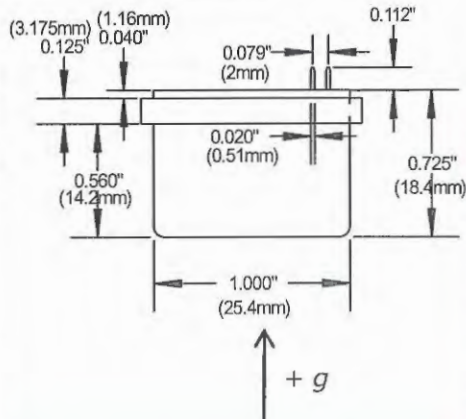
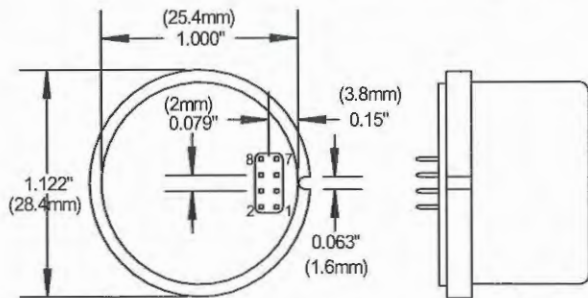


A40 MEMS ACCELEROMETER



A40 Accelerometer Part Numbers

A40-06-200

A40-10-200

A40-15-200

Preliminary Specification

| Pin No. | Pin Assignment |
|---------|----------------------------------|
| 1 | Accel Output Voltage 0V Nominal |
| 2 | Temperature +2.5V @ 25°C |
| 3 | Power Ground |
| 4 | +2.5V Reference Voltage Output |
| 5 | +4.75V to +5.25V DC Input |
| 6 | Signal Ground |
| 7 | Self Test Input |
| 8 | Case |

Accel output is Pin 1 with respect to Pin 6.
Temperature is Pin 2 with respect to Pin 6.
Self Test On is 3.3V to 5V on Pin 7. Self Test Off is open or < 1V. Accel Load: <100pf >5kΩ Vref and Temp < 500pf >5kΩ

| PARAMETER | A40-06-200 | A40-10-200 | A40-15-200 |
|--|-------------------------------------|------------|------------|
| Performance | | | |
| Input Range (g) | 6 | 10 | 15 |
| Bias (mg) 2σ 20°C | 0.7 | 1 | 1.5 |
| One-Year Bias Repeatability (mg) 1σ | 1.5 | 2 | 2.5 |
| Temperature Sensitivity (μg/°C) 1σ | 200 | 200 | 300 |
| Scale Factor (mV/g) Nominal | 750 | 450 | 300 |
| One-Year Scale Factor Stability (ppm) | <1000 | <1000 | <1000 |
| Temperature Sensitivity (ppm/°C) 1σ | <275 | <275 | <275 |
| Axis Alignment (mrad) 1σ | 8 | 8 | 8 |
| Vibration Rectification (mg/g ² rms) 1σ | 1 | 0.15 | 0.2 |
| Intrinsic Noise (mg/√Hz) 1σ | 0.08 | 0.15 | 0.17 |
| Resolution/Threshold (mg) @ 1Hz | 0.05 | 0.06 | 0.07 |
| Bandwidth (Hz) | 140 | 140 | 140 |
| Self Test (logic "1" applied) delta g | 1 ± 0.5g | 1 ± 0.5g | 1.5 ± 0.5g |
| Environments | | | |
| Operating Temperature | - 40°C to + 85°C | | |
| Storage Temperature | - 55°C to + 100°C | | |
| Vibration Operating | 6gRMS (10g and up) | | |
| Shock | 500g, any axis | | |
| Thermal Modeling | | | |
| | Available | | |
| Electrical | | | |
| Input Voltage | +5V ±0.25V (not ratiometric) | | |
| Power Consumption | 9.5mA typical 12mA maximum | | |
| Physical | | | |
| Weight (grams) | < 15 grams | | |
| Size (less flange) | 1" Diameter X 0.725" | | |
| Case Material | Anodized Aluminum | | |

Specification subject to change without notice



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Rev. Dec0811

SN: 150

Bias SF Over Temp

| Temp C° | Bias mg | SF mV / g | Temp V | Mis-Alignment mrad |
|--------------------------|---------|--------------------|--------|----------------------|
| 61.375 | -0.77 | 786.46 | 2.8711 | 0.9 Connector |
| 21 | -0.53 | 788.58 | 2.4832 | 2.8 Cross |
| -16.2 | 1.75 | 789.90 | 2.1181 | 2.1 RSS |
| Bias TC = -0.0326 mg/ C° | | SF TC = -56 ppm/C° | | Temp SF= 9.714 mV/°C |

Temp Bias @ 20°C= 2.4735 Volts

