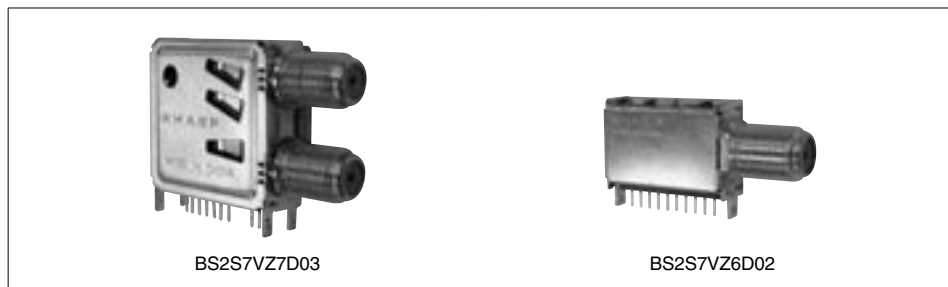
◆ Features

- (1) Equipped with a high-performance direct conversion IC. Reliability is improved by reducing power consumption and component counts.
- (2) Wide-band reception design also covering CS broadcast band. [Input frequency: 950 to 2 150 MHz]
- (3) User support tools can be provided. [Sample/evaluation boards and software are available.]

◆ Standard Specifications <IQ output type>

Destination	Global (ISDB-S/DVB-S2/ABS-S)	
Input type	1-input/1-loop through output	1-input
Model No.	BS2S7VZ7D03	BS2S7VZ6D02
Input frequency (MHz)	950 to 2 150	
Input signal level (dBm)	-65 to -25	
Base band frequency bandwidth (MHz)	5 to 40, 2 MHz step (BB LPF)	
RF input local leak (dBm)	-68 and below	
Output type	I/Q	
Noise figure (dB)	6 (TYP.)	
Phase noise (dBc/Hz)	-88 (TYP.) at 10 kHz offset	
Supply voltage (V DC)	3.3	
LNB power supply	DC 25 V, 400 mA (MAX.)	
Input impedance (Ω)	75	
Outline dimensions (mm)	30.4 (W) × 29.4 (D) × 12.9 (H)	25.2 (W) × 17.4 (D) × 8.7 (H)

※ Low-profile type is also available.



BS2S7VZ7D03

BS2S7VZ6D02

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■ Front-End Units for ISDB-T/S

◆ Features

- (1) Low phase noise characteristics, high elimination of adjacent channel interference.
- (2) Compact, low power consumption.

◆ Standard Specifications

Destination	Japan (ISDB-T/S)					
Model No.	VA4S5JD2358		VA4S6JD2359		VA4S7JD2371	
	Digital terrestrial	Digital satellite	Digital terrestrial	Digital satellite	Digital terrestrial	Digital satellite
Number of tuners	1	1	2	2	3	3
Input frequency (MHz)	93 to 767	950 to 2 150	93 to 767	950 to 2 150	93 to 767	950 to 2 150
Output type	DIF	I, Q	DIF	I, Q	DIF	I, Q
Noise figure (dB)	4 (TYP.)	5 (TYP.)	4 (TYP.)	5 (TYP.)	4 (TYP.)	5 (TYP.)
Phase noise (dBc/Hz)	-87 (TYP.) at 10 kHz offset	-85 (TYP.) at 10 kHz offset	-87 (TYP.) at 10 kHz offset	-85 (TYP.) at 10 kHz offset	-87 (TYP.) at 10 kHz offset	-85 (TYP.) at 10 kHz offset
Supply voltage (V DC)	1.8, 3.3, 5	3.3	1.8, 3.3, 5	3.3	1.8, 3.3, 5	3.3
Power consumption (W)	0.9	0.7	1.4	1.2	1.9	1.8
Outline dimensions (mm)	41 (W) × 34 (D) × 8.75 (H)					



■ Front-End Units for DVB-T2/DTMB

◆ Features

- (1) Low phase noise characteristics, high elimination of adjacent channel interference.
- (2) Compact, low power consumption.
- (3) Other types are available with various chassis forms (vertical or horizontal type) and input connectors (F or DIN type), etc.

◆ Standard Specifications

Destination	Europe/Asia (DVB-T2), China (DTMB)		
Model No.	VA4M1DX2331	VA4M1DX2323	VA4M2DX2194
Input frequency (MHz)	51 to 868		47 to 868
Output type	DIF	DIF (Off through)	DIF (Dual output)
Noise figure (dB)	5 (TYP.)		
Phase noise (dBc/Hz)	-90		
Supply voltage (V DC)	3.3, 1.8		5, 3.3, 1.8
Power consumption (W)	0.49		1.13
Outline dimensions (mm)	24.2 (W) × 25.8 (D) × 8 (H)		41.3 (W) × 37.5 (D) × 12.3 (H)



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■ Front-End Units for Digital Terrestrial and Analog Terrestrial Broadcasting

