

KS107BQ Linear and Planar Dual-Target Section Thickness

Body Model

The KS107BQ type slice thickness phantom is used to test the pitch resolution in the thickness direction of B-ultrasound probes, also known as beam slice thickness. It corresponds to the revised version of the national standard "B-type Ultrasound Diagnostic Equipment" (GB10152—2009). In addition to the diffuse reflection target specified by the standard, it also incorporates the latest research results and practical experience in this field from the international community, and adds a line target group. Its functions include: (a) serving as a reference for determining the threshold gain state, so that the slice thickness is the same as the measurement conditions of axial and lateral resolution, forming a complete data set; (b) providing a complete view of the sound beam section in the pitch direction; (c) verifying the slice thickness values read from the surface target.

The specific technical indicators are as follows:

The sound velocity of the ultrasonic tissue-mimicking (TM) material: (1540 ± 10) m/s
[$(23 \pm 3) ^\circ$ C]

The sound attenuation of the ultrasonic tissue-mimicking (TM) material: (0.7 ± 0.05)
dB/(cm • MHz) [$(23 \pm 3) ^\circ$ C]

The total depth of the tissue-mimicking material: 200 mm

The thickness of the scattering target layer: < 0.4 mm

The angle between the scattering target layer and the sound window: 70°

The number of target lines: 19

The spacing between adjacent target lines: 10 mm

The diameter of the target line: (0.3 ± 0.05) mm

The tolerance of the position of the line target: ± 0.1 mm



KS107BQ(L) Slice Thickness Mold



Customized body model KS107BQ(L), which is compatible with KS107BQ in terms of parameters.

The sound velocity of the ultrasonic tissue (TM) material: (1540 ± 10) m/s
[(23 ± 3) ° C]

The sound attenuation of the ultrasonic tissue (TM) material: (0.7 ± 0.05)
dB/(cm • MHz) [(23 ± 3) ° C]

The total depth of the tissue imitation material: 280 mm

The thickness of the scattering target layer: < 0.4 mm

The angle between the scattering target layer and the sound window: 70°

Number of target lines: 27

Distance between adjacent target lines: 10mm

Diameter of target lines: (0.3 ± 0.05) mm

Tolerance of line target position: ± 0.1 mm

The actual detectable depth has been increased to 280mm. The lateral size of the panel has been moderately widened, while the angle between the scattering layer and the acoustic window remains unchanged.