ShibaSoku®

RT83B

TELEVISION INSTRUMENTS

MULTICHANNEL SIGNAL GENERATOR

General

The RT83B is a multichannel signal generator in which user-defined frequencies from 30 MHz to 2.4 GHz can be preset in 10 kHz increments. The AM section consists of a VHF, UHF, and CATV standard TV signal generator, and the optional FM section of a BS (Broadcast Satellite) and CS (Communications Satellite) signal generator. The AM section incor-porates seven types of SAW filters; the FM section features original advanced high-frequency technologies such as energy dispersion, pre-emphasis, and LPF characteristics. The versatile RT83B is useful in the development, manufacture, and maintenance of VCRs, televisions, BS/CS tuners and other high-frequency equipment.

Features

- 30 MHz to 2.4 GHz AM/FM(optional) modulated signal is available.
- The combined use of on-screen menu displays and the rotary encoder enables easy setting of standard and non-standard signals.
- Country name, channel numbers, and other information can be displayed.
- A GP-IB interface is included as standard equipment.
- Optional FM modulation unit (RT83B0001) and 1 GHz LPF adaptor (RT83B0003) are available.

Specifications

- Output signals
- Output impedance 50 Ω, N-R
- Max. output level AM: 0 dBm (Video modulation: 87.5%)
  FM: 0 dBm
- Output frequency 30 to 2400 MHz
  (Min. resolution: in 10 kHz increments)
- Frequency response (at output level of 0 dBm)
  AM: 30 to 1,000.99 MHz ±1.5 dB
  FM: 1001.00 to 1800 MHz ±2 dB
  1800.01 to 2400 MHz ±3 dB
- Frequency accuracy
  ±50 PPM (25℃ ±5℃)
- Output level accuracy
  ±1.5 dB, 0 to -29 dBm
  ±2.0 dB, -30 to -59 dBm
  ±5.0 dB, -60 to -107 dBm

- Video characteristics
- Input impedance High (bridge connection)
- Input level (75Ω) 1 Vp-p, VBS (BNC-R)
- Differential gain < 2% (AM), < 5% (FM)
- Differential phase < 2° (AM), < 5° (FM)
- S/N ratio ≤-50 dBrms (AM), ≤ -50 dBrms (FM)
- Modulation polarity (AM)
  M, B/G, D/K, I: Negative
  L : Positive
- Frequency deviation
  AM: Standard modulation: 87.5% (±3%)
  0% to 100% modulation
  (in 0.5% increments)
  FM: 0 to 30 MHz (in 0.1 MHz increments)
  Rated: 17 MHzp-p
- Dispersal frequency deviation
  FM: Rated: 600 kHz, 0 to 5.0 MHzp-p
  (in 10 kHz increments)
- Clamp mode AC or DC
- AFC (FM) Mean value AFC
- Filter characteristics
  AM: VSB filter
  FM: LPF filter
- Frequency response
  AM section: Designated by each television system (M, B/G, D/K, I, and L)
  FM section: NTSC: 4.5 MHz; LPF: standard equip.
  PAL: 5.5 MHz; LPF: standard equip.
- Pre-emphasis (FM) NTSC, PAL, OFF

Specifications

●Sound characteristics

- Input level — AM: 0 dBs (0.775 Vrms), 10 kΩ, BNC-R (unbalanced)
  FM: 0 dBm, 75Ω, BNC-R (unbalanced)
- Frequency response
  AM: ±1 dB, 40 Hz to 100 kHz (pre-emphasis OFF)
- Distortion
  NTSC / PAL / General-purpose SG mode
  < 1.5%
  (±50 kHz FM; pre-emphasis OFF)
  SECAM < 3% (60% AM; pre-emphasis OFF)
- Frequency deviation
  FM: 0 to 99 kHz for M, B/G, D/K, I (in 1 kHz increments)
  FM: 0 to 12.7 MHz for BS/CS (in 100 kHz increments)
- Modulation degree AM: 0% to 99% for system L (in 1% increments)
- S/N ratio ≥ 58 dB
  (75 μsec, 400 Hz, FM; pre-emphasis ON)

●Options RT83B0001 FM modulation unit (BS/CS)
RT83B0003 1 GHz LPF adaptor

●General specifications

Memory backup By key operation
(500 hours or longer after power-off)
Operating temperature range
0 to 40 degrees C
Relative humidity
15% to 85%RH (non-dewing)
Power supply AC 90 to 250 V, 50/60 Hz
Power consumption
Approx. 170 VA
Dimensions 426 (W) x 99 (H) x 510 (D) mm
Weight Approx. 12 kg

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