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Data Sheet

August 13, 2026

STANFORD RESEARCH SYSTEMS

Stanford Research DS360 " Ultra-Low Distortion Function Generator

Stanford Research Systems DS360 Ultra-Low Distortion Function Generator The SRS DS360 combines analog-class residual distortion with DDS architecture for audio-frequency work from 10 mHz to 200 kHz. THD is typically -110 dB below 5 kHz (1 Vrms unbalanced / 2 Vrms balanced) and remains below about -100 dBc to 20 kHz at moderate levels. Waveforms include sine, square, two-tone (SMPTE/DIM/CCIF), white noise, pink noise, and band-limited noise. Balanced and unbalanced outputs use XLR, BNC, and banana jacks from 20 uVpp to 80 Vpp balanced (Hi-Z). Frequency accuracy is 25 ppm + 4 mHz. The SRS DS360 combines analog-class residual distortion with DDS architecture for audio-frequency work from 10 mHz to 200 kHz. THD is typically -110 dB below 5 kHz (1 Vrms unbalanced / 2 Vrms balanced) and remains below about -100 dBc to 20 kHz at moderate levels. Waveforms include sine, square, two-tone (SMPTE/DIM/CCIF), white noise, pink noise, and band-limited noise. Balanced and unbalanced outputs use XLR, BNC, and banana jacks from 20 uVpp to 80 Vpp balanced (Hi-Z). Frequency accuracy is 25 ppm + 4 mHz. Audio analyzer stimulus; ultra-low-THD sine sources; IMD two-tone tests; pink/white noise excitation; swept-frequency acoustic and analog-circuit tests; GPIB/RS-232 automated audio production.



MODEL

**Stanford Research
Systems DS360**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

DS360

LISTING

<https://aumictechlabs.com/products/ds360-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Stanford Research Systems DS360 is an ultra-low distortion function generator engineered for precision signal generation in demanding measurement and audio applications. It combines Direct Digital Synthesis with analog-grade performance to deliver THD below 0.001%, frequency accuracy of 0.0025%, and exceptional waveform purity across a 1 mHz to 200 kHz range.

Technical Specifications
Frequency Performance
Frequency range: 1 mHz to 200 kHz

Frequency resolution: 6-digit
Frequency accuracy: 0.0025%
Frequency stability: 25 ppm

Distortion & Signal Quality
THD at 1 Vrms unbalanced / 2 Vrms balanced:

Below 5 kHz: -110 dB typical, -106 dB maximum
5 to 20 kHz: -104 dB typical, -100 dB maximum
20 to 40 kHz: -100 dB typical, -96 dB maximum

40 to 100 kHz: -90 dB typical, -85 dB maximum
100 to 200 kHz: -76 dB typical, -68 dB maximum

THD at 10 Vrms unbalanced / 20 Vrms balanced:

Below 5 kHz: -109 dB typical, -105 dB maximum
5 to 20 kHz: -103 dB typical, -99 dB maximum

20 to 40 kHz: -98 dB typical, -93 dB maximum
40 to 100 kHz: -88 dB typical

Amplitude Specifications

Output range: 20 μ Vpp to 40 Vpp
Unbalanced output: 0 to ± 7.4 VDC (50 Ω load), 0 to ± 10.0 VDC (600 Ω load), 0 to ± 20.0 VDC (Hi-Z load)

Key Features
20-bit D/A converter with DSP and DDS architecture

Waveforms: Sine, square, two-tone (independent frequency/amplitude control), white noise, pink noise, band-limited white noise

Two-tone formats: SMPTE, DIM, CCIF for intermodulation distortion testing

Frequency sweep and tone burst capabilities
Low output noise with optimized shielding and board layout

Requires 1 hour warm-up for performance verification

Typical Applications
Audio system characterization and distortion analysis

Precision impedance and network measurements
Sensitive electronics testing

Intermodulation distortion (IMD) evaluation
Frequency sweep and parametric testing

Compatibility & Integration
RS-232 interface for device control and automation

GPIB interface for instrumentation system integration
User-accessible front panel controls