◆ Features

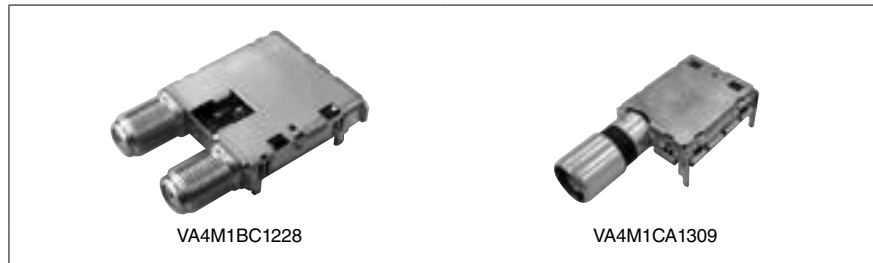
Contributing to the development of thinner LCD TVs and similar products by combining compatibility with digital and analog terrestrial broadcasts into a single unit.

◆ Standard Specifications

Destination	Brazil	China*1
Model No.	VA4M1BC1228	VA4M1CA1309
Input frequency (MHz)	47 to 866	
Output type	IF	
Digital IF bandwidth (MHz)	6	8
Phase noise (dBc/Hz)	-90 (TYP.) at 10 kHz offset	
Supply voltage (V DC)	3.3	
Noise figure (dB)	4 (TYP.)	
Channel selection system	PLL (I ² C-bus)*2	
Outline dimensions (W) × (D) × (H) (mm)	30 × 28 × 7.5	26.2 × 20 × 10.6

*1 Built-in isolator type

*2 I²C-bus is a trademark of Philips Corporation.



◆ Features

Universal specifications compatible with various broadcasting systems all over the world.

Digital: DVB-T/T2, DVB-C, ATSC, ISDB-T, DTMB

Analog: NTSC-M/N, PAL-B/G/I/DK, SECAM-L, L'

◆ Standard Specifications

Destination	Global
Model No.	VA4M1DB1370
Input frequency (MHz)	47 to 868
Output type	IF
Noise figure (dB)	4 (TYP.)
Phase noise (dBc/Hz)	-90 (TYP.)
Supply voltage (V)	3.3
Outline dimensions (W) × (D) × (H) (mm)	27 × 14 × 7.5



※ Contact SHARP for custom design product.
(For connector shape or facing side, analog output format, etc.)

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■ Tuner Module for Multimedia Broadcast Reception

◆ Features

- (1) Compact and thin design: 6.7 × 6.7 × 1.0 mm
- (2) Capable of receiving digital terrestrial broadcasts such as One-seg or Full-seg.
- (3) Output interface: TS or SPI output



◆ Standard Specifications

Destination	Japan
Model No.	VA3D5JZ714
Input frequency (MHz)	90 to 108 207.5 to 222 470 to 710
Supply voltage (V)	1.1, 1.8, I/O: 1.8
Power consumption (mW)	80 (When receiving One-seg broadcasting) 135 (When receiving V-High multimedia broadcasting) 145 (When receiving Full-seg broadcasting)
Operating temperature range (°C)	-20 to +65
Control I/F	I ² C-bus*1
Outline dimensions (mm)	6.7 × 6.7 × 1.0

*1 I²C-bus is a trademark of Philips Corporation.

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■ One-Seg Tuner Module

◆ Features

- (1) High sensitivity: -100 dBm (13 seg, QPSK CR: 2/3)
- (2) Compact and thin design: 5.4 × 5.4 × 1.0 mm
- (3) Low power consumption: 41 mW (with software power control)
- (4) Output interface: TS serial output



◆ Standard Specifications

Destination	Japan
Model No.	VA3A5JZ967
Input frequency (MHz)	470 to 770 (UHF: 13 to 62)
Input signal level (dBm)	-100 (13 seg, QPSK CR: 2/3)
Supply voltage (V DC)	1.2 (RF) 1.2 (OFDM Core) 1.62 to 3.6 (I/O)
Power consumption (mW)	41 (TYP.)
Operating temperature range (°C)	-20 to +65
Control I/F	I ² C-bus ^{*1}
Outline dimensions (mm)	5.4 (W) × 5.4 (D) × 1.0 (H)

*1 I²C-bus is a trademark of Philips Corporation.

■ Digital Terrestrial Front-End Unit with EWBS

◆ Features

- (1) Reduced power consumption with use of One-seg broadcasting system
- (2) Compact size for simple assembly



◆ Standard Specifications

Product name	Digital terrestrial front-end unit with EWBS
Destination	Japan/Global (common)
Model No.	VA4M1FB0337
Reception bandwidth (MHz)	6/7/8
Reception frequency range (MHz)	Full-seg tuner: (54 to 864), EWBS module: UHF (470 to 862)
Standby power consumption (mW)	Full-seg tuner: 690 (TYP.), EWBS: 63 (TYP.)
Communication system	I ² C
Power supply (V)	Full-seg tuner: 3.3, EWBS: 3.3, 1.2
Outline dimensions (mm)	34 × 40.5 × 7.8

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