

# **SSA-P4HT1C**

**IEPE high-temperature single-axial acceleration sensor**



### **PRODUCTS FEATURES**

- High-temperature micro-miniature built-in circuit selected
- Small size and light weight, high frequency response characteristics
- All series use memory alloy fasteners, stable and reliable, high frequency response characteristics
- Standard model, series, various ranges available, high quality piezoelectric material, low temperature drift
- Top M5 connector or customized connecting cable output

**1. Performance parameters for SSA-P4HT1C2:**
*Table 1. Characteristics for SSA-P4HT1C2*

Parameters	Value	Units
Sensitivity	10	mV/g
Measurement Range	±500	g
Frequency response ±5%	1~10000	Hz
Frequency response ±10%	0.5~13000	Hz
Magnitude linearity	≤1	%
Lateral Sensitivity	≤5	%
Installation of resonant frequency	≥48	kHz
Time constants	≤1	s
Resolution	0.001	grms
Base strain	0.0008	g/ε
Hitting the Limits <sup>1</sup>	5500	gpK
Maximum vibration <sup>2</sup>	2200	grms
Sensitivity temperature coefficient	-0.07	%/°C
Operating temperature	-50~160	°C
Constant voltage supply	20~30	VDC
Constant current supply	2~20	mA
Full-scale voltage	±5	V
Maximum over-range output	±6	V
DC bias	8~12	V
Output Impedance	≤100	Ω
Sensitive components	Piezoelectric Ceramic	
Housing Material	Stainless Steel	
Seal form	Laser welding IP68	
Output connector	M5 Top	
Mounting form	M5	
Quality	9	g
Recommended mounting torque	3.0	N*m

Note: 1,2: refers to the sensor in the non-energized state, the mechanical structure is not damaged, and not the working state.

**2. Performance parameters for SSA-P4HT1C3:**
*Table 2. Characteristics for SSA-P4HT1C3*

Parameters	Value	Units
Sensitivity	20	mV/g
Measurement Range	±250	g
Frequency response ±5%	1~10000	Hz
Frequency response ±10%	0.5~13000	Hz
Magnitude linearity	≤1	%
Lateral Sensitivity	≤5	%
Installation of resonant frequency	≥40	kHz
Time constants	≤1	s
Resolution	0.0005	grms
Base strain	0.0008	g/ε
Hitting the Limits <sup>1</sup>	5000	gpK
Maximum vibration <sup>2</sup>	3000	grms
Sensitivity temperature coefficient	-0.07	%/°C
Operating temperature	-50~160	°C
Constant voltage supply	20~30	VDC
Constant current supply	2~20	mA
Full-scale voltage	±5	V
Maximum over-range output	±6	V
DC bias	8~12	V
Output Impedance	≤100	Ω
Sensitive components	PZ23 Piezoelectric Ceramics	
Housing Material	Stainless Steel	
Seal form	Laser welding IP68	
Output connector	M5 Top	
Mounting form	M5	
Quality	14	g
Recommended mounting torque	3.0	N*m

Note: 1,2: refers to the sensor in the non-energized state, the mechanical structure is not damaged, and not the working state.

**3. Performance parameters for SSA-P4HT1C5:**
*Table 3. Characteristics for SSA-P4HT1C5*

Parameters	Value	Units
Sensitivity	50	mV/g
Measurement Range	±100	g
Frequency response ±5%	1~11000	Hz
Frequency response ±10%	0.5~11000	Hz
Magnitude linearity	≤1	%
Lateral Sensitivity	≤5	%
Installation of resonant frequency	≥43	kHz
Time constants	≤1	s
Resolution	0.0002	grms
Base strain	0.0008	g/ε
Hitting the Limits <sup>1</sup>	2000	gpK
Maximum vibration <sup>2</sup>	800	grms
Sensitivity temperature coefficient	-0.07	%/°C
Operating temperature	-50~160	°C
Constant voltage supply	20~30	VDC
Constant current supply	2~20	mA
Full-scale voltage	±5	V
Maximum over-range output	±6	V
DC bias	8~12	V
Output Impedance	≤100	Ω
Sensitive components	PZ23 Piezoelectric Ceramics	
Housing Material	Stainless Steel	
Seal form	Laser welding IP68	
Output connector	M5 Top	
Mounting form	M5	
Quality	15	g
Recommended mounting torque	3.0	N*m

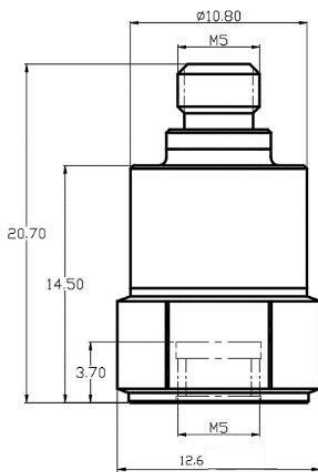
Note: 1,2: refers to the sensor in the non-energized state, the mechanical structure is not damaged, and not the working state.

