

DS303C

NEW

Digital TV Signal Generator

General

The DS303C is a multi signal generator for terrestrial digital TV broadcasting. If assembled together with the optional units, it can output signals compatible with terrestrial digital TV broadcasting systems used in countries around the world, including ATSC in North America, DVB in Europe, ISDB in Japan, and DTTB in China.



Using an optional modulation methods, it can also output signals for different types of terrestrial digital TV broadcasting. This makes it possible to handle different TV broadcasting systems without the need to prepare different signal generators for different TV broadcasting systems.

Features

The DS303C is a multi signal generator for terrestrial digital TV broadcasting in worldwide.

Supports multi terrestrial digital TV broadcasting systems

ATSC, SCTE (USA QAM, Annex B), DVB-C (Annex A), ISDB-T (including 1 segment), ISDB-C (Annex C), DVB-T, DTTB (China, GB20600-2006)

The DS303C consists of TS SG unit, Modulation unit, and Up Converter unit

TS SG Unit: Generates moving pictures and test patterns for each modulation system
TS output from its internal HDD or the external HDD connected via USB.

NOTE: We do not guarantee the performance of the equipments connected via USB

Modulation Unit: Up to 8 different modulation systems can be installed into a unit

Up Converter Unit: Generates RF signals from 35MHz to 955MHz

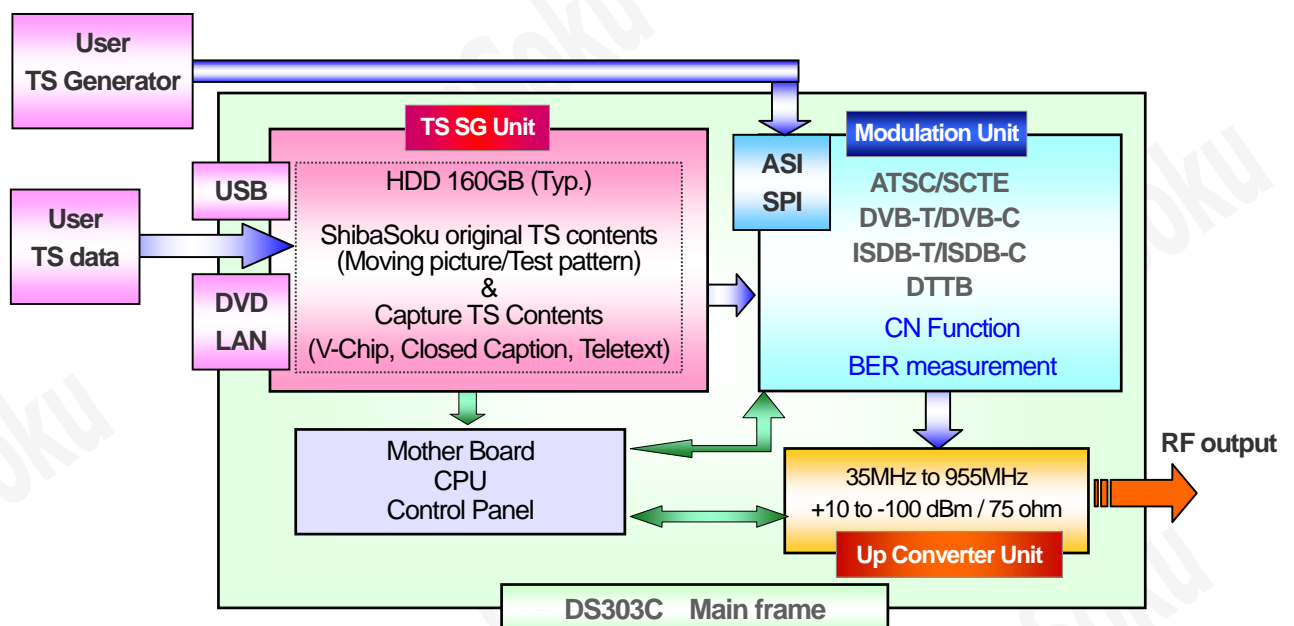
Noise signal can be added. (C/N 0.0 to 30.0dB, 0.1dB step)

BER (Bit Error Rate) measurement is available.

TS-Remux for ISDB-T system can be executed by external PC software.

If a power amplifier (optional RA series) is added to the DS303C, a centralized TV signal generator system can be established.

