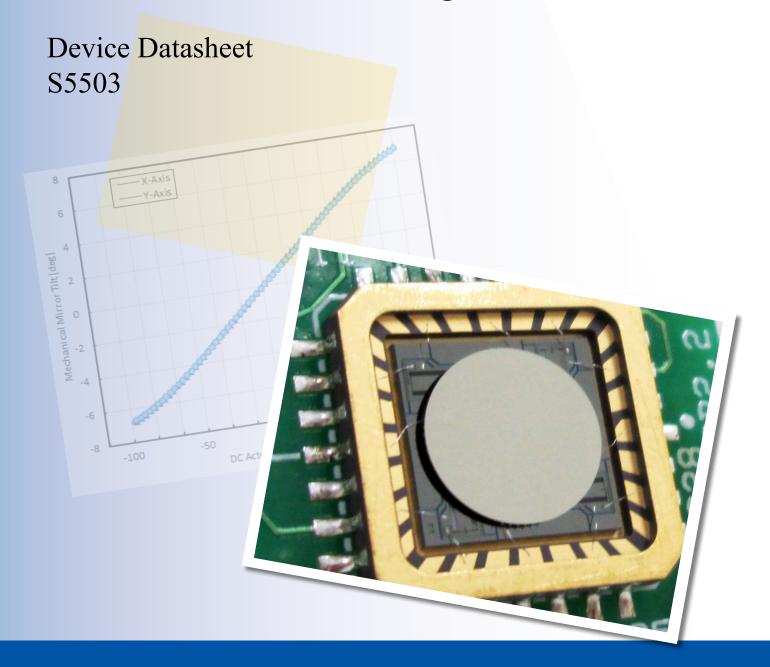




#### **Gimbal-Less Two-Axis Scanning MEMS Micromirrors**



### **Device Parameters Summary**

Device ID: S5503

**Actuator Name :** A3I12.2

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

Mirror Type and Size: Integrated mirror of 1200um diameter

**Mirror Coating:** Aluminum

Maximum Angle - X Axis [degrees]: 5.1700

Maximum Angle - Y Axis [degrees]: 5.1020

Maximum Voltage - X Axis [V]: 145

Maximum Voltage - Y Axis [V]: 144

Bias Voltage [V]: 80

Maximum Angle - Coupled Axes [degrees]: 6.7734

**Resonant Frequency - X Axis [Hz]:** 2607

**Resonant Frequency - Y Axis [Hz]: 2627** 

Quality Factor- X Axis: 64

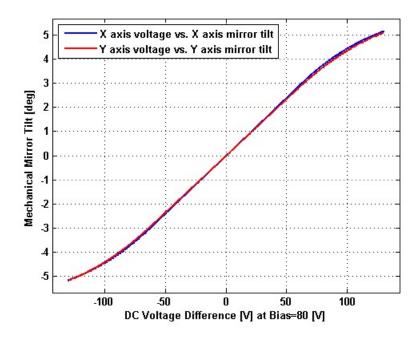
**Quality Factor - Y Axis: 56** 

**Recommended LPF Cutoff Frequency (6th Order Bessel):** 1000

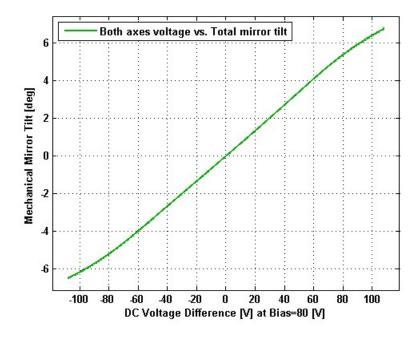
Date and Time Report was Created: 15-Apr-2016 at 11:40:19

## **Static Response**

#### Voltage vs. Angle - Individual Axes

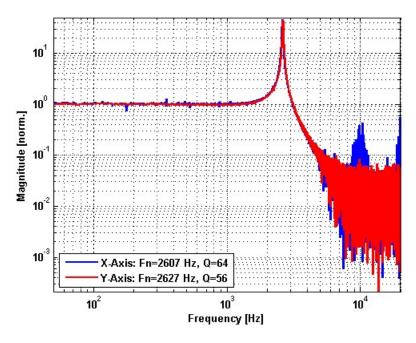


#### Voltage vs. Angle - Coupled Axes

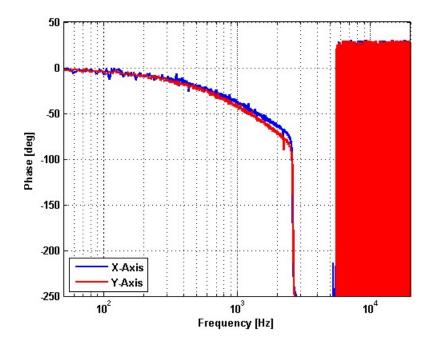


# **Frequency Response**

#### **Small Signal Frequency Response - Magnitude**

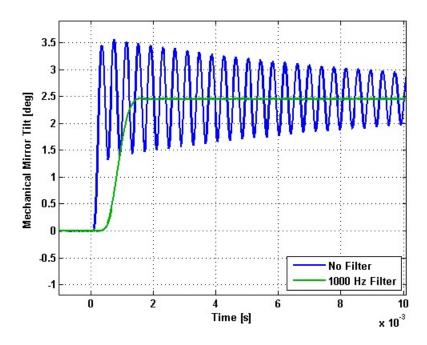


### **Small Signal Frequency Response - Phase**

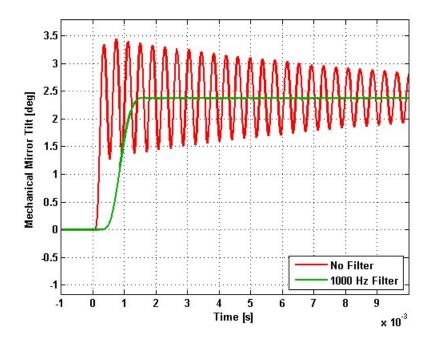


# **Step Response**

## **X-Axis Step Response**

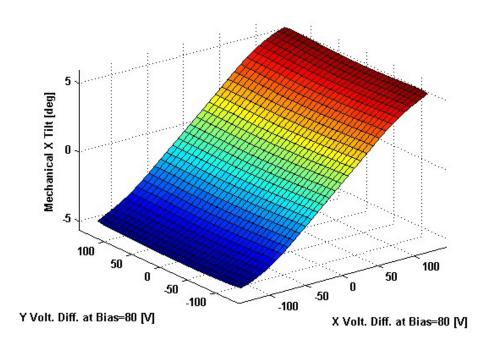


## **Y-Axis Step Response**

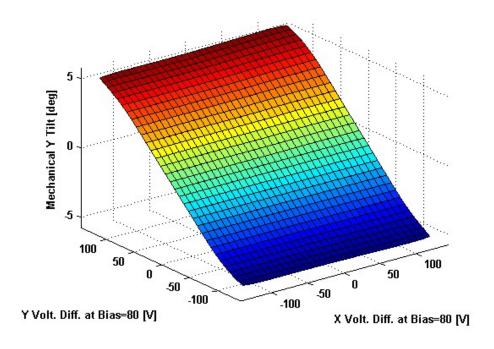


# **2D Lookup Tables**

### Voltage vs. X Angle - Lookup Table



### Voltage vs. Y Angle - Lookup Table



# Y Angle vs. X Angle - Addressable Angles

