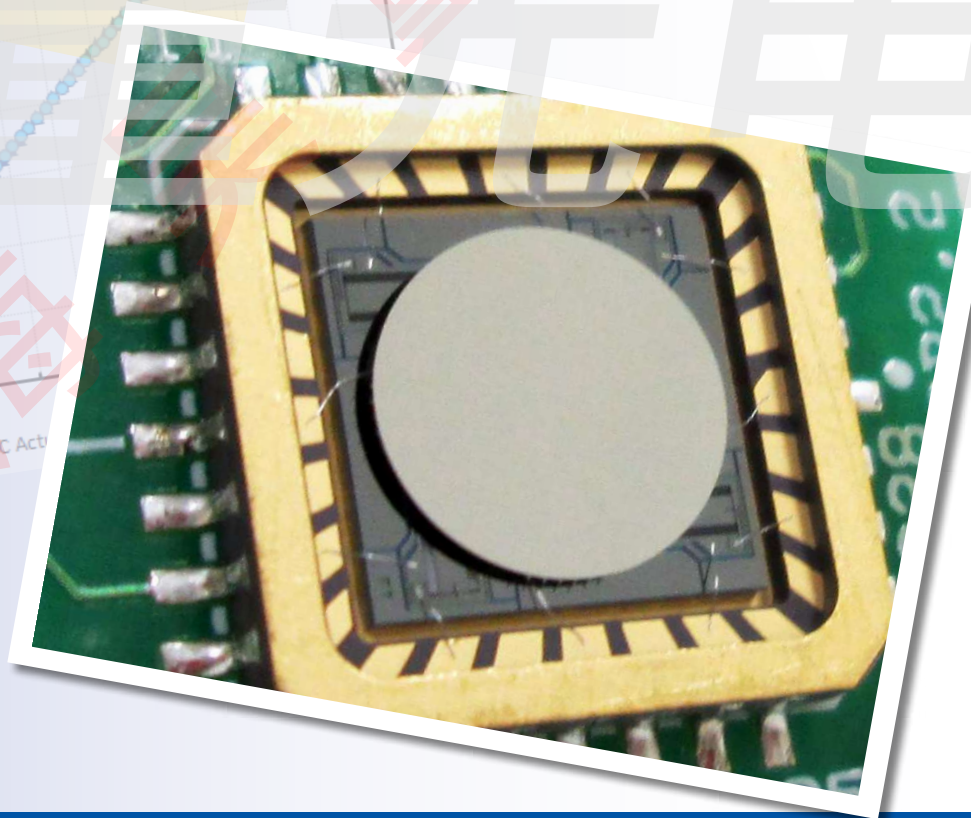
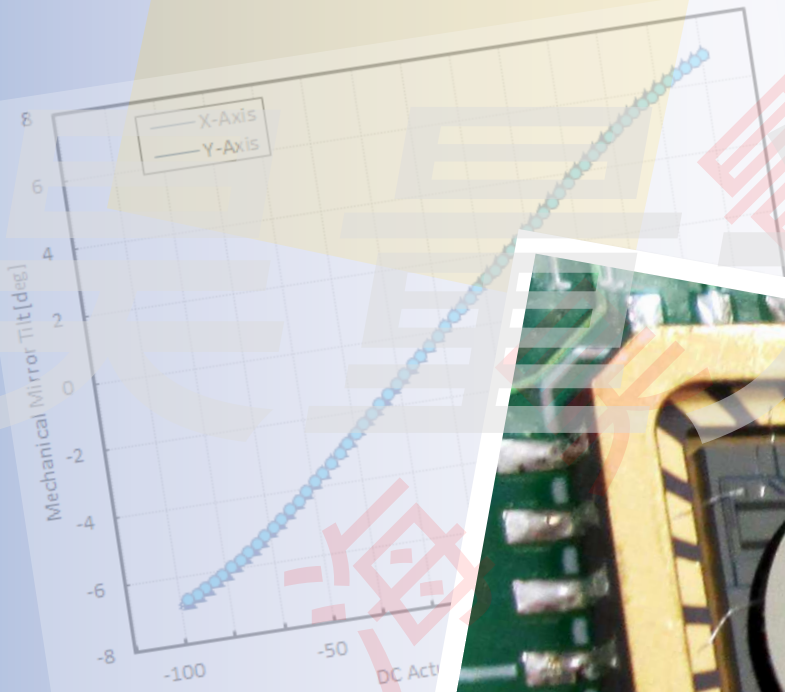


