

DATASHEET

600 X,F/H,F-D-05-Z



Key Features:

- ^{19}F on X AND ^1H channel enabling $^{19}\text{F}\{^1\text{H}\}$ and e.g. $^{13}\text{C}\{^{19}\text{F}\}$.
- Fast channel adjustment for all nuclei within seconds.
- Superior ^1H sensitivity and water suppression.
- Full access to all nuclei around 2H on the X channel .

NMR Nucleus	Signal/Noise	Sample, noise range
^1H	$\geq 850:1$	0.1% Ethylbenzene in Chloroform-D / Noise = 200 Hz, LB = 1 Hz
^1H	$\geq 200:1^*$	2mM Sucrose in 90% H_2O / 10% D_2O / AQ=1s, Noise = 1.5ppm
$^{19}\text{F}_{[\text{H}]}$	$\geq 850:1$	TFT in Chloroform-D / Noise = 1 ppm, LB = 2 Hz
$^{19}\text{F}_{[\text{X}]}$	$\geq 480:1$	TFT in Chloroform-D / Noise = 1 ppm, LB = 2 Hz
^{31}P	$\geq 300:1$	TPP in Acetone-D6 / Noise = 5 ppm, LB = 5 Hz
^{13}C	$\geq 300:1$	ASTM (40% Dioxane in Benzene-D6) / Noise = 40 ppm, LB = 3.5 Hz
^{15}N	$\geq 35:1$	90% Formamide in DMSO-D6 / Noise = 2 ppm, LB = 0.3 Hz

NMR Nucleus	Pulse Width	Description:
^1H	$\leq 9 \mu\text{s}$	QUAD 600 X,F/H,F-D-05-Z is a two radio frequency channel probe, optimized for X detection. The X channel covers ^{19}F and the nuclei range between ^{31}P and ^{15}N . The second probe circuit can be tuned either for ^1H or ^{19}F . The probe is equipped with actively shielded single-axis gradient. All channels including lock can be tuned and matched without removing the probe. The probe can be operated at temperatures between -50°C and $+100^\circ\text{C}$ using the appropriate accessories (not included). This probe is equipped with FCA (fast channel adjustment) which enables tuning and matching of all channels within seconds without drift.
$^{19}\text{F}_{[\text{H}]}$	$\leq 12 \mu\text{s}$	
$^{19}\text{F}_{[\text{X}]}$	$\leq 15 \mu\text{s}$	
^{31}P	$\leq 14 \mu\text{s}$	
^{13}C	$\leq 12 \mu\text{s}$	
^{15}N	$\leq 18 \mu\text{s}$	

Feature	Rated	Parameters/Sample
^1H Line shape non-spinning*	$\leq 0.8/7/14\text{Hz}$	@ 50%/0.55%/0.11% peak height / Sample 1% Chloroform in Acetone-D6
^1H Line shape spinning	$\leq 0.6/6/12\text{Hz}$	@ 50%/0.55%/0.11% peak height / Sample 1% Chloroform in Acetone-D6
VT-range	$-50 \dots +100^\circ\text{C}$	
Z-Gradient	50 Gauss/cm (@10A)	

* These specifications are only valid for 600 MHz spectrometers with at least 34 RT-shims. Probe performance on other systems may be different.

QUAD Systems AG
Industriestrasse 31
8305 Dietlikon/Zurich
Switzerland
sales@quadsystems.tech