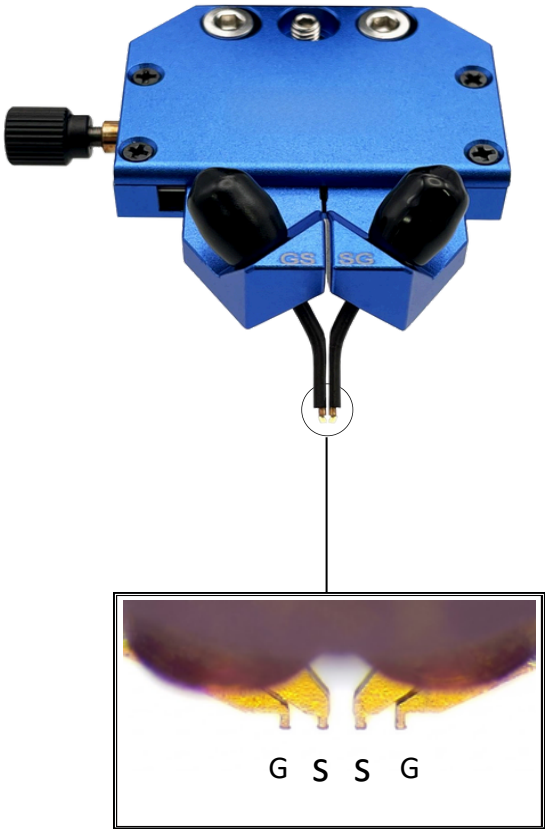
DC~40GHz GSSG Probe

Model:VST-40G-GSSG-XXX-AJ（XXX=Pitch range:μm)

Product Overview

The Vinstronics VST-40G-GSSG-AJ represents a significant advancement in differential probing flexibility, covering the spectrum from DC to 40 GHz. Featuring a precision mechanical adjustment mechanism, this probe allows for seamless pitch adaptation to various differential pad layouts. It is the premier solution for Signal Integrity (SI) labs and R&D environments requiring high-accuracy differential measurements across multiple chip designs with a single, versatile tool.

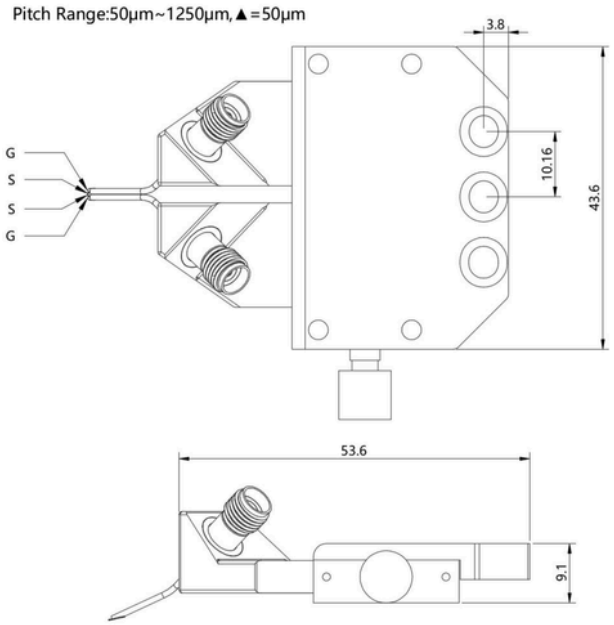


Key Features

- Differential Precision: Optimized GSSG layout specifically engineered for balanced signal characterization.
- Adjustable Pitch Range: Continuously adjustable from 100 μm to 1250 μm to match varied pad geometries.
- Wideband Performance: Reliable DC to 40 GHz coverage with stable 100 Ω differential impedance.
- Symmetry Control: Precision-matched signal paths to minimize skew and phase error.
- Robust Construction: Durable tip design ensuring consistent contact repeatability across thousands of cycles.

Typical Applications

- High-speed serial link characterization (PCIe 4.0, SATA).
- Differential IC and MMIC evaluation with non-standard pad pitches.
- Multi-design R&D testing and engineering debug.
- Signal Integrity (SI) analysis for balanced circuits and package interconnects.



