

Type: **MSS** PatternedMedia - Supra Lifetime Probe on FMR

SuperSharp, high aspect ratio probe for very fine features such as divots or 10nm holes

Due to the softer FMR cantilever this multipurpose high resolution probe approaches ultimate lifetime and reliability. The special qualities of our MSS PatternedMedia also lead to the best interaction between tip and cantilever.

The **nanotools**® **MSS_FMR_13/3** tip is designed for non-contact / high frequency mode. It delivers outstanding resolution in critical AFM applications even on hard, tip eating samples like ceramics, silicon oxide/nitride or polysilicon to name a few.

EBD Material

The high aspect ratio part of the probe is made from HIGH-DENSITY, DIAMOND LIKE CARBON (**HDC/DLC**). The tips show superior properties such as high aspect ratio, hydrophobic surface properties, high stiffness / elastic modulus (8x of that of silicon), low thermal mass as well as abrasion resistance. Our HDC dissipates static charge.

This leads to probes offering the extreme durability of diamond together with high resolution imaging capability. Applying our patented **EBD** (electron beam deposition) technique we ensure a stiff and rigid high aspect ratio probe of superior symmetry and nanometer precision.

Technical Data

Tip dimensions	Shape:	conical
	Length:	400 nm +/- 100 nm
	Diameter*:	30 nm +/- 10 nm
	Tip radius:	<5 nm, typically 2-3 nm
	Tilt compensation:	3 or 13deg +/- 1deg

Cantilever	Pointprobe FMR
	l: 225 µm w: 28 µm t: 3 µm
	k: 2.8 N/m f: 75 kHz

Coating	Tipside: none
	Backside: Al reflex

*measured at 300 nm from tipend

First in Quality

A 100% quality check by SEM for every tip, high scan speeds, flexibility in combination with stiffness, 13 deg tilt compensation and optimized cost per scan are key parameters. The **nanotools**® **MSS_FMR_13/3** is used by leading fabs worldwide for several AFM in-line monitoring tasks such as depth control or STI.

Datasheet for every tip with precise tip dimensions provided.

nanotools is the first and only probe manufacturer being quality certified to ISO 9001.

For more information please contact: info@nano-tools.com
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