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We report measurements of the statistical polarization of small electron spin ensembles by Magnetic Resonance Force Microscopy (MRFM). The experiments were conducted at $T = 4$ K using an IBM-style ultrasoft micromechanical cantilever outfitted with a high coercivity micromagnetic probe. Magnetic resonance signals from tens of electron spins with spin-correlation time of $\sim 400$ ms are obtained. In order to apply MRFM for spatial mapping of donor electrons in semiconductors, non-contact friction between the cantilever and the silicon surface is investigated. We found the combination of hydrogen passivation, gold coating, and shielding the sample surface from stray laser light reduces the non-contact friction by almost a factor of 100.