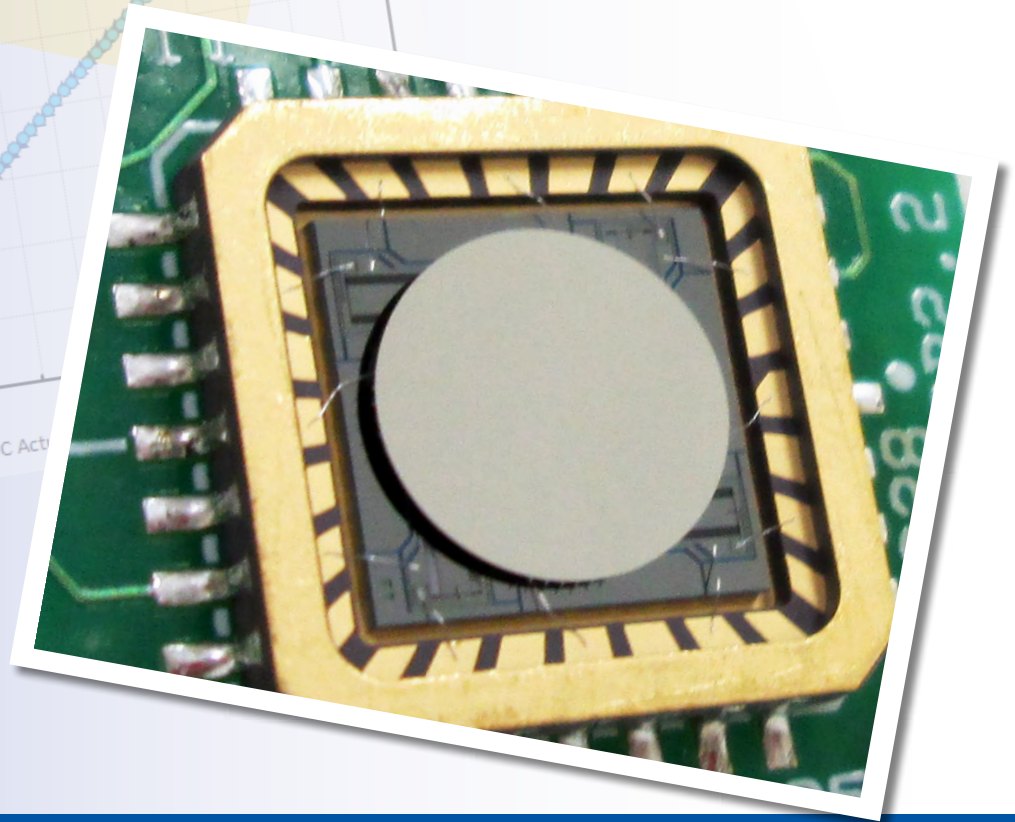
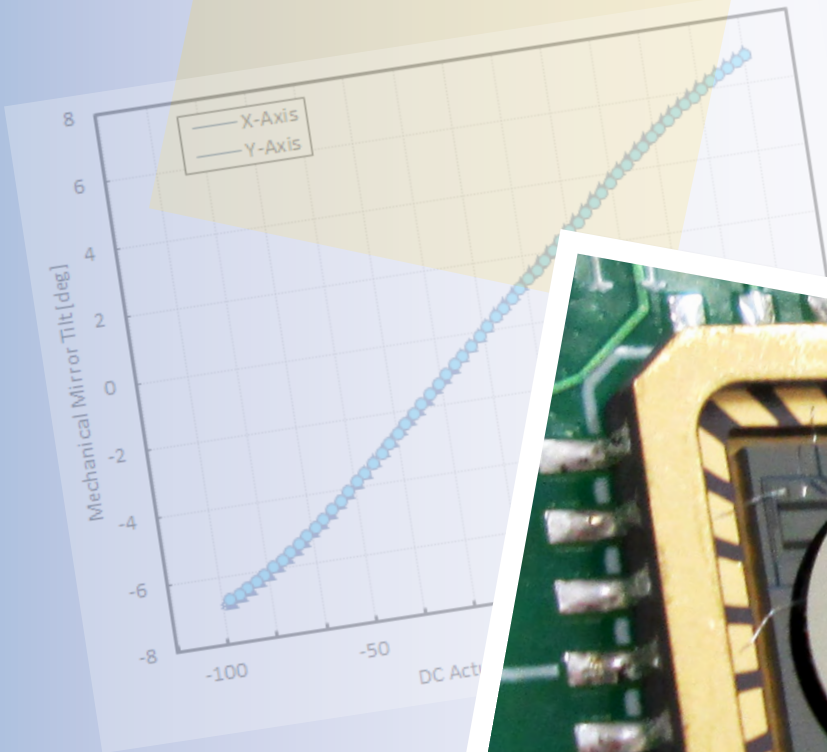