# Gimbal-Less Two-Axis Scanning MEMS Micromirrors

Device Datasheet  
S44953\_90V



[www.auniontech.com](http://www.auniontech.com)

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# Device Parameters Summary

**Device ID** : S44953\_90V

**Actuator Type**: F1M16.1

**Actuator Mode** : Gimbal-less Dual-Axis Quasistatic

**Mirror Type and Size** : Integrated mirror 1.6mm diameter

**Mirror Coating** : Aluminum

**Maximum Mech. Angle - X Axis [degrees]** : 5.1600

**Maximum Mech. Angle - Y Axis [degrees]** : 5.2319

**Maximum Vdifference - X Axis [V]** : 164

**Maximum Vdifference - Y Axis [V]** : 164

**Driver Bias Voltage (Vbias) [V]** : 90

**Maximum Mech. Angle - Coupled Axes [degrees]** : 6.4902

**Resonant Frequency - X Axis [Hz]** : 1853

**Resonant Frequency - Y Axis [Hz]** : 1816

**Quality Factor - X Axis** : 15

**Quality Factor - Y Axis** : 15

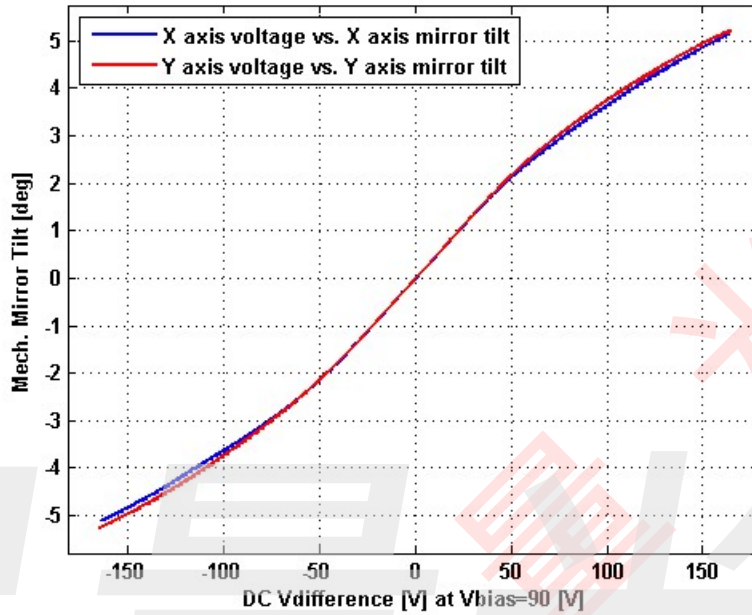
**Recommended LPF Cutoff Frequency (6th Order Bessel) [Hz]** : 900

