

Fig. 1 (left) Waveform primitive applied to the power delivery substrate for actuation. V_{low} and V_{high} represents the lowest and highest voltage level respectively of pulse train (250 pulses) shown for one cycle. (right) Composite optical micrograph showing representative USDA motion on power delivery substrate. Motion is recorded for $V_{low}=0\text{V}$ and $V_{high}=170\text{V}$ at 15Hz frequency for deposition pressure of 25 mTorr. Position of USDA is recorded every 250 frames.

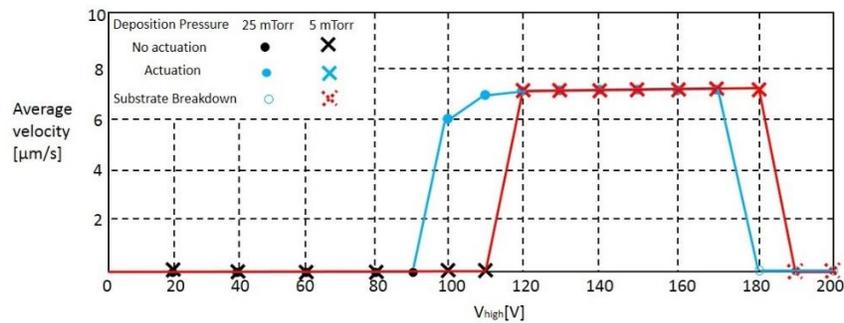


Fig. 2 Average velocity of USDA with V_{high} ($V_{low}=0\text{V}$) for deposition pressure of 5 and 25 mTorr respectively. The stepping frequency is kept constant at 15 Hz.

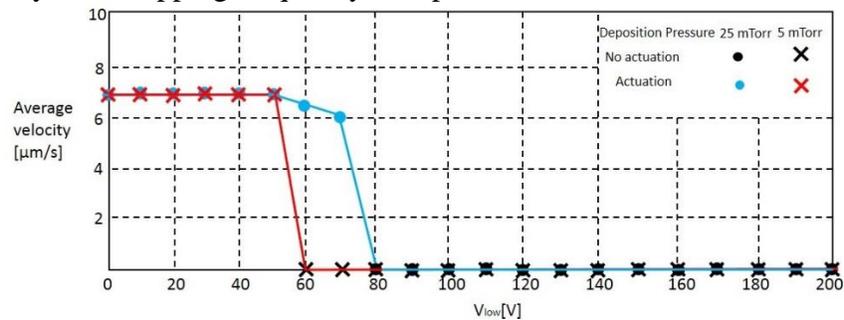


Fig. 3 Average velocity of USDA with V_{low} ($V_{high}=170\text{V}$) for deposition pressure of 5 and 25 mTorr respectively. The stepping frequency is kept constant at 15 Hz.

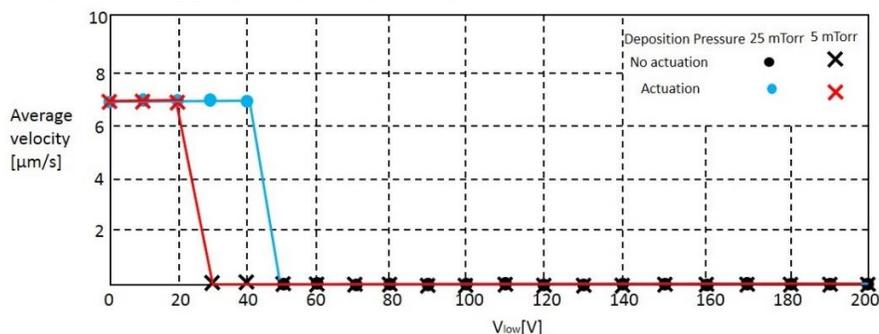


Fig. 4 Average velocity of USDA with V_{low} ($V_{high}=140\text{V}$) for deposition pressure of 5 and 25 mTorr respectively. The stepping frequency is kept constant at 15 Hz.