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Data Sheet

July 29, 2026

TEKTRONIX

Tektronix TG2000 Signal Generator

Lab. Items are supplied with manuals, accessories and typically a full no-quibble 1 year warranty. Our staff have extensive backgrounds in T&M which enables us to deliver industry-leading service and support. We endeavour to be customer focused in every way right down to the detail, such as offering free delivery on sales, presenting flexible technical + commercial solutions and supplying a loan unit during warranty repair, if available. Multiformat Generator TG2000 Data Sheet Features & Benefits Multiformat at Analog and Digital Test Signal Generation Reference Generator Performance Level Conforms to Analog, Digital, Video, and Audio Industry Standards Modular Expandable Platform Designed for the Requirements of Today and the Future Fully Supports VM700T Video Measurement Routines RAM-based Test Signal Generators with Nonvolatile Storage Test Signal Libraries for All Formats commercial solutions and supplying a loan unit during warranty repair, if available. Multiformat Generator TG2000 Data Sheet Features & Benefits Multiformat at Analog and Digital Test Signal Generation Reference Generator Performance Level Conforms to Analog, Digital, Video, and Audio Industry Standards Modular Expandable Platform Designed for the Requirements of Today and the Future Fully Supports VM700T Video Measurement Routines RAM-based Test Signal Generators with Nonvolatile Storage Test Signal Libraries for All F

 Tektronix TG2000 Signal Generator

MODEL

Tektronix TG2000

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

TG2000

LISTING

<https://aumictechlabs.com/products/tg2000-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Tektronix TG2000 is a modular signal generation platform engineered for multiformat analog and digital test signal creation across video, audio, and broadcast applications. Its nine-slot mainframe accepts plug-in generator modules, delivering reference-grade performance across SMPTE and EBU standards. The platform combines RAM-based signal generation with nonvolatile storage, programmable system clocks, and full remote control via RS-232, optional GPIB, and ground closure interfaces supporting SCPI commands.

Technical Specifications

Platform Architecture

Modular mainframe supporting up to nine plug-in signal generator or special function modules
RAM-based signal generation with nonvolatile storage
Programmable system clocks for future compatibility
Pre-loaded test signal libraries plus Windows-based SDP2000 development program for custom signal creation

Analog Video Generator (AVG1)

Formats: NTSC, PAL, PAL-D, PAL-M, PAL-N, SECAM, RGB, YC, Y/B-Y/R-Y
12-bit, 27 MHz component architecture with digital modulation for composite signals
Video bandwidth: 6 MHz with distortion-free operation suitable for applications to 8 MHz
Variable analog video parameters

Digital Video Generator (DVG1)

Formats: NTSC composite and 525/625 component digital at 13.5 MHz and 18 MHz sampling
Parallel and serial outputs 8 or 10-bit resolution
Maximum clock frequency: 36 MHz
Jitter: ≤ 1 ns typical with ≥ 50 dB S/N ratio
Standards: EBU Tech. 3267, ITU-R BT.601/656/801, SMPTE 125M/244M/259M/267M/272M, RP 165/178

Digital HDTV Generator (HDVG1)

Three 1.485 Gb/s serial digital video outputs
Formats: 1080i at 60 Hz, 59.94, 50, 25, 24 Hz; 720p at 60 Hz and 59.94 Hz
Bit rates: 1.485 Gb/s and 1.485/1.001 Gb/s
Amplitude: 800 mV $\pm 10\%$ into 75 Ω
Overshoot: $\leq 10\%$

Key Features

- Multiformat analog and digital test signal generation at reference generator performance level
- Full remote control via RS-232, optional GPIB, and ground closure with SCPI command support
- Standards conformance across analog, digital, video, and audio domains
- Customizable signal libraries and user-defined test signal development

Typical Applications

Research and development, manufacturing test, studio reference generation, and broadcast facility deployment.

Compatibility & Integration

Interfaces with third-party systems through RS-232, optional GPIB, and ground closure control. SCPI command set enables integration into automated test environments.