**Date and Time Report was Created**: 15-Mar-2019 at 15:56:42

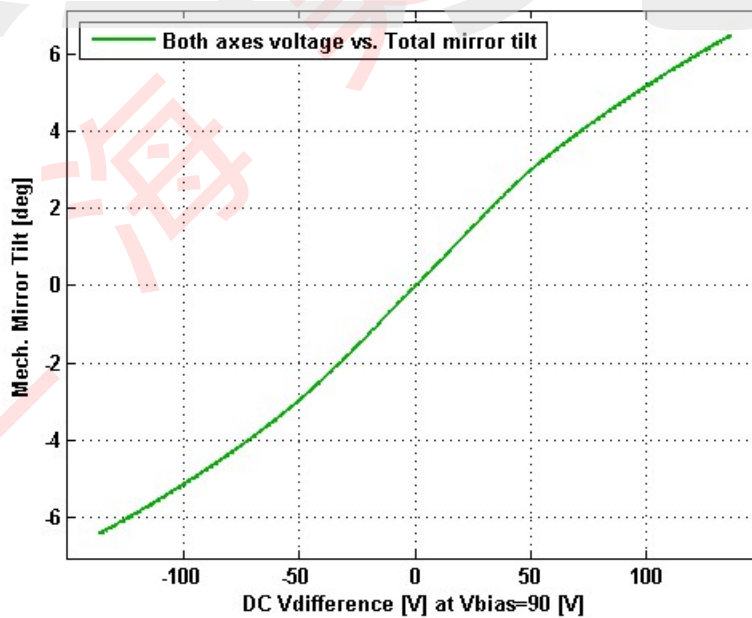
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# Static Response