## Gimbal-Less Two-Axis Scanning MEMS Micromirrors

Device Datasheet  
S4144



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# Device Parameters Summary

**Device ID :** S4144

**Actuator Name :** A4QQ8.3

**Actuator Type :** 4-Quadrant (Two-Axis, Bidirectional)

**Mirror Type and Size :** Bonded mirror of 2.4mm diameter

**Mirror Coating :** Aluminum

**Maximum Angle - X Axis [degrees] :** 3.8621

**Maximum Angle - Y Axis [degrees] :** 3.7634

**Maximum Voltage - X Axis [V] :** 157

**Maximum Voltage - Y Axis [V] :** 156

**Bias Voltage [V] :** 80

**Maximum Angle - Coupled Axes [degrees] :** 4.6301

**Resonant Frequency - X Axis [Hz] :** 1680

**Resonant Frequency - Y Axis [Hz] :** 1699

**Quality Factor- X Axis :** 32

**Quality Factor - Y Axis :** 31

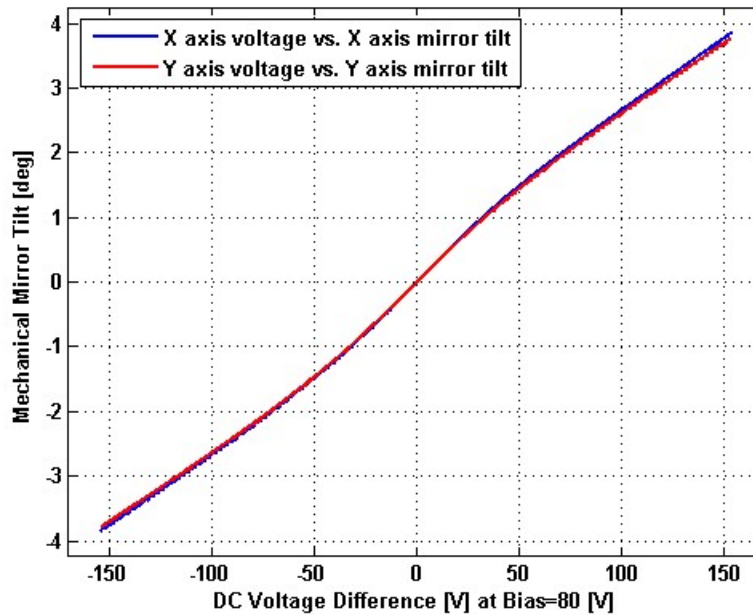
**Recommended LPF Cutoff Frequency (6th Order Bessel) :** 680

