

PCBite SQ-series

handsfree oscilloscope probes



Oscilloscope Probes for Precision Debugging

Meet the SQ-series



Overview of the probes

The new SQ series of handsfree probes from Sensepeck features a lower center of gravity, making them even more stable than the original SP series.

All probes in the SQ series are fully insulated and can be used as traditional handheld probes. However, their true potential is unlocked when measuring handsfree.

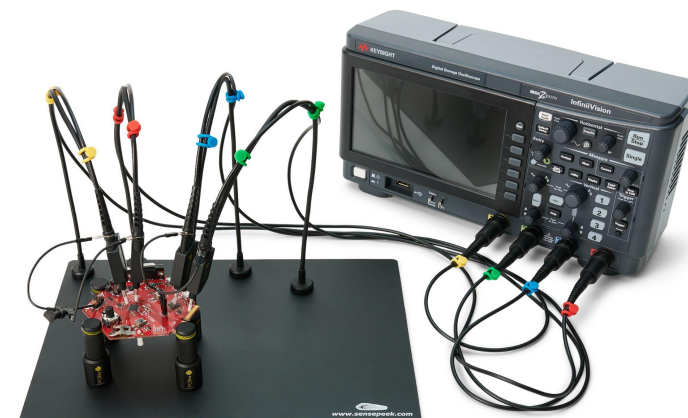
The SQ series also offers additional ground options, probe tip protection, longer cables, and compatibility with oscilloscopes that support automatic scaling.

All the beloved features of handsfree measurement, such as exchangeable fine pitch spring tipped test needles, color coded cable holders, and a minimalist design, are preserved to make traditional sized handheld probes obsolete.

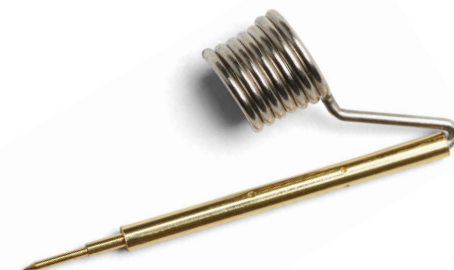
The length and weight of the SQ probes are perfectly balanced for use with PCBite PCB holders and the base plate, which are essential for handsfree functionality.

Features

- Passive 10:1 probe with support for oscilloscopes with automatic scaling
- Spring-loaded test needle for fine pitch measurements
- Multiple ground options
- Color coded cable holders
- Probe tip protection
- Insulated, can be used handheld
- Improved probe holder for handsfree measurement when used with PCBite PCB holders