TG2000 Characteristics / Specifications

PARAMETER	VALUE
Multiformat Generator	TG2000 Characteristics TG2000 Mainframe Black-burst Output – Standards Conformance: EBU N14, SMPTE RP 154.
Frequency	NTSC or PALFSC . Long-term stability: ≤ 1 ppm per year drift. AVG1 Analog Video Generator Standards Conformance –EBU N10, ITU-R BT.624, SMPTE 170M. Frequency Response –Within 0.5% to 6 MHz. Typically within 5% to 8 MHz. Differential Gain Error $\leq 0.1\%$. Differential Phase Error $\leq 0.1^\circ$. * 1 S/N Ratio ≥ 67 dB unweighted to 6 MHz, measured on a quiet line.
SCH Phase Error	$\leq 2^\circ$. * 1 * 1 Denotes a typical performance characteristic.
DVG1 Digital Video Generator Standards Conformance	EBU Tech. 3267: ITU-R BT.601, BT.656, BT.801; SMPTE 125M, 244M, 259M, 267M, 272M, RP 165, RP 178.
Maximum Clock Frequency	36 MHz. Resolution –8 or 10 bit. Serial Output – Amplitude: 800 mV $\pm 10\%$ into 75 Ω .
Overshoot	$\leq 10\%$. Rise/Fall times: 0.4 to 1.5 ns. Jitter: ≤ 0.2 UI p-p total for all Jitter frequencies above 10 Hz.
Embedded Audio	Number of channels: 16 channels in 4 groups; 8 AES/EBU audio pairs.
Audio tones	Frequency: silence to 16 kHz; 28 discrete settings.
Level	0 to -60 dBFS in 2 dB steps.
Delay Errors	Group Delay: ≤ 3 ns to 20 MHz, ≤ 5 ns to 25 MHz. * 1 Pulse Distortions – Pulse Ringing: $2T: \leq 0.5\%$ peak . $T: \leq 1\%$ peak. Pulse to Bar Ratio –Unity within 0.5% for T and $2T$. S/N Ratio ≥ 60 dB unweighted to 30 MHz, measured on a quiet line. * 1 Denotes a typical performance characteristic. HDVG1 Test Signal Generator Module Standards Compliance –SMPTE 272M, 292M.
Electrical Characteristics (Typical)	Connector (serial): (3) BNC. Bit rate: 1.485 Gb/s, 1.485/1,001 Gb/s.
Formats	1080i/60 Hz , 59.94, 50, 25, and 24 Hz. 720p/60 Hz and 59.94 Hz. Amplitude: 800 mV $\pm 10\%$. Overshoot : $\leq 10\%$.
Rise/Fall times	≤ 270 ps (20% to 80%). DC offset (AC coupled): 0.0 V ± 0.5 V.
Jitter	≤ 1.35 ps (alignment Jitter). Return Loss: ≤ 15 dB from 5 MHz to 742.5 MHz. ≤ 10 dB from 742.5 MHz to 1.485 GHz. Audio Signal (Embedded) – Channels active: 1, 2, 3, 4, 5, 6, 7, 8.
Audio sampling frequency	48 kHz. Sampling alignment: Asynchronous, synchronous without frame numbers, synchronous with frame numbers.