**Date and Time Report was Created:** 25-Aug-2015 at 12:35:5

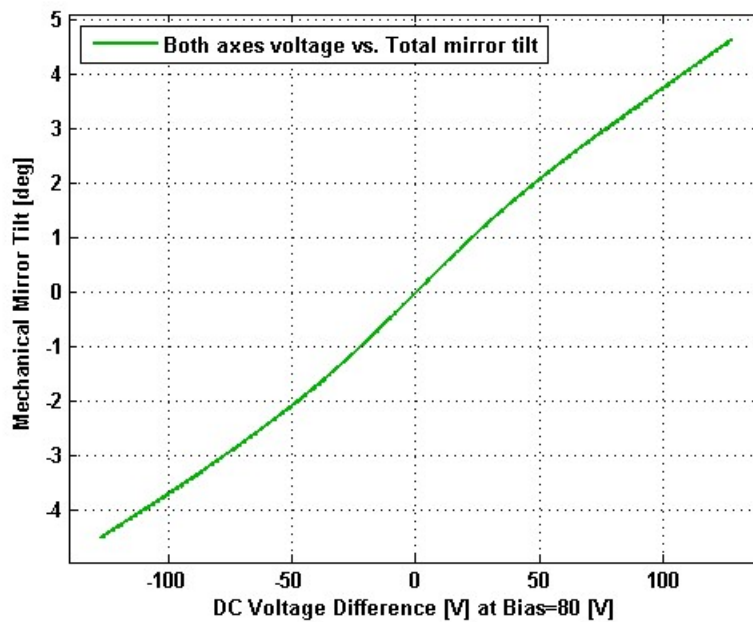
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# Static Response

## Voltage vs. Angle - Individual Axes



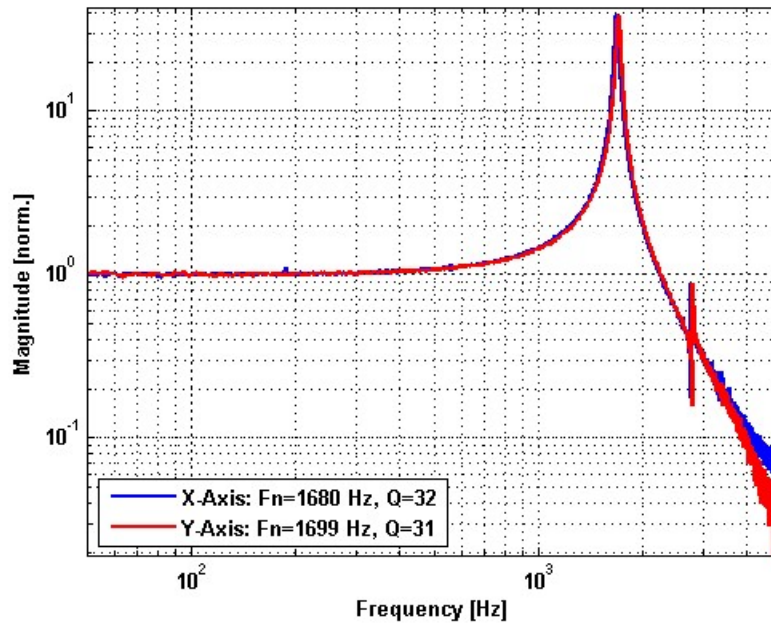
## Voltage vs. Angle - Coupled Axes



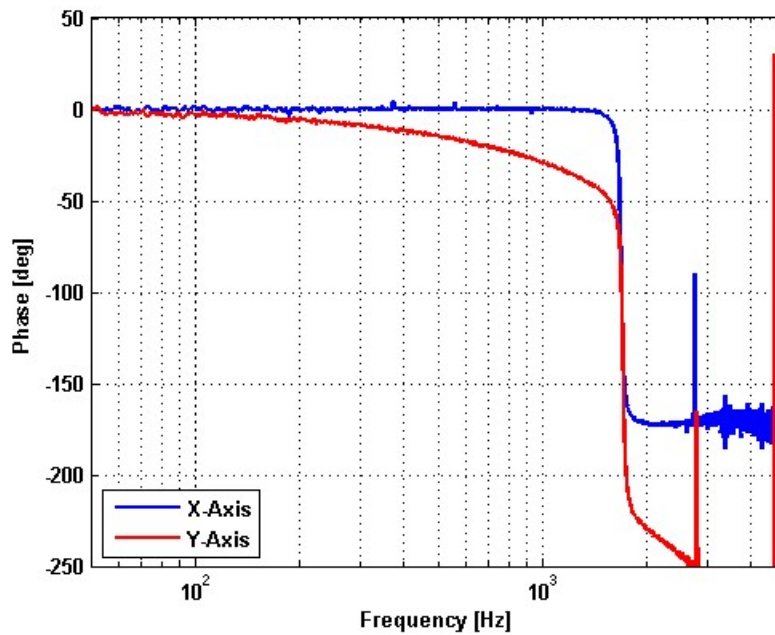
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# Frequency Response