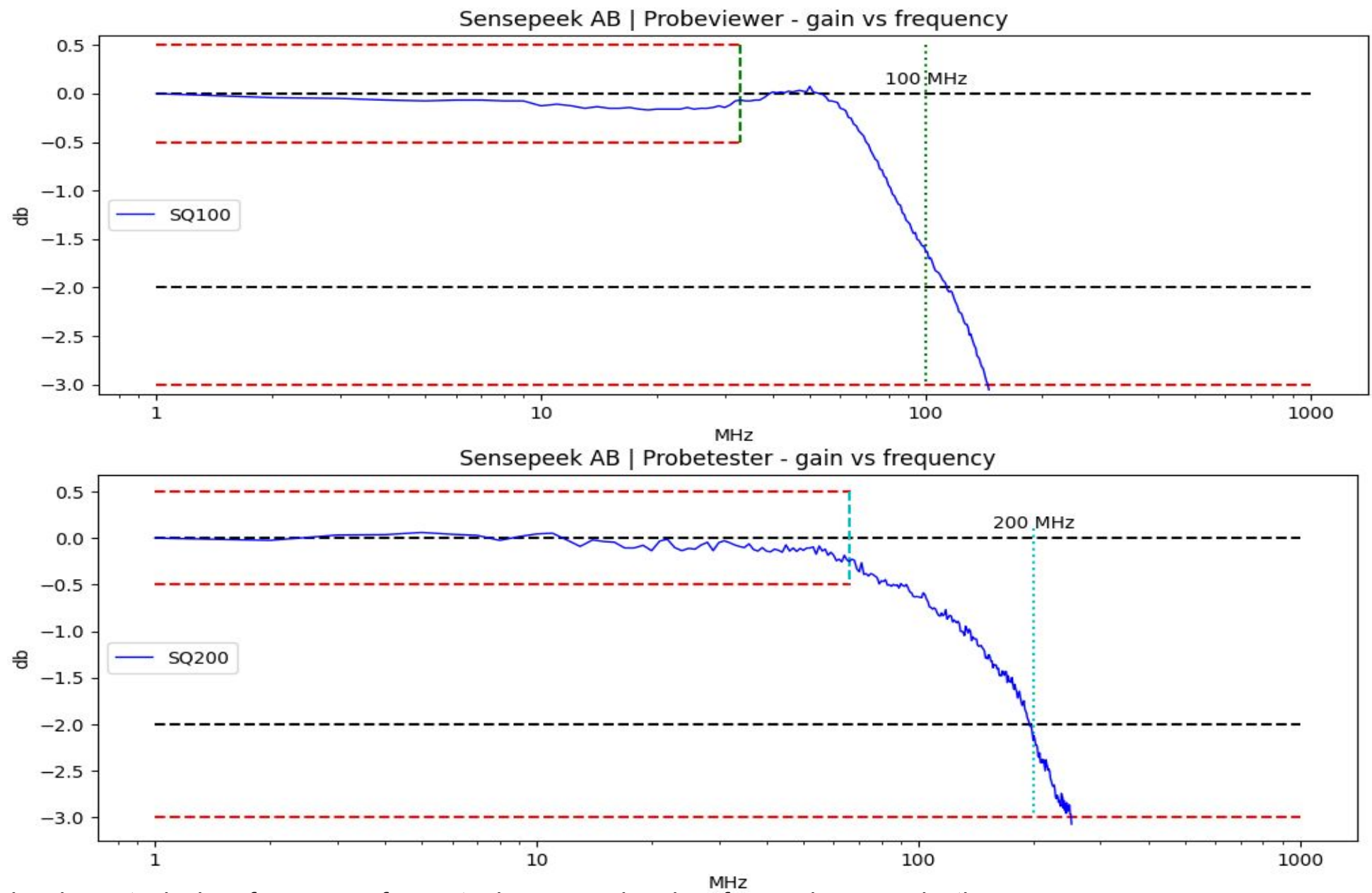
The SQ-probes significantly reduced PCB loading with spring-loaded signal and ground connections applying only 60–100g of force, compared to the 400g–1kg exerted by rigid probes.



The design also provides tactile feedback, ensuring reliable contact with the target being measured.