PARAMETER	VALUE
Sample bits	24, 20. For each channel: Audio amplitude: 0 to -60 dBFS in 1 dB increments.
Audio frequency (Hz)	50, 100, 150, 200, 250, 300, 400, 500, 600, 750, 800, 1000, 1 200, 1500, 1600, 2000, 2400, 3000, 3200, 4000, 4800, 6000, 8000, 9600, 12000, 16000. www.tektronix.com3 Data Sheet HDST1 HD-SDI Stress Test Module Input Connector –75ΩBNC Connector.
Input Signal	HD-SDI signal. Bit Rate –1.485 Gb/s, 1.485/1,001 Gb/s. Amplitude –800 mV p-p ±10%. Standards Conformance –SMPTE 292M. Return Loss –≤15 dB to 742.5 MHz, ≤10 dB to 1.485 GHz.
Stress OutputConnector	7 5ΩBNC Connector. Output Signa l– HD-SDI signal. Amplitude –8 0to1040mV p-p ±5% (measured at 4.64 MHz square wave).
AmplitudeSetting	1% step. Duty Cycle – 40% to 60%.
Rise/FallTime	≤270ps(20%to80%). Return Loss – ≤15 dB to 1.485 GHz.
Jitter HF Jitter Jitter Waveform	Sine wave. Frequency –0.1Hzto10MHz.
Amplitude	0.01 to 1 UI. Amplitude Setting –0.01 UI. Amplitude Error – ≤0.1 UI (≤1MHz,at1UIsetting). ≤0.1 UI ±5% (≤5 MHz, at 1 UI setting). ≤0.1 UI ±10% (≤10 MHz, at 1 UI setting).
LF Jitter Jitter Waveform	Sine wave. Frequency –0.1Hzto10kHz. Amplitude –0.01 to 20 UI.
Amplitude Setting	0.01 UI. Amplitude Error – ≤0.1 UI ±1% (≤1 kHz, at 8 UI setting). ≤0.1 UI ±5% (≤5 kHz, at 8 UI setting). ≤0.1 UI ±10% (≤10 kHz, at 8 UI setting). Error Insertion Error Rate –0 to 120 errors/second. Error Rate Setting – 0.1 errors/second.
Cable Simulator Connector	75ΩBNC Connector. Cable Type –L-5CFB. Return Loss –≤15 dB to 1.485 GHz. Length –20 m, 100 m. AGL1 Analog Genlock Module Inputs –Two 75Ωloopthrough; one 75Ωterminating.
Loopthrough Inputs	Input range: ±6 dB from nominal black burst.
Return loss	≥40dBto5MHz. Burst lock stability: Amplitude changes:≤1 ns change over a ±3 dB input level. Jitter:≤1nswith≥50 dB S/N ratio onanominal amplitude reference input. Typically≤1°. CW Input – Input range: 1 to 2.25 V p-p .
Frequencies	NTSC and PALFsc ;1,5,and10MHz. Return loss:≥30 dB to 10 MHz.
Lock stability	Amplitude changes:≤1 ns over the valid input range. Jitter:≤1nswith≥50 dB S/N ratio for a 2 V reference input. Typically≤0.5°.
Timing Adjustment (Black burst reference)	Range: Anywhere within the color frame. Resolution:≤0.5°. Color Framing –Correct for up to ±45° SCH error on the reference input.
Power Source Mains Range	Voltage: 87 to 132 or 174 to 250 VAC.

PARAMETER	VALUE
Environmental Temperature	Operating: 0 °C to +40 °C. Nonoperating: -40 °C to +65 °C.
Certifications EMC	Certified to the EMC Directive 89/336/EEC. Safety – Approved to: CSA1010.1, ANSI S82.01.
Complies with	EN61010-1, IEC1010-1. Physical Characteristics Dimensions mm in. Height1335.23 Width48319.0 Depth58423.0 Weightkglb. Net17.338.0 Shipping 23.752.0 4www.tektronix.com

