

Probe: HCN Balun

Part Number: SW50P38N13

Specifications

Mechanical Specifications:

Field: 500MHz 89mm bore.

Spinning system: 3.2mm Vespel

Maximum spin rate: 25kHz

Stability: The greater of +/- 0.1% of spin rate or 5 Hz, over 24 Hours.

Active Sample Volume: 20ul (std. volume rotors)

Sample Temperature:

Range: +100 C to -50 C

RF Specifications:

Maximum B₁ field strengths (Duty cycle not to exceed 1.5%):

¹H:

T90¹=1.7us @ 40ms maximum length (<500 Watts at probe).

Tuning Bandwidth: >= -1 to +5 MHz

¹³C:

T90¹=2.3us @ 20ms maximum length (<350 Watts at probe).

Tuning Bandwidth: >= -2 to +2 MHz

¹⁵N:

T90¹=3.7us @ 20ms maximum length (<550 Watts at probe).

Tuning Bandwidth: >= -2 to +2 MHz

NMR Specifications:

Shimming on Adamantane:

0.06 ppm FWHM, FW10%M 0.15ppm.

Signal to Noise: HMB

¹³C: S/N >= 100:1 (HMB, 4 scans, matched filter according to our standard test protocol)

Background:

¹³C: The standard probe will be constructed of modern engineering materials that minimize the presence of ¹³C background (as measured via. cross polarization using spin temperature alternation.)

¹ T90=[T360-T180]/2