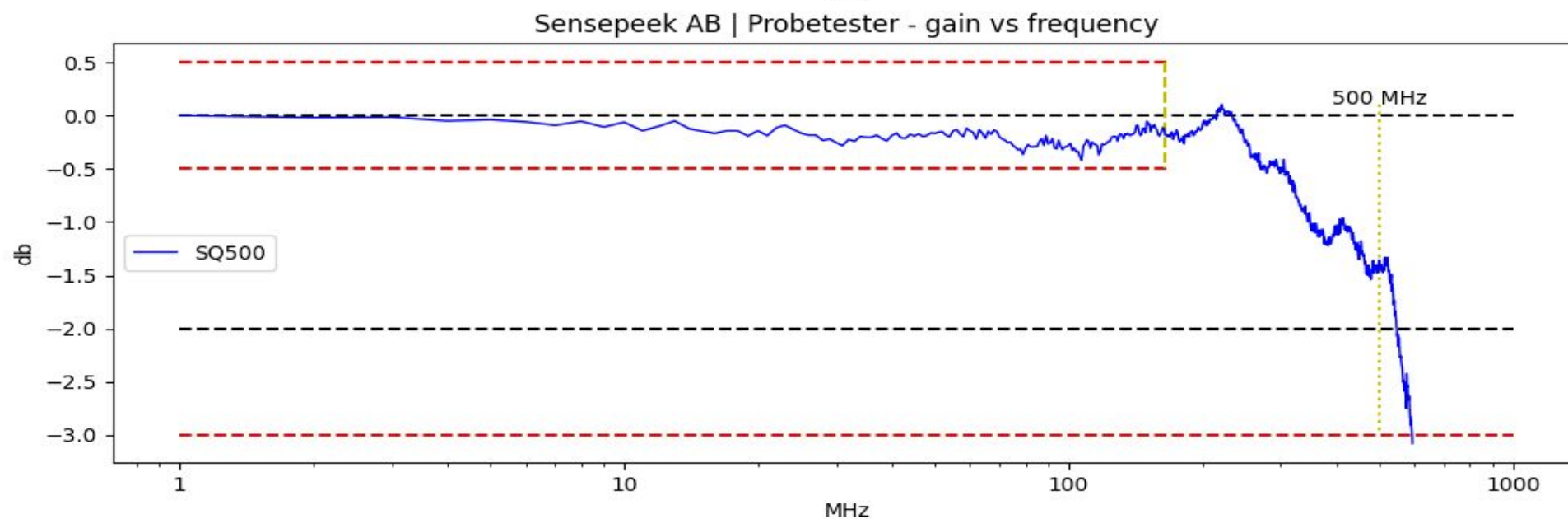
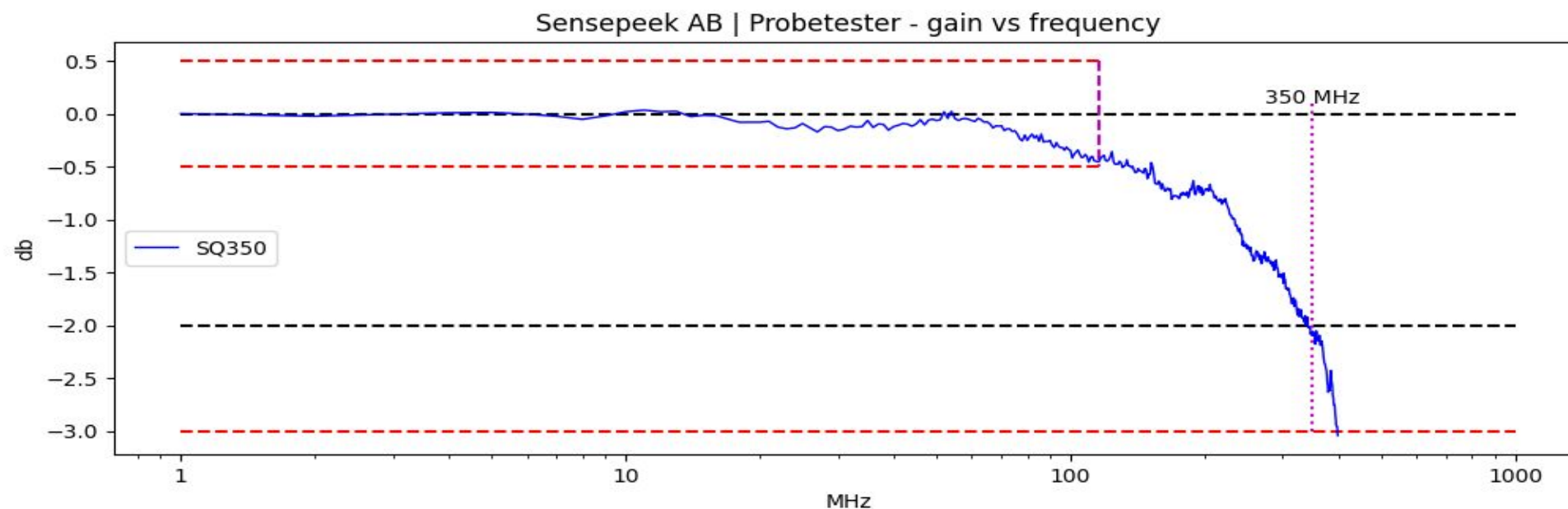
PERFORMANCE



*Graphs shows typical performance of an actual measured probes from volume production.

SPID (Sensepeek probe ID): 5351313030-KS4TVIXB; SPID (Sensepeek probe ID): 5351353030-c1f82b7b





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SPECIFICATION – PROBE MODEL OVERVIEW

Model	SQ100	SQ200	SQ350	SQ500
Bandwidth (3 dB)	DC to 100 MHz	DC to 200 MHz	DC to 350 MHz	DC to 500 MHz
Attenuation	10:1			
Resistance at probe tip (±2% at DC)	10 MΩ			
Capacitance at probe tip (note 2)	13.9 pF	13.9 pF	12.7 pF	9 pF
Scope input impedance	1 MΩ			
Scope x10 read out pin	No	Yes		
Maximum working voltage	300 V RMS CAT II (note 1)			
Compensation range	9 to 54 pF			
Output Connector	BNC			
Environment				
Operating temperature range	−20 °C to +50 °C			
Storage temperature range	−40 °C to +60 °C			
Temperature range for stated specifications	15 - 30 °C			
Max. humidity, operating (non-condensing)	80 % to +30 °C, decreasing linearly to 40 % at +50 °C			
Max. humidity, storage (non-condensing)	80 %			
Max. altitude Operating	2 km			
Max. altitude Storage	15 km			
Pollution degree	2 (As defined in IEC 61010-031. Only non-conductive pollution. Occasionally, however, a temporary conductivity caused by condensation must be accepted.)			
Safety	IEC 61010-031:2015, AMD1:2018			
EMC approvals	Not applicable			
Environmental approvals	WEEE, RoHS			