TG2000 Specifications

PARAMETER	VALUE
Unit	3 Highfield Court
Bedfordshire	MK43 7TA
for the Requirements of Today and the Future	Fully Supports VM700T Video Measurement Routines
Automated Manufacturing Test	TheTG2000i
Data Sheet	TG2000 configured to supply signals in several formats simultaneously.
AVG1 Analog Video Generator	The AVG1 is a high-accuracy, multiformat analog test signal generator. The
for many applications up to 8 MHz.	DVG1 Digital Video Generator
each channel may be set from the front panel.	AWVG1 Analog Wideband Video Generator
is 12 bits w	ith 72 MHz sampling that ensures very low distortion T-pulse
generator is included. AWVG1 output is analog composite.	HDVG1 Digital HDTV Generator
signal development software.	HDST1 Stress Test Module
SDP2000 Signal Development Program	The SDP2000 is a Windows-based software program that provides facilities
matrix sign	als for automated testing applications. Modified and new signals
Internal and External Reference Operation	The TG2000 has a high-stability internal reference making it suitable as the
Remote Control	The TG2000 provides a versatile and comprehensive remote control
round closure control.	2www.tektronix.com
Characteristics	TG2000 Mainframe
Denotes a typical performance characteristic.	DVG1 Digital Video Generator
Number of	channels: 16 channels in 4 groups; 8 AES/EBU audio pairs.
AWVG1 Analog Wideband Video Generator	Frequency Response –Within 1% to 20 MHz, 2% to 30 MHz.

PARAMETER	VALUE
HDVG1 Test Signal Generator Module	Standards Compliance –SMPTE 272M, 292M.
Connector (	serial): (3) BNC.
Samplin	g alignment: Asynchronous, synchronous without frame numbers,
synchronous with frame numbers.	Sample bits: 24, 20.
Input	Connector –75ΩBNC Connector.
Sine wave.	Frequency –0.1Hzto10MHz.
Error Insertion	Error Rate –0 to 120 errors/second.
Cable Simulator	Connector –75ΩBNC Connector.
AGL1 Analog Genlock Module	Inputs –Two 75Ωloopthrough; one 75Ωterminating.
Certifications	EMC –Certified to the EMC Directive 89/336/EEC.
in.	Height1335.23
Width48319.0	Depth58423.0
Weightkglb.	Net17.338.0
Shipping	23.752.0
mainframe	Only one AGL1 Genlock Module per TG2000 mainframe
modules	Only one HDST1 module per TG2000 mainframe. Additional limitations
nding upon other modules loaded in a mainframe	configured with an HDST1. Contact Tektronix Technical Support for
details	The performance of the TG2000 is degraded to the E4 environment for
Opt. 88	TG2000
Generator Mainframe with BG1 Black Burst Generator.	AVG1
Analog Video Generator.	DVG1
Digital Video Generator.	Opt. S1 –SDI Test.
Analog Genlock Module.	GP1
GPIB interface.	HDVG1
High Definition Video Generator.	HDST1
Support Options	Opt. C3

PARAMETER	VALUE
Calibration Service 3 Years.	Opt. R3 –Repair Service 3 Years.
e manufactured in ISO registered facilities.	www.tektronix.com5
ASEAN / Australa	sia(65) 6356 3900
Belgium07 81 601	66
Central East Eu	rope, Ukraine, and the Baltics+41 52 675 3777
Hong Kong(852	) 2585-6688
Japan81 (3) 67	14-3010
The Netherlands090 02 021797	Norway800 16098
ublic of China86 (10) 6235 1230	Poland+41 52 675 3777
Republic of	Korea82 (2) 6917-5000
Sweden020 08 80371	Switzerland+41 52 675 3777
Taiwan886 (	2) 2722-9622
espective companies.	29 Jul 200920W-07270-6
Serial Output	Amplitude: 800 mV ±10% into 75Ω.
Embedded Audio	Number of
Pulse Distortions	Pulse Ringing:
Electrical Characteristics (Typical)	Connector (
nal (Embedded)	Channelsactive:1,2,3,4,5,6,7,8.
channel	Audio amplitude: 0 to -60 dBFS in 1 dB increments.
etting	1% step.
Duty Cycle	40% to 60%.
ime	≤270ps(20%to80%).
Jitter Waveform	Sine wave.
Amplitude Error	≤0.1 UI (≤1MHz,at1UIsetting).
Loopthrough Inputs	Input range: ±6 dB from nominal black burst.
Burst lock stability	Amplitude changes:≤1 ns change over a ±3 dB input level.
CW Input	Input range: 1 to 2.25 V