Features & description

From manufacturer datasheet

Features

- Less than 0.001 % THD class performance in the audio band
- Balanced and unbalanced outputs with V_{rms} , V_{pp} , dBV, dBm, dBrel units
- Linear and log sweeps 0.01 Hz to 200 kHz; sweep times 0.3 ms to 100 s class (catalog prose); rate 0.1 Hz to 3.1 kHz in the spec table
- Tone bursts with adjustable ON cycles, off level, and gating
- Optional 10 MHz reference input (Opt. 03)
- Standard GPIB and RS-232

DS360 Characteristics / Specifications

PARAMETER	VALUE
Model	DS360
Manufacturer	Stanford Research Systems
Instrument Type	Ultra-Low Distortion Function Generator
Alias	DS360; SRS DS360
Sine Frequency Range	0.01 Hz to 200.000 kHz
Frequency Resolution	6 digits or 10 mHz, whichever is greater
Frequency Accuracy	25 ppm (0.0025 %) + 4 mHz (20 C to 40 C)
Sine THD Below 5 kHz Low Level	-110 dB typical, -106 dB max (1 Vrms unbalanced, 2 Vrms balanced)
Sine THD Five to 20 kHz Low Level	-104 dB typical, -98 dB max
Sine THD Twenty to 40 kHz Low Level	-100 dB typical, -96 dB max
Sine THD Forty to 100 kHz Low Level	-90 dB typical, -85 dB max
Sine THD 100 to 200 kHz Low Level	-76 dB typical, -68 dB max
Square Frequency Range	0.01 Hz to 200 kHz
Square Rise Time	1.3 us
Square Even Harmonics	less than -60 dBc to 20 kHz
White Noise Bandwidth	DC to 200 kHz
White Noise Flatness	less than 1.0 dB, 1 Hz to 100 kHz
White Noise Crest Factor	11 dB
Pink Noise Bandwidth	10 Hz to 200 kHz
Pink Noise Flatness	less than 3.0 dB (20 Hz to 20 kHz, 1/3-octave)
Pink Noise Crest Factor	12 dB
Two Tone Types	sine-sine or sine-square
Two Tone SFDR	greater than 90 dB
Unbalanced Amplitude Hi Z	10.0 uVpp to 40.0 Vpp
Balanced Amplitude Hi Z	20 uVpp to 80.0 Vpp

PARAMETER	VALUE
Unbalanced Amplitude 50 Ohm	5.0 uVpp to 14.4 Vpp
Amplitude Resolution	4 digits or 1 uV, whichever is greater (Vpp or Vrms); 0.1 dB (dBm or dBV)
Sine Square Amplitude Accuracy	+/-0.1 dB (1 %)
White Noise Amplitude Accuracy	+/-0.175 dB (2 %)
Pink Noise Amplitude Accuracy	+/-0.35 dB (4 %)
Sweep Type	linear or logarithmic
Sweep Range	0.01 Hz to 200.000 kHz
Sweep Rate	0.1 Hz to 3.1 kHz
Sweep Flatness	+/-0.1 dB (1 %)
Burst Off Level	0.0 % to 100.0 % of on level, 0.1 % resolution
Unbalanced Source Impedance	50 ohm +/-3 %; 600 ohm +/-1 %; Hi-Z 25 ohm +/-1 ohm
Balanced Source Impedance	50 ohm +/-3 %; 150 ohm +/-2 %; 600 ohm +/-1 %; Hi-Z 50 ohm +/-3 %
Floating Voltage	+/-40 VDC max
Internal Frequency Stability	+/-25 ppm
Dimensions	17 in x 3.5 in x 16.25 in (WHD)
Weight	17 lbs
Line Power	50 W, 100/120/220/240 VAC, 50/60 Hz
Interfaces	GPIB and RS-232 Notes Specs from SRS DS360 catalog. Residual THD depends on amplitude and frequency; use the tabulated band that matches the operating level. Confirm Opt. 03 external 10 MHz reference if phase-locking to a house standard.
Bandwidth	DC to 200 kHz
Rise Time	1.3 us