## Voltage vs. Mech. Angle - Individual Axes

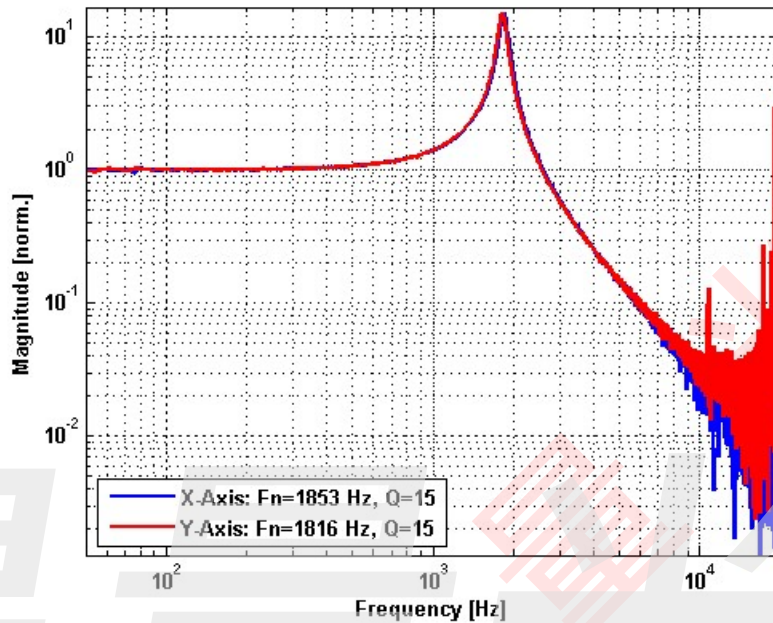


## Voltage vs. Mech. Angle - Coupled Axes

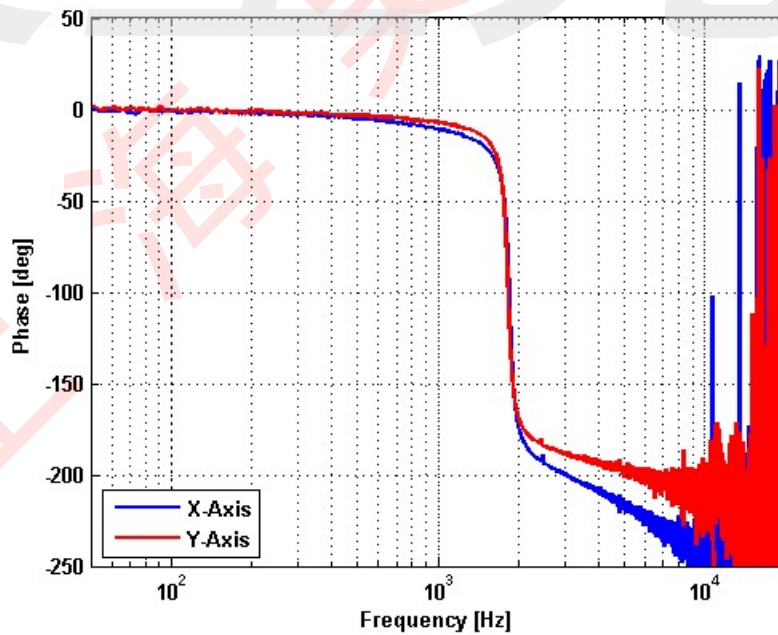


# Frequency Response

## Small Signal Frequency Response - Magnitude

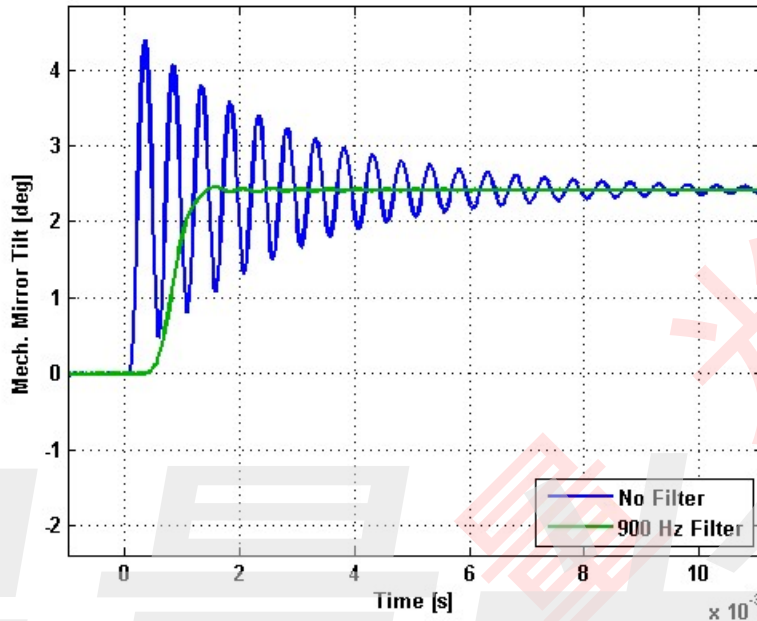


## Small Signal Frequency Response - Phase

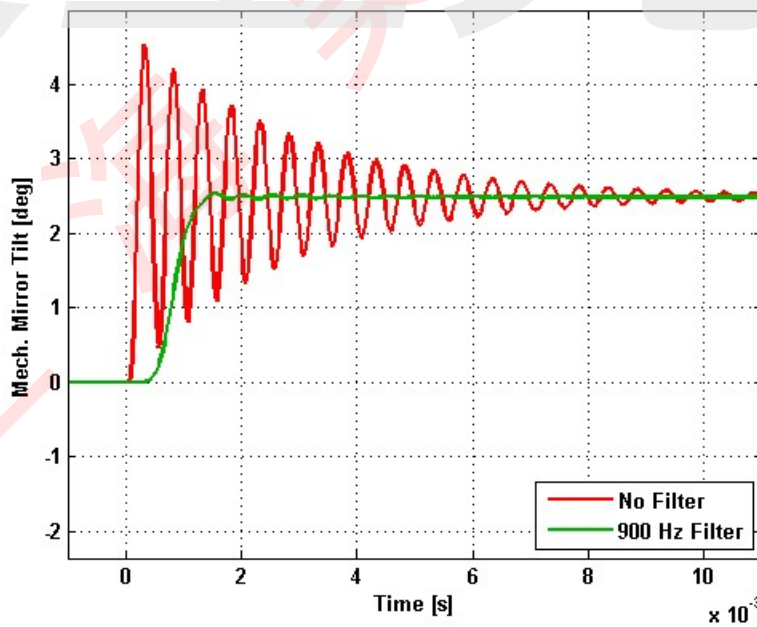