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Environmental Temperature	Operating: 0 °C to +40 °C. Nonoperating: -40 °C to +65 °C.
Certifications EMC	Certified to the EMC Directive 89/336/EEC. Safety – Approved to: CSA1010.1, ANSI S82.01.
Complies with	EN61010-1, IEC1010-1. Physical Characteristics Dimensions mm in. Height1335.23 Width48319.0 Depth58423.0 Weightkglb. Net17.338.0 Shipping 23.752.0 4www.tektronix.com
Multiformat Generator	TG2000 Ordering Information When Ordering, Please Observe These Simple Guidelines: At least one signal generation module must accompany each TG2000 mainframe Only one AGL1 Genlock Module per TG2000 mainframe Only one GP1 GPIB Interface Module per each TG2000 mainframe Signal generator modules (AVG1, DVG1) may be combined in any mix desired up to the TG2000 mainframe limit of 8. The mainframe may
AVG1 Analog Video Generator. DVG1 Digital Video Generator. Opt. S	SDI Test. AWVG1 Analog Wideband Video Generator. Tri-level Sync Generator. AGL1 Analog Genlock Module. GP1 GPIB interface. HDVG1 High Definition Video Generator. HDST1 HD-SDI Stress Test Module.
Support Options Opt. C	Calibration Service 3 Years. Opt. R3 –Repair Service 3 Years. Product(s) aremanufactured in ISO registered facilities. www.tektronix.com5 Data Sheet 6www.tektronix.com
Data Sheet Contact Tektronix	ASEAN / Australasia(65) 6356 3900 Austria+41 52 675 3777 Balkans, Israel, South Africa and other ISE Countries+41 52 675 3777 Belgium07 81 601 66 Brazil+55 (11) 40669400 Canada1 (800) 661-5625 Central East Europe, Ukraine, and the Baltics+41 52 675 3777 Central Europe & Greece+41 52 675 3777 Denmark+4580881401 Finland+41526

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet

(<https://www.testequipmenthq.com/datasheets/TEKTRONIX-TG2000-Datasheet.pdf>). Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

performance, quality and service are key, whilst realising the cost savings that second user equipment offers. We fully test & refurbish equipment in our in-house, traceable Lab. Items are supplied with manuals, accessories and typically a full no-quibble 1 year warranty. Our staff have extensive backgrounds in T&M which enables us to deliver industry-leading service and support. We endeavour to be customer focused in every way right down to the detail, such as offering free delivery on sales, presenting flexible technical + commercial solutions and supplying a loan unit during warranty repair, if available.

MultiFormat Generator TG2000 Data Sheet Features & Benefits MultiFormat at Analog and Digital Test Signal Generation Reference Generator Performance Level Conforms to Analog, Digital, Video, and Audio Industry Standards Modular Expandable Platform Designed for the Requirements of Today and the Future Fully Supports VM700T Video Measurement Routines RAM-based Test Signal Generators with Nonvolatile Storage Test Signal Libraries for All Formats

Variable Analog and Digital Video Parameters Applications Research and Development Studio Reference Generator Manufacturing Test Equipment Design Maintenance Postproduction and Broadcast Facilities Automated Manufacturing Test The TG2000 is a multiFormat, analog and digital, precision signal generation platform. Designed for the most demanding test applications, the TG2000 provides reference-quality test signals, stressing functions in both the analog and digital domains and the flexibility to address user-defined testing requirements. Comprehensive test signal libraries are supplied in all formats and are supplemented by a Windows-based test signal development program. The modular architecture, RAM-based test signal generators, and programmable system clocks ensure the TG2000 will meet future needs as well as today's requirements.

Data Sheet TG2000 configured to supply signals in several formats simultaneously.

AVG1 Analog Video Generator The AVG1 is a high-accuracy, multiFormat analog test signal generator. The AVG1 supports NTSC, PAL, PAL-D, PAL-M, PAL-N, SECAM, RGB, YC, and Y, B-Y, R-Y. Signal generation architecture is 12 bit, 27 MHz component with digital modulation for composite signals. This ensures high-accuracy, distortion-free signals within a 6 MHz video bandwidth and signals suitable

for many applications up to 8 MHz. **DVG1 Digital Video Generator** The DVG1 is a multiFormat digital test signal generator. The DVG1 supports NTSC composite and 525 and 625 component digital sampled at 13.5 and 18 MHz. Parallel and serial outputs are provided.