System Configurations



Specifications

Main Frame		Modulation (Options)	
REF output signal		ATSC	DS303C210, ATSC/A53 standard
Connector	BNC-J/ 50 ohm	ISDB-T	DS303C211, ARIB STD-B31
Frequency	10 MHz within 0.1ppm (It follows the input signal at an External input mode)	DVB-T	DS303C212, ETSI EN 300744
Level	0.9Vp-p (Typ.), sine wave	DTTB	DS303C215, SAC GB20600-2006
REF input signal		SCTE	DS303C220, ANSI/SCTE 07, ITU-T Recommendation J.83 Annex B
Connector	BNC-J/ 50 ohm	ISDB-C	DS303C221, ITU-T Recommendation J.83 Annex C
Frequency	10 MHz	DVB-C	DS303C222, ETSI EN 300429, ITU-T Recommendation J.83 Annex A
Level	0.8 to 1.1Vp-p, sine wave		
Monitoring functions		Up Converter Unit (Optional DS303C300)	
Fan monitor, power failure, Alarm of each optional unit.		IF input signal	
TS SG Unit (Optional DS303C100)		Connector	BNC-J/75ohm
Output signal	DVB-SPI (Conforms to EN50083-9)	Frequency	44 MHz
Drives	DVD drive and HDD (80 GB or more)	Level	-15 dBm, Typical
Interfaces	USB, LAN, Serial (for UPS connection)	RF output f signal	
Compatible stream		Connector	BNC-J/75 ohm
Compliant with ISO/IEC 13818-1, MPEG-2 system, and MPEG2-TS		Frequency	35 to 955 MHz (1Hz step)
Transmission rate	0.5 to 60 Mbps (depends on TS contents)	Frequency Accuracy	within 0.1ppm (at +25 degree C) within 0.2ppm (at +5 to +40 degree C)
Packet length	188/204/208 bytes	Level	+10 to -100 dBm (0.1 dB step)
TS Play mode	Normal, Cycle, Repeat	Level Accuracy	within 2dB for +10dBm to -50dBm within 3dB for -50.1dBm to -100dBm
TS Contents		Spurious	Less than -60dBc (at 0dBm output, except harmonic wave)
Moving picture		Monitor output signal	
Signal name	Fujisan	BNC-J/75ohm (About -20dB from the RF output)	
Systems	HDTV 1080i SDTV 576i for DVB-T/DTTB system	Remote control option (Optional DS303C001)	
Natural still picture		RS232C, GP-IB, GPI	
Signal name	Dining Table	General specifications	
Systems	HDTV 1080i SDTV 576i for DVB-T/DTTB system	Operating temperature	
Test signal		5 to 40 degree C, 20 to 85%RH (non dewing)	
Signal name	Colorbar	Power supply	
Systems	HDTV 1080i SDTV 576i for DVB-T/DTTB system	AC100 to 240 V, 50/60 Hz	
Modulation Unit (Option DS303C200)		Power consumption	
Input signal	DVB-SPI (Conforms to EN50083-9) DVB-ASI (Conforms to EN50083-9)	Max. 250 VA	
IF output signal		Dimensions	
Connector	BNC-J/75ohm	426(W) x 149(H) x 460(D) mm	
Frequency	44 MHz +/-200 kHz (1 Hz step)	Weight	
Level	-15 dBm, Typical	17 kg or less (within TS SG, modulation and up converter unit)	
Additional functions			
CN function (0.0 to 30.0dB, 0.1dB step)			
BER measurement			
NOTE: CN and BER function is available for ATSC, DVB-T, ISDB-T, and DTTB system.			
PRBS signal can be generated			
IF signal polarity switchable			



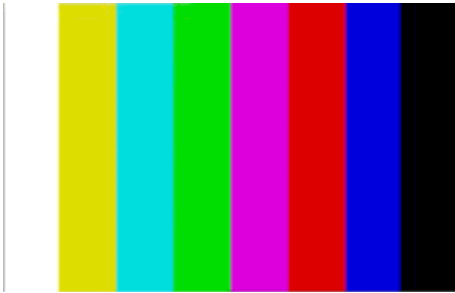
TS Contents



Moving Picture (Fujisan)
HDTV 1080i
SDTV 576i for DVB-T/DTTB



Natural Still Picture (Dining Table)
HDTV 1080i
SDTV 576i for DVB-T/DTTB



Test Signal (Colorbar)
HDTV 1080i
SDTV 576i for DVB-T/DTTB

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