# Step Response

## X-Axis Step Response



## Y-Axis Step Response

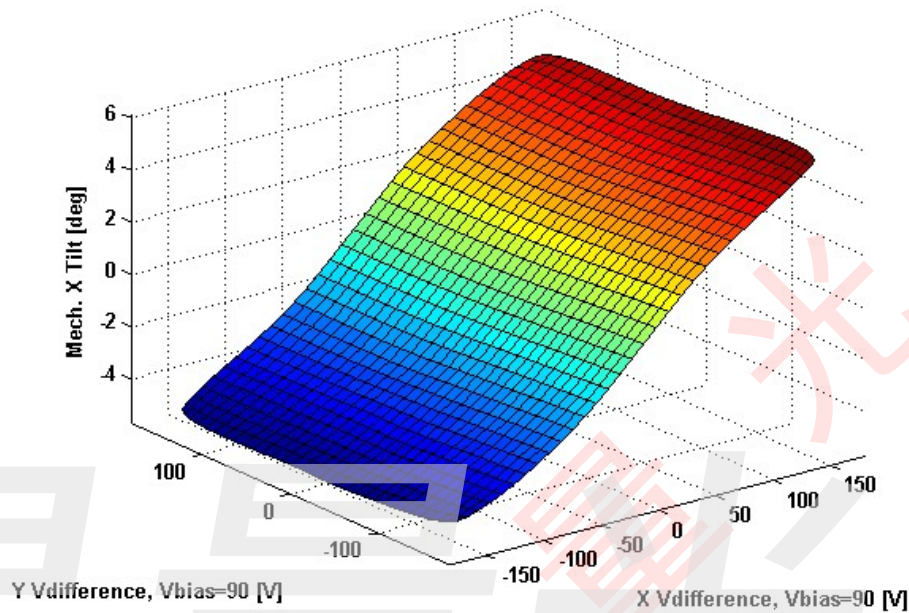




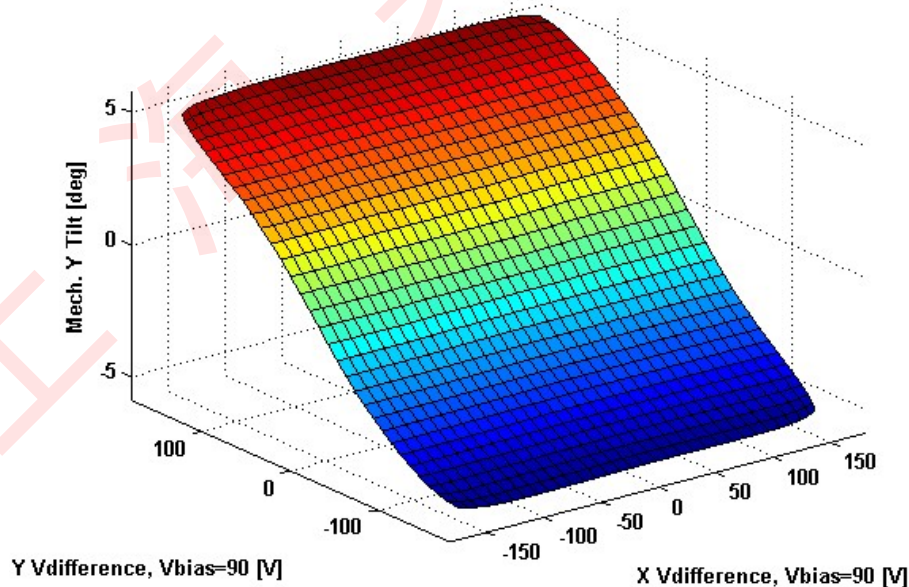
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# 2D Lookup Tables

## Voltage vs. X Mech. Angle - Lookup Table



## Voltage vs. Y Mech. Angle - Lookup Table



## Y vs. X Tilt - Addressable Mech. Angles