**4. Performance parameters for SSA-P4HT1C6:**
*Table 4. Characteristics for SSA-P4HT1C6*

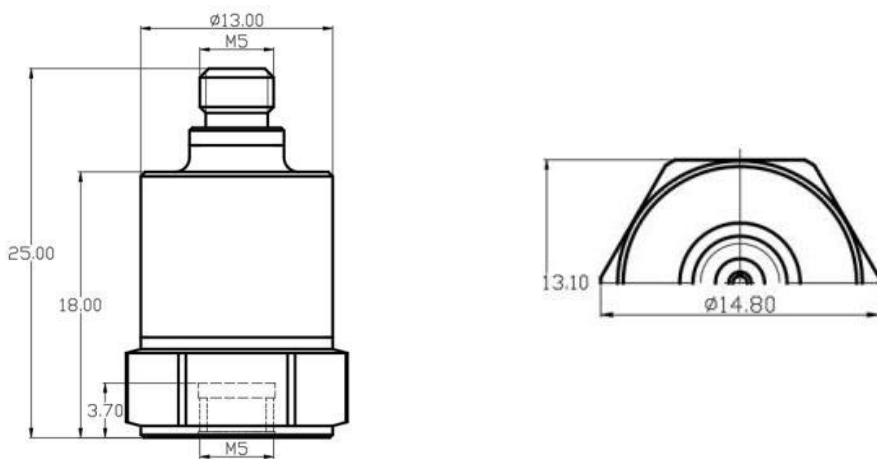
Parameters	Value	Units
Sensitivity	100	mV/g
Measurement Range	±50	g
Frequency response ±5%	1~9000	Hz
Frequency response ±10%	0.5~11000	Hz
Magnitude linearity	≤1	%
Lateral Sensitivity	≤5	%
Installation of resonant frequency	≥29	kHz
Time constants	≤1	s
Resolution	0.0001	grms
Base strain	0.0008	g/ε
Hitting the Limits <sup>1</sup>	1000	gpK
Maximum vibration <sup>2</sup>	400	grms
Sensitivity temperature coefficient	-0.07	%/°C
Operating temperature	-50~160	°C
Constant voltage supply	20~30	VDC
Constant current supply	2~20	mA
Full-scale voltage	±5	V
Maximum over-range output	±6	V
DC bias	8~12	V
Output Impedance	≤100	Ω
Sensitive components	PZ23 Piezoelectric Ceramics	
Housing Material	Stainless Steel	
Seal form	Laser welding IP68	
Output connector	M5 Top	
Mounting form	M5	
Quality	17	g
Recommended mounting torque	3.0	N*m

Note: 1,2: refers to the sensor in the non-energized state, the mechanical structure is not damaged, and not the working state.

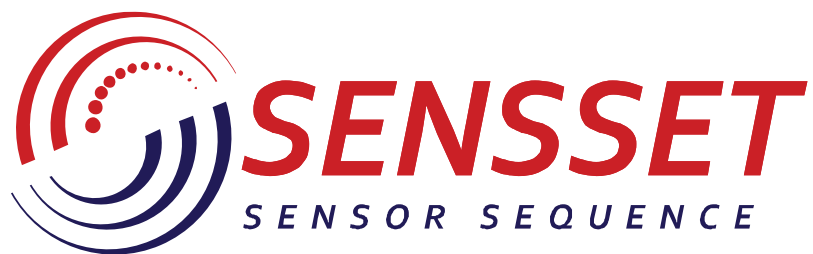
**5. Mechanical dimensions**



**Figure 5.1.** Mechanical dimensions for SSA-P4HT1C2



**Figure 5.2.** Mechanical dimensions for SSA-P4HT1C3/5/6



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