

# Effect of Temperature on Domain Wall Dynamics in Magnetic Microwire

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**Abstract.** Domain wall velocity versus applied magnetic field was measured at different temperatures in a glass-coated Fe<sub>77.5</sub>Si<sub>15</sub>B<sub>7.5</sub> microwire. Measurement of velocities under four different conditions confirmed the presence of unidirectional effect in the domain wall propagation. The experimental results are interpreted using an elastic domain wall model. This explains the non-linearity of domain wall velocity versus applied magnetic field dependences as well as the wall shape transformation in a low field region, and finally provides an additional reason why wall velocity decreases with decreasing temperature.