

New Release



GA50

High Performance Single-Axis Accelerometer



The GA50 series high-end open loop MEMS accelerometers are available in various sensing ranges. The accelerometer is based on a bulk micro-machined silicon MEMS device and an application-specific integrated circuit (ASIC) with an analog front end (AFE) and a temperature sensor, assembled in a custom-tailored, hermetically sealed, and compact LCC20 package. **The robust, low-power GA50 accelerometer delivers superior long term bias repeatability and stability.** It is ideal for Aerospace & Defense applications including Inertial Measurement Units (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

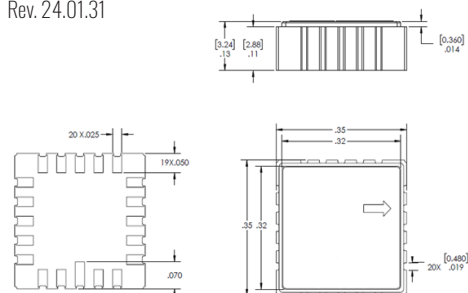
Environment

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. 24.01.31



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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