

New Release



GA50

High Performance Single-Axis Accelerometer



The high-end open loop GA50 series MEMS accelerometers are available in various sensing ranges. The accelerometer is based on a bulk micro-machined silicon MEMS device and an ASIC with an analog front end (AFE) and temp sensor, assembled in a compact hermetically sealed LCC20 package. **The low-power GA50 accelerometer delivers superior long term bias repeatability and stability.** It is ideal for Aerospace & Defense IMUs and other demanding guidance, navigation, autonomous, and seismic applications.

- Multiple G Ranges: ± 5 , ± 40 , ± 70
- Excellent Long Term Bias Repeatability
- Nav-Grade Short Term Stability
- Nav-Grade Ultra-Low VRW Noise
- Low Scale Factor
- Evaluation Board Mounted Accels Available to Verify Performance

MISSION PROVEN

Inertial Sensors and Systems



GLADIATOR
TECHNOLOGIES

GA50 Accelerometer

Performance

| | | | |
|-------------------------------------|---------------------------|--------------------------|--------------------------|
| Range | ±5 g | ±40 g | ±70 g |
| Long Term Repeatability | 0.8 mg | 4 mg | 7 mg |
| Short Term Stability | 60 µg | 120 µg | 180 µg |
| VRW | 1.3 µg/vHz | 2.5 µg/vHz | 4 µg/vHz |
| Temperature Sensitivity | 165 µg/°C | 450 µg/°C | 800 µg/°C |
| Temp Residual Error | 450 µg | 900 µg | 1600 µg |
| Turn On to Turn On Repeatability | 50 µg | 120 µg | 240 µg |
| Scale Factor Stability (mV/g) | 240 ±2 | 30 ±1 | 17 ±1 |
| Scale Factor Repeatability (Long) | 600 ppm | 600 ppm | 600 ppm |
| Scale Factor Stability (Short) | 60 ppm | 60 ppm | 90 ppm |
| Linearity Error | 0.25 % | 0.25 % | 0.25 % |
| Bandwidth (-3dB) | 250 Hz | 300 Hz | 300 Hz |
| Vibration Rectification (20-2000hz) | 150 µg/g ² rms | 25 µg/g ² rms | 15 µg/g ² rms |

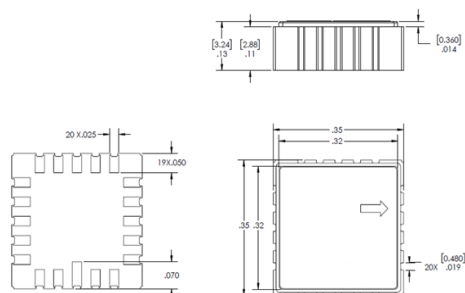
Environment

| | | | |
|---------------------------------|-----------|----------------|-------|
| Vibration (Operating 20-2000hz) | 1.25 gRMS | 5gRMS | 5gRMS |
| Shock (Operating) | | 40g 11msec | |
| Operating Temp | | -50°C to +85°C | |
| Non-Operating Temp | | -54°C to 90°C | |

Electrical / Mechanical

| | |
|-------------------|------------------------------------|
| Input Voltage | +3.3 V ±0.1 V Input (single sided) |
| Power Consumption | <13 mA @ 3.3 VDC |
| Mass | <0.7 grams |
| Size | 8.9 X 8.9 x 3.2 mm ³ |

All performance parameters 1σ
Specification subject to change without notice
Rev. 24.01.11



| Pin No. | Name | Pin Description |
|---------|-------|----------------------------|
| 1-3 | NC | Not Connected |
| 4 | VIN | Supply Voltage |
| 5 | OUT_N | Negative Output Voltage |
| 6 | GND | Ground |
| 7 | TEMP | Temperature Output |
| 8 | OUT_P | Positive Output Voltage |
| 9-15 | NC | Not Connected |
| 16 | GND | Ground (internal use only) |
| 17-20 | NC | Not Connected |

Further Technical
Information Available:

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NON ITAR
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