CHET

MEMS Inertial Devices and Systems

AC306

Advantages

- Based on MEMS Process
- ±5 ~ ±150g Full Scale
- 10,000g Shock Resistance
- LCC16 Package
- Integrated Signal Conditioning
- SPI Output

Applications

- Inertial Navigation: Inertial Guidance, Integrated Navigation, Platform Stabilization, Short-term
- Navigation: Flight Control , Ballistic Correction, Telemetry
- Posture Control: UAV(Unmanned Aerial Vehicle), Antenna Orientation, North Finder
- Automotive: ESP, Balance Measurement

Accelerometer	-5	-15	-50	-100	-150	
Full Scale	±5	±15	±50	±100	±150	g
Bias	±5	±15	±50	±50	±50	mg
Bias Stability	<0.1	<0.3	<0.5	<1	<1.5	mg
Bias Repeatability	<0.1	<0.3	<0.5	<1	<1.5	mg
Bias Temp. Coefficient	<0.2	<0.5	<0.5	<1	<1.5	mg/°C
Scale Factor Stability	<300	<300	<300	<600	<600	PPm
Scale Factor Repeatibility	<300	<300	<300	<600	<600	PPm
Scale Factor Temp.Coefficient	<100	<100	<300	<600	<600	ppm/°C
Resolution	0.5	0.5	0.5	0.8	1	mg
Bandwidth	0-500	0-500	0-500	0-500	0-500	Hz
Input axis Mis-alignment	<10	<10	<10	<10	<10	mrad
	<1	<1	<1	<1	<1	%
Non Linearity	<±0.3	<±0.3	<±0.3	<±0.3	<±0.3	%FS(max)
Resonant Frequency	X,Y:4.8 Z:3.5	X,Y:4.8 Z:3.5	X,Y:8.1 Z:6.2	X,Y:13.9 Z:10	X,Y:13.9 Z:10	kHz
Start Up Time	1	1	1	1	1	s
Power Consumption	130					mW
Size	6mm x 6mm x 1,9±0,25mm					
Package	Ceramic LCC16					
Interface	SPI					
Operating Temp.	-45°C+85°C					
Storaging Temp.	-55°C+125°C					
Shock	Up to 10,000g (0.15ms half-since, 3 time shocks in each direction)					
Vibration	20g rms, 20-2000 Hz(random noise, 30 minutes in each direction)					
ESD Sensitivity	Class 2 (requirements MIL-STD-833-G, 1 Method 3015.7) HBM 2kV					

All values are typical at +25·c , +5Vdc unless otherwise statement

Structure (unit: mm)