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

performance in the audio band

- Balanced and unbalanced outputs with V_{rms} , V_{pp} , dBV, dBm, dBrel units
- Linear and log sweeps 0.01 Hz to 200 kHz; sweep times 0.3 ms to 100 s class (catalog prose); rate 0.1 Hz to 3.1 kHz in the spec table
- Tone bursts with adjustable ON cycles, off level, and gating
- Optional 10 MHz reference input (Opt. 03)
- Standard GPIB and RS-232

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	DS360
Manufacturer	Stanford Research Systems
Instrument Type	Ultra-Low Distortion Function Generator
Alias	DS360; SRS DS360
Sine Frequency Range	0.01 Hz to 200.000 kHz
Frequency Resolution	6 digits or 10 mHz, whichever is greater
Frequency Accuracy	25 ppm (0.0025 %) + 4 mHz (20 C to 40 C)
Sine THD Below 5 kHz Low Level	-110 dB typical, -106 dB max (1 V_{rms} unbalanced, 2 V_{rms} balanced)

Sine THD Five to 20 kHz Low Level: -104 dB typical, -98 dB max
Sine THD Twenty to 40 kHz Low Level: -100 dB typical, -96 dB max
Sine THD Forty to 100 kHz Low Level: -90 dB typical, -85 dB max
Sine THD 100 to 200 kHz Low Level: -76 dB typical, -68 dB max

Specifications

PARAMETER	VALUE
Square Frequency Range	0.01 Hz to 200 kHz
Square Rise Time	1.3 us
Square Even Harmonics	less than -60 dBc to 20 kHz
White Noise Bandwidth	DC to 200 kHz
White Noise Flatness	less than 1.0 dB, 1 Hz to 100 kHz
White Noise Crest Factor	11 dB
Pink Noise Bandwidth	10 Hz to 200 kHz
Pink Noise Flatness	less than 3.0 dB (20 Hz to 20 kHz, 1/3-octave)
Pink Noise Crest Factor	12 dB

PARAMETER	VALUE
Two Tone Types	sine-sine or sine-square
Two Tone SFDR	greater than 90 dB
Unbalanced Amplitude Hi Z	10.0 uVpp to 40.0 Vpp
Balanced Amplitude Hi Z	20 uVpp to 80.0 Vpp
Unbalanced Amplitude 50 Ohm	5.0 uVpp to 14.4 Vpp
Amplitude Resolution	4 digits or 1 uV, whichever is greater (Vpp or Vrms); 0.1 dB (dBm or dBV)
Sine Square Amplitude Accuracy	+/-0.1 dB (1 %)
White Noise Amplitude Accuracy	+/-0.175 dB (2 %)
Pink Noise Amplitude Accuracy	+/-0.35 dB (4 %)
Sweep Type	linear or logarithmic
Sweep Range	0.01 Hz to 200.000 kHz
Sweep Rate	0.1 Hz to 3.1 kHz
Sweep Flatness	+/-0.1 dB (1 %)
Burst Off Level	0.0 % to 100.0 % of on level, 0.1 % resolution
Unbalanced Source Impedance	50 ohm +/-3 %; 600 ohm +/-1 %; Hi-Z 25 ohm +/-1 ohm
Balanced Source Impedance	50 ohm +/-3 %; 150 ohm +/-2 %; 600 ohm +/-1 %; Hi-Z 50 ohm +/-3 %
Floating Voltage	+/-40 VDC max

Optional Reference Input: sine or TTL, 0.4 to 7 Vpp, 10 MHz +/-50 ppm (Opt. 03)

Specifications

PARAMETER	VALUE
Internal Frequency Stability	+/-25 ppm
Dimensions	17 in x 3.5 in x 16.25 in (WHD)
Weight	17 lbs
Line Power	50 W, 100/120/220/240 VAC, 50/60 Hz
Interfaces	GPIB and RS-232

Notes

Specs from SRS DS360 catalog. Residual THD depends on amplitude and frequency; use the tabulated band that matches the operating level. Confirm Opt. 03 external 10 MHz reference if phase-locking to a house standard.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

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30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.