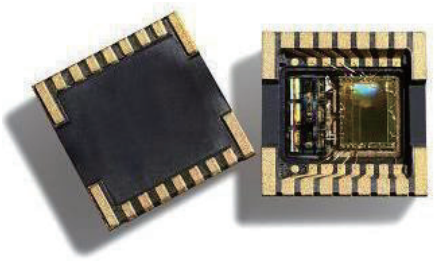
ACM-1900: HIGH PRECISION MEMS ACCELERATER CHIP SENSOR



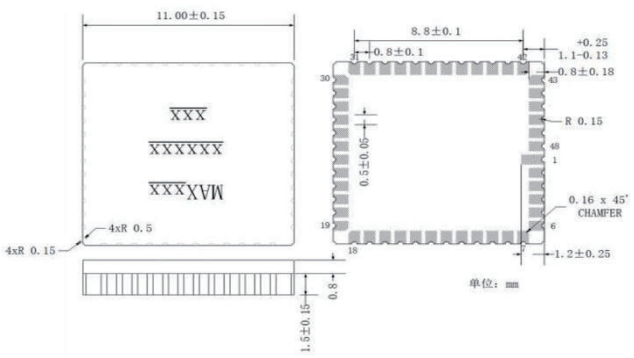
■ PRODUCT DESCRIPTION

The ACM-1900 silicon-based MEMS accelerometer adopts a small volume ceramic package, which has the characteristics of high precision, wide range, resistance to large impact, wide temperature range, and fully digital output. This accelerometer integrates temperature compensation function internally and uses SPI Bus to read and write data.

■ PRODUCT MAIN SPECIFICATION

Parameters		Unit	A	B	C	D	E
Measurement range		g	5g	10g	15g	30g	50g
Zero bias stability	H level	mg	<0.06	<0.08	<0.08	<0.1	<0.2
	M level	mg	<0.15	<0.15	<0.15	<0.2	<0.3
	L level	mg	<0.2	<0.3	<0.3	<0.6	<1
Zero bias repeatability		mg	0.15	0.20	0.30	0.40	0.60
Bias temperature coefficient		mg/°C	0.05	0.1	0.1	0.2	0.3
Full temperature zero bias stability	H level	mg	<1	<1.5	<1.5	<2	<3
	M level	mg	<3.5	<5	<5	<6	<8
	L level	mg	<10	<15	<15	<20	<25
Threshold/Resolution		mg	0.02	0.03	0.05	0.1	0.2
Scale factor nonlinearity		% of FS	0.3	0.3	0.3	0.3	0.3
Scale factor repeatability		ppm	50	100	150	200	250
Scale factor temperature coefficient		ppm/°C	2	3	5	10	15
Starting time		s	0.1				
Sampling rate		Samples/s	1000				
Bandwidth		Hz	100Hz				
Power consumption		mW	< 40				
Power voltage		V	3.3 VDC				
Data output			Digital output（SPI）				
Encapsulation			LCC Ceramics				
Working temperature		°C	-40~+85				
Random vibration			6g,（20~2KHz）				
Shocking		g	10000				
Dimension size			10mmx10mmx3.5mm				
Weight		g	1				

■ PRODUCT DIMENSION



■ PRODUCT APPLICATION

- High precision IMU
- Ship navigation and attitude measurement
- Crash records, fatigue monitoring and prediction
- Satellite solar antenna positioning
- Transportation system monitoring
- Roadbed analysis and high-speed railway fault detection