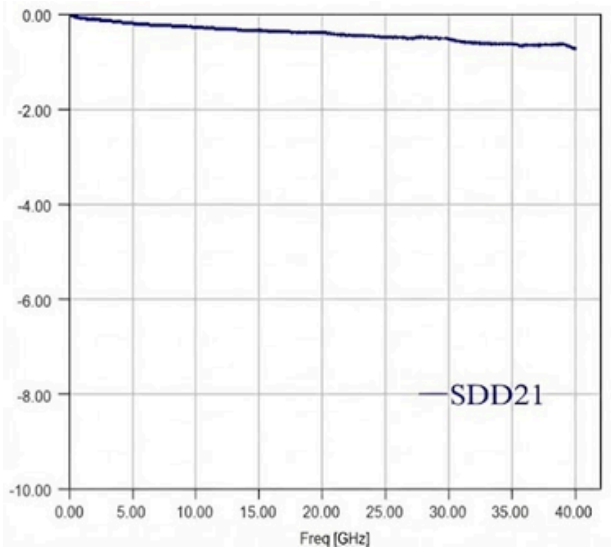
Typical Electrical Characteristics

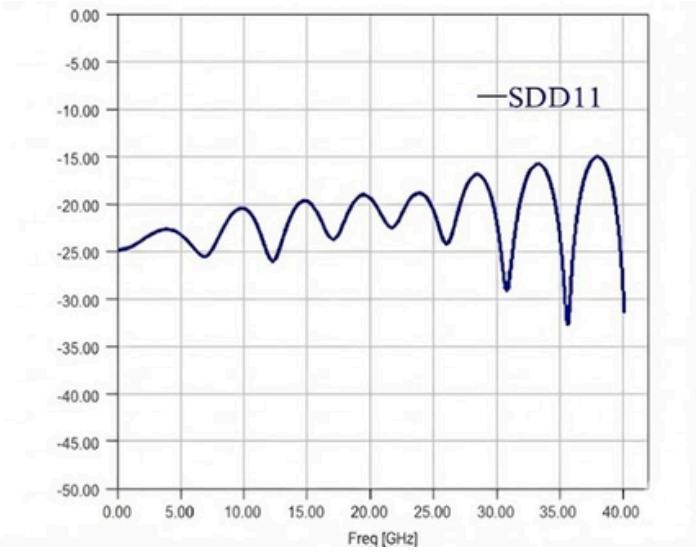
Frequency range	DC-40GHz
Insertion loss	Spec:<2.0dB
Return loss	Spec:>12dB
Impedance	100Ω
DC current	≤1A
DC voltage	≤100V
RF power	≤5w

Mechanical Characteristics

Connector	2.92mm Female
Tip configurations	GSSG-AJ
Connector angle	45-degree
Pitch range	100µm-1250µm or customized
Standard pitch step	50µm
Tip size	
from 100 um to 250 um	25µm
from 300 um to 1250 um	50µm

Typical Electrical Characteristics: DC~40 GHz GSSG Probe-AJ





Technical Support:Pitch Adjustment Procedure

To maintain measurement accuracy and extend probe tip life, please follow these professional adjustment protocols:

- Visual Monitoring: Conduct all adjustments under a high-resolution microscope (min. 100x magnification) to prevent mechanical over-travel.
- Precision Control: Utilize the integrated micro-screw mechanism. A standard hex driver is required for fine-tuning.
- Adjustment Logic:
  - Expand Pitch: Rotate the adjustment screw Clockwise to increase the distance between signal pins.
  - Narrow Pitch: Rotate the adjustment screw Counter-clockwise to decrease the distance.
- Calibration Requirement: After each adjustment, verify the pitch using a NIST-traceable pitch ruler or a Calibration Substrate (ISS) before performing VNA calibration.
- Mechanical Safety: Do not force the screw beyond its specified range (100 µm – 1250 µm) to avoid internal spring fatigue or tip misalignment.

Ordering Information

Model format
VST-40G-GSSG-XXX-AJ
Where:

- 40G = frequency range (DC–40 GHz)
- GSSG = tip configuration (Ground-Signal-Signal-Ground)
- XXX = pad pitch in microns
- AJ = Adjustable Pitch (indicates the probe is equipped with a precision mechanical adjustment mechanism)

Example:VST-40G-GSSG-150-AJ (40 GHz GSSG probe with 150 µm base pitch, mechanically adjustable)
Custom versions are available upon request (special pitch range, angle, or connector).

Recommended Accessories

- Calibration substrates (SOLT / LRM compatible)
- RF cables and adapters
- Probe positioners and probe stations
- Cleaning kits and spare tips

Handling & Usage Notes

- Always perform calibration at the probe tip for best accuracy
- Avoid excessive force to preserve tip alignment
- Keep contact surfaces clean to maintain low contact resistance
- Store probes in protective cases when not in use

Contact & Support

For quotations, technical support, or customization requests:
Vinstronics
Email: sales@vinstronics.com
Website: www.vinstronics.com/rf-probe/