## Small Signal Frequency Response - Magnitude



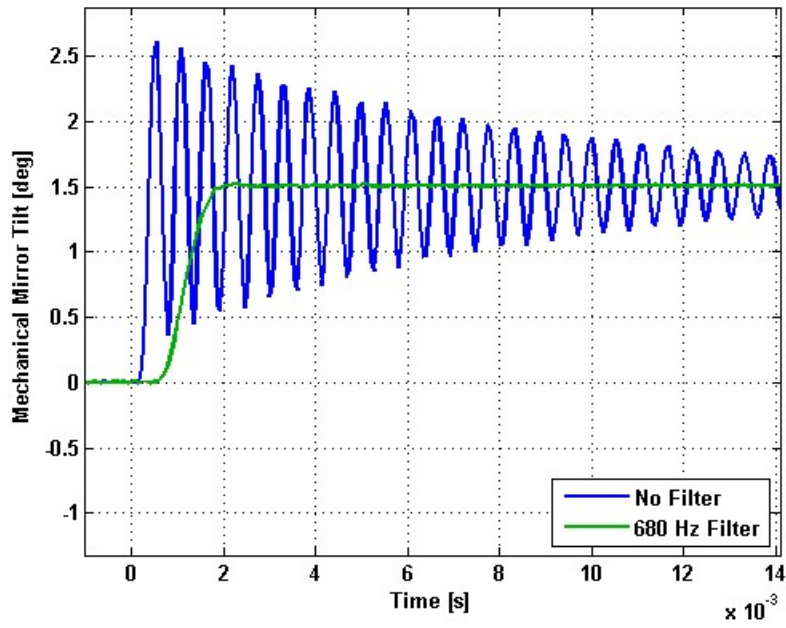
## Small Signal Frequency Response - Phase



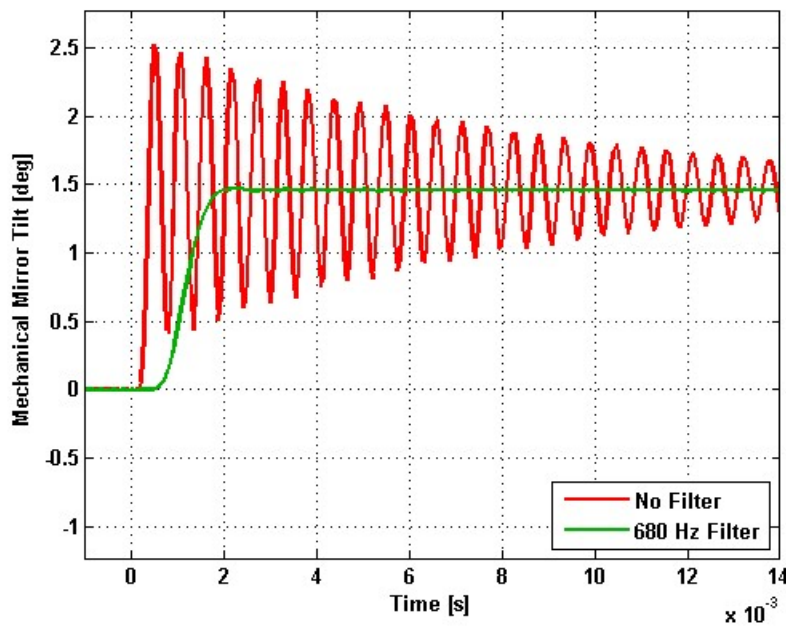
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# Step Response