SPECIFICATION – PROBE MODEL OVERVIEW

General		
Supplied accessories	1x SQ probe holder for handsfree measurement 1x Testhook with detachable cables (5cm & 10cm) for convenient ground connection 1x Alligator cable for convenient ground connection 1x Standard ground spring, for handheld measurements at rated bandwidth 1x Unique ground spring, for total handsfree measurements at rated bandwidth 1x Set of color coded cable holders(4 colors) 1x Probe tip protection 1x Extra test needle (note 3)	
Cable length with probe and connector		1.2m (approx. 3 ft 11 in)
Dimensions (probe head)		Length 90 mm, Ø 8.9mm
Nominal probe tip pitch		0 - 10 mm
Probe tip diameter		0.5 mm
Weight with probe and cable		40 g

All specifications are subject to change without notice.
note 1, SQ-series, only CATII 300V RMS with finger protection mounted on probe
note 2, Calculated
note 3, Accessories can differ between different product packages



ORDERING INFORMATION – SQ-series accessories

Article no	Article description	*EUR	
PCBITE-6028	5x Ground spring needle 3,5mm	30	
PCBITE-7001	5x Ground spring 3,5mm	7	
PCBITE-7002	5x Probe tip needle	7	
PCBITE-7003	Oscilloscope probe BNC adaptor	9	
PCBITE-7004	Ground cable accessories	18	
PCBITE-7005	Sprung hook CATII	12	
PCBITE-7006	Cable holders	9	
PCBITE-7007	Probe tip protection caps	7	
PCBITE-7020	Oscilloscope probe MMCX adaptor	19	

*Prices may change. Prices listed are manufacturer's suggested retail price.

For more information and resellers visit www.sensepeek.com



ORDERING INFORMATION – SQ-series probes and kits

Article no	Article description	*EUR	
PCBITE-6013	SQ100 - 100 MHz handsfree oscilloscope probe	49	
PCBITE-6014	SQ200 - 200 MHz handsfree oscilloscope probe	59	
PCBITE-6023	SQ350 - 350Mhz handsfree oscilloscope probe	79	
PCBITE-6024	SQ500 - 500Mhz handsfree oscilloscope probe	99	
PCBITE-6016	PCBite kit with 2x SQ200 200 MHz handsfree oscilloscope probes	179	
PCBITE-6025	PCBite kit with 2x SQ350 350 MHz handsfree oscilloscope probes	219	
PCBITE-6026	PCBite kit with 2x SQ500 500 MHz handsfree oscilloscope probes	259	
PCBITE-6019	PCBite kit with 2x SQ200 200 MHz and 4x SQ10 handsfree probes	249	
PCBITE-6027	PCBite kit with 2x SQ350 350 MHz and 4x SQ10 handsfree probes	289	
PCBITE-6029	PCBite kit with 2x SQ500 500 MHz and 4x SQ10 handsfree probes	329	

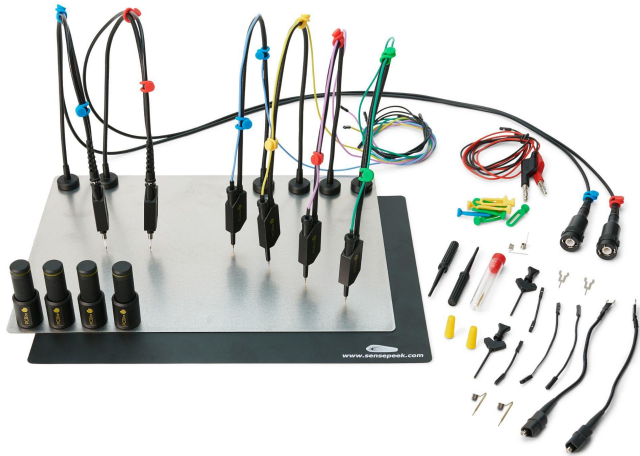
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Single oscilloscope probe



PCBite kit with 2x oscilloscope probes



PCBite kit with 2x oscilloscope probes and 4x SQ10 probes

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