Fullfield and active picture CRC generation is supported on the serial digital outputs and may be turned on and off from the front panel. Up to 16 channels of 20-bit audio sampled at 48 kHz and locked to the video sampling clock may be embedded on the serial digital video output.

Frequency and level for each channel may be set from the front panel.

AWVG1 Analog Wideband Video Generator The AWVG1 is a 30 MHz bandwidth test signal generator intended primarily for generation of wideband frequency and transient response test signals.

The AWVG1 can be used as a source of tri-level sync. Signal generation is 12 bits with 72 MHz sampling that ensures very low distortion T-pulse generation for bandwidths up to 6 MHz. A fully programmable zone plate generator is included. AWVG1 output is analog composite.

HDVG1 Digital HDTV Generator The HDVG1 is a high-accuracy, multiFormat, high-definition test signal module that provides three 1.485 Gb/s serial digital video test signal outputs in 1080i/60, 59.94, 1080p/25, and 24 Hz rates and 720p formats in 60 and 59.94 field rates. It is programmable with the included SDP2000 PC-based signal development software.

HDST1 Stress Test Module The HDST1 is a HD-SDI Stress Test module that supports stress test capability for 1.485 and 1.485/1,001 Gb/s HD-SDI signals. The HDST1 takes in a single HD-SDI signal and outputs a stressed HD-SDI signal. HD signals from test signal generators (including the HDVG1 module), as well as from HD cameras, VTRs, or switchers, can be used as the input signal.

Signal stress options include Jitter (amplitude or frequency), amplitude, duty cycle, and random error insertion. The HDVG1 is recommended as a signal source, since it is capable of providing a signal with low residual Jitter, as well as the ability to incorporate its frequency offset stress feature.

SDP2000 Signal Development Program The SDP2000 is a Windows-based software program that provides facilities to edit signals in the factory-supplied test signal libraries and to create new signals for special applications. Line- and frame-editing functions permit fast, easy changes to fullfield test signals and composition of multisegment matrix signals for automated testing applications. Modified and new signals may be named and stored in the factory test signal libraries or in new user-created libraries.

Internal and External Reference Operation The TG2000 has a high-stability internal reference making it suitable as the master house reference for most broadcast and production/postproduction applications. A black-burst

output, selectable for NTSC or PAL, is provided with the TG2000 mainframe.

Remote Control The TG2000 provides a versatile and comprehensive remote control system. All front-panel functions and controls are available through the RS-232 and optional GPIB ports. A subset of those functions is available through ground closure control.

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Multi-format Generator - TG2000 Characteristics TG2000 Mainframe Black-burst Output - Standards Conformance: EBU N14, SMPTE RP 154.

Frequency: NTSC or PALFSC . Long-term stability: ≤ 1 ppm per year drift.

AVG1 Analog Video Generator Standards Conformance - EBU N10, ITU-R BT.624, SMPTE 170M.

Frequency Response - Within 0.5% to 6 MHz. Typically within 5% to 8 MHz.

Differential Gain Error $\leq 0.1\%$. Differential Phase Error $\leq 0.1^\circ$. * 1 S/N Ratio ≥ 67 dB unweighted to 6 MHz, measured on a quiet line.

SCH Phase Error $\leq 2^\circ$. * 1 * 1 Denotes atypical performance characteristic.

DVG1 Digital Video Generator Standards Conformance - EBU Tech. 3267: ITU-R BT.601, BT.656, BT.801; SMPTE 125M, 244M, 259M, 267M, 272M, RP 165, RP 178.

Maximum Clock Frequency - 36 MHz. Resolution - 8 or 10 bit. Serial Output - Amplitude: 800 mV $\pm 10\%$ into 75 Ω .