## X-Axis Step Response



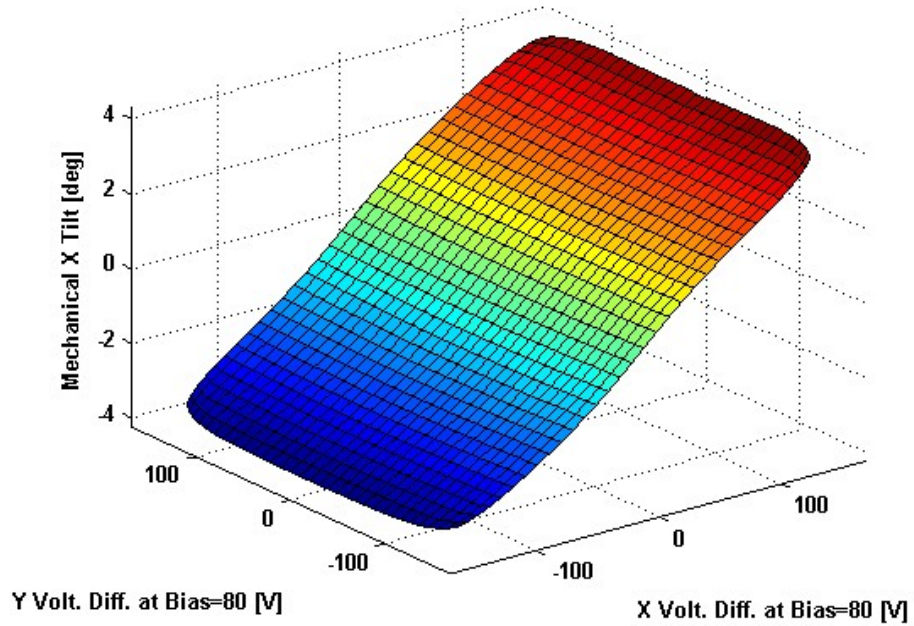
## Y-Axis Step Response



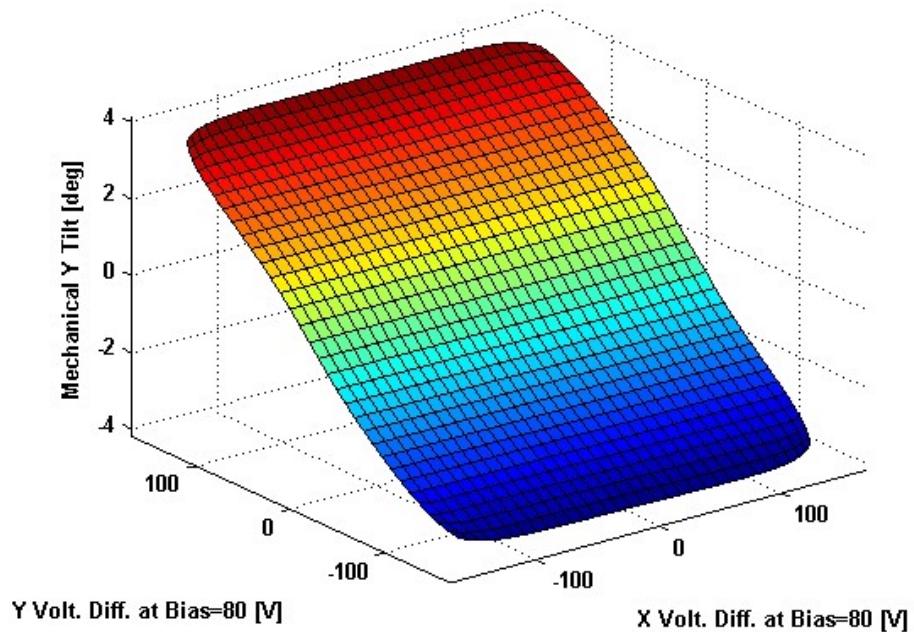
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# 2D Lookup Tables

## Voltage vs. X Angle - Lookup Table



## Voltage vs. Y Angle - Lookup Table



# Y Angle vs. X Angle - Addressable Angles

