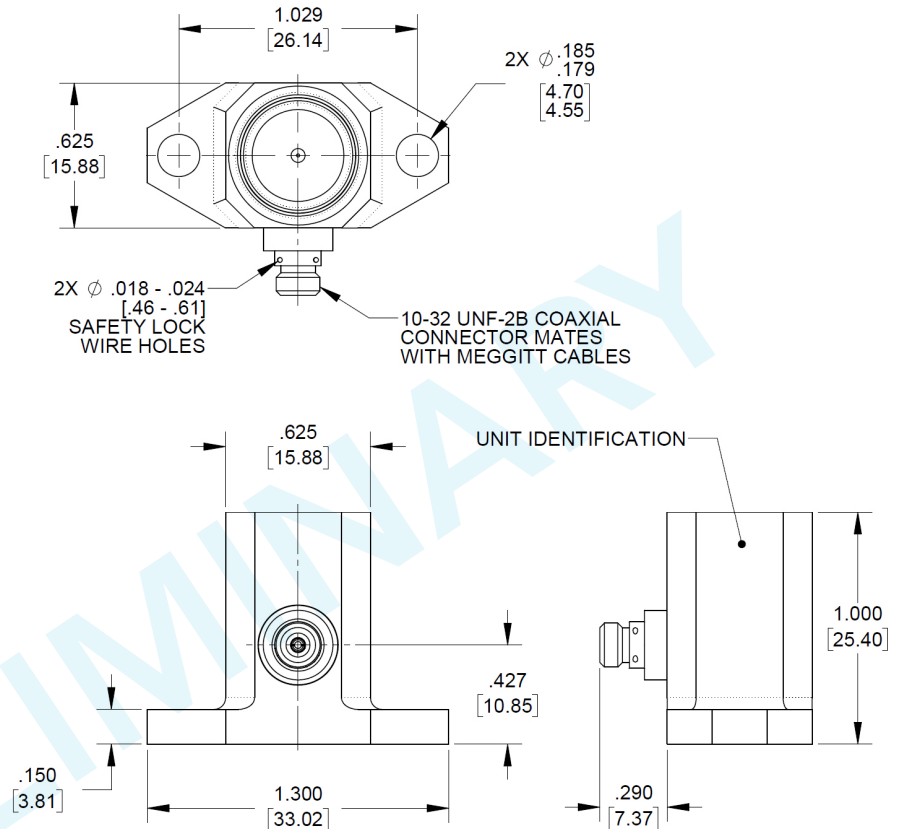
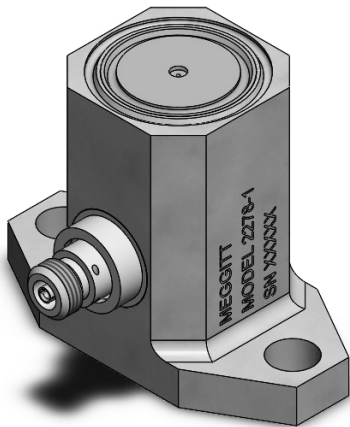


# EHTPE\* miniature accelerometer

## Model 2278-1



\* Extreme High Temperature Piezoelectric

### Key features

- Operating up to +1200°F (+650°C)
- Small and lightweight (48g), single axis
- Ground isolated
- Fully compliant to EU technical regulations and RoHS

### Description

The MEGGITT Model 2278-1 is a small, lightweight piezoelectric single axis accelerometer for shock and vibration measurements at temperatures up to 1200°F. It is also capable of operation in nuclear environments. This accelerometer is 1.0 inch [25.4] tall and weighs 48 grams. It features a side 10-32 receptacle and has a flange with two 8-32 holes for mounting. The 2278-1 features MEGGITT Proprietary MC2 sensing element and is designed for use with high temperature. Coaxial cables such as the hardline 3075M6 (rated to 900°F) or flexible 3076 (rated to 1000°F) or the 3076A (rated to 1200°F) are designed for use with the 2278-1.

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### Specifications

All values are typical at +75°F (+24°C), referenced at 100 Hz and conform to ISA-RP 37.2 unless otherwise specified.

Dynamic characteristics	Units	
Charge sensitivity		
Typical	pC/g	4.0
Tolerance	pC/g	± .5
Frequency response		
Resonance Frequency		
Typical	kHz	20
Minimum	kHz	18
Typical Amplitude Response		
± 5%	Hz	1 to 4000
± 10%	Hz	1 to 5000
± 3dB	Hz	1 to 6000
Temperature response		
Over temperature range	%	+15
Transverse sensitivity	%	≤ 5
Amplitude linearity	%	1
Per 500 g, 0 to 2000 g		
<b>Electrical characteristics</b>		
Resistance		
Over temperature range	kΩ	≥ 10
Isolation		
Over temperature range	kΩ	≥ 500
Capacitance	pF	50
Grounding		Signal return isolated from case
<b>Environmental characteristics</b>		
Temperature range		(-67°F to +1200°F) -55°C to +650°C
Humidity		Hermetic
Sinusoidal vibration limit	g	500
Shock limit	g	2000
Radiation		5 x 10 <sup>7</sup> rad per IEEE STD 383-1974
<b>Physical characteristics</b>		
Weight	gm (oz)	48 [1.7]
Case material		Inconel
Mounting	Qty 2	8-32 X 1/2 inch, Inconel socket head screw
Recommended Torque	lbf-in (Nm)	18-20 (2-2.3)
<b>Calibration</b>		
Supplied		
Charge sensitivity	pC/g	
Frequency response	%	±5, 50 Hz to 4000 Hz
Transverse sensitivity	%	
Capacitance	pF	

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### Accessories

Product	Description	2778-1
EH873, 2X	Mounting Screw, 8-32 X 1/2 in, socket head, Inconel	Included
MEGGITT Model 3076A-120	Cable Assembly (1200°F)	Optional
MEGGITT Model 3076-120	Cable Assembly (1000°F)	Optional
MEGGITT Model 3075M6-120	Cable Assembly (900°F)	Optional
MEGGITT Model 1772-5	Remote charge converter – extended frequency range	Optional
MEGGITT Model 33268	In-line adaptor (connects cables)	Optional

### Notes

1. Frequency response is controlled by the resonance characteristics of the transducer. Estimated calibration errors are  $\pm 1.5\%$  to 900 Hz and  $2.5\%$  from 900 Hz to 5000 Hz.
2. Low-end response of the transducer is a function of its associated electronics.
3. CE Certification: This product is fully compliant to the European Union's Low Voltage Directive 2006/95/EC, EMC Directive 2004/108/EC, and compliant RoHS Directive 2002/95/EC, and is eligible to bear the CE Mark.

PRELIMINARY



Continued product improvement necessitates that Meggitt reserve the right to modify these specifications without notice. Meggitt maintains a program of constant surveillance over all products to ensure a high level of reliability. This program includes attention to reliability factors during product design, the support of stringent Quality Control requirements, and compulsory corrective action procedures. 041320

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