Overshoot: $\leq 10\%$. Rise/Fall times: 0.4 to 1.5 ns. Jitter: ≤ 0.2 UI p-p total for all Jitter frequencies above 10 Hz.

Specifications

PARAMETER	VALUE
Embedded Audio	Number of channels: 16 channels in 4 groups; 8 AES/EBU audio pairs.
Audio tones	Frequency: silence to 16 kHz; 28 discrete settings.
Level	0 to -60 dBFS in 2 dB steps.

Pre-emphasis: None. AWVG1 Analog Wideband Video Generator Frequency Response - Within 1% to 20 MHz, 2% to 30 MHz.

Delay Errors - Group Delay: ≤ 3 ns to 20 MHz, ≤ 5 ns to 25 MHz. * 1 Pulse Distortions - Pulse Ringing: 2T: $\leq 0.5\%$ peak . T: $\leq 1\%$ peak. Pulse to Bar Ratio - Unity within 0.5% for T and 2T. S/N Ratio ≥ 60 dB unweighted to 30 MHz, measured on a quiet line.

* 1 Denotes atypical performance characteristic. HDVG1 Test Signal Generator Module Standards Compliance - SMPTE 272M, 292M.

Electrical Characteristics (Typical) - Connector (serial): (3) BNC. Bit rate: 1.485 Gb/s, 1.485/1,001 Gb/s. Formats: 1080i/60 Hz , 59.94, 50, 25, and 24 Hz.

720p/60 Hz and 59.94 Hz. Amplitude: 800 mV $\pm 10\%$. Overshoot : $\leq 10\%$.

Rise/Fall times: ≤ 70 ps (20% to 80%). DC offset (AC coupled): 0.0 V ± 0.5 V.

Jitter: ≤ 135 ps (alignment Jitter). Return Loss: ≤ 15 dB from 5 MHz to 742.5 MHz.

≤ 10 dB from 742.5 MHz to 1.485 GHz. Audio Signal (Embedded) - Channels active: 1, 2, 3, 4, 5, 6, 7, 8.

Specifications

PARAMETER	VALUE
Audio sampling frequency	48 kHz. Sampling alignment: Asynchronous, synchronous without frame numbers, synchronous with frame numbers.
Sample bits	24, 20. For each channel: Audio amplitude: 0 to -60 dBFS in 1 dB increments.
Audio frequency (Hz)	50, 100, 150, 200, 250, 300, 400, 500, 600, 750, 800, 1000, 1200, 1500, 1600, 2000, 2400, 3000, 3200, 4000, 4800, 6000, 8000, 9600, 12000, 16000.

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Data Sheet HDST1 HD-SDI Stress Test Module Input Connector - 75 Ω BNC Connector.

Input Signal - HD-SDI signal. Bit Rate - 1.485 Gb/s, 1.485/1,001 Gb/s.

Amplitude - 800 mV p-p $\pm 10\%$. Standards Conformance - SMPTE 292M. Return Loss ≤ 15 dB to 742.5 MHz, ≤ 10 dB to 1.485 GHz.

Stress Output Connector - 75 Ω BNC Connector. Output Signal - HD-SDI signal.

Amplitude - 80 to 1040 mV p-p $\pm 5\%$ (measured at 4.64 MHz square wave).

Specifications

PARAMETER	VALUE
AmplitudeSetting	1% step. Duty Cycle – 40% to 60%.
Rise/FallTime	≤270ps(20%to80%). Return Loss – ≤15 dB to 1.485 GHz.
Jitter HF Jitter Jitter Waveform	Sine wave. Frequency –0.1Hzto10MHz.

