

NMR Probe Specifications

Model JEOL Resonance 4.0 mm High Resolution 400 MHz Extended VT MAS probe

Applicable Instrument ECZR 400 MHz NMR system.
For other models, please contact JEOL USA for specifications.

Description Two-channel magic angle spinning (MAS) NMR probe. Magic angle spinning speeds up to 17 kHz with standard Zirconia rotors at room temperature with gas supply <60 psi. High frequency channel tuned to ^1H at 400 MHz or ^{19}F at 376 MHz. Observe (X) channel tuning inserts supplied for ^{31}P , ^7Li , ^{11}B , ^{23}Na , ^{27}Al , ^{13}C , ^{79}Br , ^{207}Pb , ^{29}Si , ^6Li , and ^{15}N .

Specifications Signal-to-Noise
 ^{13}C sensitivity ≥ 200 8 scans HMB

Pulse Widths

Standard Power Amplifiers:

^1H $\pi/2$ pulse width $\leq 3.6 \mu\text{s}$ At ≤ 50 W at 400 MHz

^{13}C $\pi/2$ pulse width $\leq 3.0 \mu\text{s}$ At ≤ 180 W at 100 MHz

Middle Power Amplifiers:

^1H $\pi/2$ pulse width $\leq 2.6 \mu\text{s}$ At ≤ 100 W at 400 MHz

^{13}C $\pi/2$ pulse width $\leq 2.5 \mu\text{s}$ At ≤ 275 W at 100 MHz

Resolution

^{13}C resolution ≤ 0.1 ppm Adamantane (FWHM)

Variable Temperature

Variable temperature range is -100°C to $+200^\circ\text{C}$ with VT system.

Notes:

Pulse width specifications are measured at the magic angle with sufficient air flow, at ambient temperature. Cross Polarization (CP) at field strengths up to 80% of the observe pulse strength up to 10ms duration. The probe may have ^{19}F background signals for single pulse experiments.