Amplitude –0.01 to 1 UI. Amplitude Setting –0.01 UI. Amplitude Error – ≤0.1 UI (≤1MHz,at1UIsetting). ≤0.1 UI ±5% (≤5 MHz, at 1 UI setting). ≤0.1 UI ±10% (≤10 MHz, at 1 UI setting).
LF Jitter Jitter Waveform – Sine wave. Frequency –0.1Hzto10kHz. Amplitude –0.01 to 20 UI.
Amplitude Setting –0.01 UI. Amplitude Error – ≤0.1 UI ±1% (≤1 kHz, at 8 UI setting). ≤0.1 UI ±5% (≤5 kHz, at 8 UI setting). ≤0.1 UI ±10% (≤10 kHz, at 8 UI setting).
Error Insertion Error Rate –0 to 120 errors/second. Error Rate Setting –0.1 errors/second.
Cable Simulator Connector –75ΩBNC Connector. Cable Type –L-5CFB. Return Loss –≤15 dB to 1.485 GHz.
Length –20 m, 100 m. AGL1 Analog Genlock Module Inputs –Two 75Ωloopthrough; one 75Ωterminating.
Loopthrough Inputs – Input range: ±6 dB from nominal black burst.
Return loss:≥40dBto5MHz. Burst lock stability: Amplitude changes:≤1 ns change over a ±3 dB input level.
Jitter:≤1nswith≥50 dB S/N ratio onanominal amplitude reference input. Typically≤1°. CW Input – Input range: 1 to 2.25 V p-p .
Frequencies: NTSC and PALFsc ;1,5,and10MHz. Return loss:≥30 dB to 10 MHz.
Lock stability: Amplitude changes:≤1 ns over the valid input range.
Jitter:≤1nswith≥50 dB S/N ratio for a 2 V reference input. Typically≤0.5°.
Timing Adjustment (Black burst reference) – Range: Anywhere within the color frame.
Resolution:≤0.5°. Color Framing –Correct for up to ±45° SCH error on the reference input.

Specifications

PARAMETER	VALUE
Power Source Mains Range	Voltage: 87 to 132 or 174 to 250 VAC.
Frequency	50 to 60 Hz. Power Consumption –Typically 220 W forafully loaded TG2000 mainframe.
Environmental Temperature	Operating: 0 °C to +40 °C. Nonoperating: -40 °C to +65 °C.

Certifications EMC –Certified to the EMC Directive 89/336/EEC. Safety – Approved to: CSA1010.1, ANSI S82.01. Complies with: EN61010-1, IEC1010-1. Physical Characteristics Dimensions mm in. Height1335.23 Width48319.0 Depth58423.0 Weightkglb. Net17.338.0 Shipping 23.752.0 4www.tektronix.com

Multiformat Generator – TG2000 Ordering Information When Ordering, Please Observe These Simple Guidelines: At least one signal generation module must accompany each TG2000 mainframe Only one AGL1 Genlock Module per TG2000 mainframe Only one GP1 GPIB Interface Module per each TG2000 mainframe Signal generator modules (AVG1, DVG1) may be combined in any mix desired up to the TG2000 mainframe limit of 8. The mainframe may containamaximum of 4 of any combination of HDVG1 and AWVG1 modules Only one HDST1 module per TG2000 mainframe. Additional limitations may apply, depe nding upon other modules loaded inamainframe configured with an HDST1. Contact Tektronix Technical Support for details The performance of the TG2000 is degraded to the E4 environment for radiated emissions only when operating withacombination of HDVG 1 and HDST1 in HD-SDI stress testing applications Add Opt. 88 to each item ordered. This will ensure your TG2000 package will come assembled and calibrated asasingle unit Modules ordered to add to an existing TG2000 package do not require Opt. 88 TG2000 Generator Mainframe with BG1 Black Burst Generator. AVG1 Analog Video Generator. DVG1 Digital Video Generator. Opt. S1 –SDI Test. AWVG1 Analog Wideband Video Generator. Tri-level Sync Generator. AGL1 Analog Genlock Module. GP1 GPIB interface. HDVG1 High Definition Video Generator. HDST1 HD-SDIStress Test Module. Support Options Opt. C3 – Calibration Service 3 Years. Opt. R3 –Repair Service 3 Years. Product(s) aremanufactured in ISO registered facilities. www.tektronix.com5

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