

# HIGH TEMPERATURE PIEZOELECTRIC ACCELEROMETER (HTPE)

## Model 2248/2248M1



Model 2248



Model 2248M1

### Product description

The Parker Meggitt model 2248 is a small piezoelectric accelerometer for shock and vibration measurement of structures subjected to very high temperatures. It features a side 10-32 receptacle, with either flange (2248) or integral stud-mount (2248M1). The accelerometer is a self-generating device that requires no external power source for operation.

The 2248 features Parker Meggitt's crystal material in compression construction. The design provides mechanical isolation of base strain from the mounting surface. Signal ground is connected to case.

Model number definition:

2248 = mounting with 2 bolts

2248-R = replacement sensor, no accessories

2248M1 = integral mounting stud

2248M1-R = replacement sensor, no accessories supplied

2248-US = Made in USA

2248M1-US = Made in USA

### Key features and benefits

- Small size
- Light weight
- High temperature operation 900°F (+482°C)
- RoHS complaint

### Applications

- Gas Turbine engine monitoring
- Nuclear applications



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### Specifications

The following performance specifications are typical values, referenced at +75°F (+24°C) unless otherwise noted.

#### Dynamic Characteristics

Charge Sensitivity (typical)	pC/g	3.0
Minimum	pC/g	2.4
Frequency response ±1 dB	Hz	See typical amplitude response 1 to 8K
±5%	Hz	1 to 5K
Resonance (typical)	kHz	25
Minimum	kHz	22
Temperature response	%	±18 max over temperature range
Transverse sensitivity	%	≤ 5
Amplitude linearity	%	1

#### Electrical Characteristics

Resistance at room temperature (typical)	>1GΩ
At +900°F (+482°C)	>100KΩ [1]
Capacitance	250 pF
Grounding	Signal return connected to case

#### Environmental Characteristics

Temperature range	-65°F to +900°F (-54°C to +482°C)
Humidity	Hermetically sealed
Sinusoidal vibration limit	500 g pk
Shock limit	3000 g pk
Base strain sensitivity	0.005 pk/μstrain
Transient temperature	0.10 equiv g pk/°F [2]

#### Physical Characteristics

Dimensions	See Outline details
Weight	0.46 oz. (13 gm)
Case Material	Inconel
Connector	10-32 coaxial
Mounting torque	18 to 20 lbf-in (2 to 2.3 Nm)
Mounting (2248)	6-32 bolts (qty 2)
Mounting (2248M1)	10-32 stud

#### Calibration Supplied

Charge Sensitivity	pC/g
Frequency response through resonance	20 Hz to 8000 Hz, 8000 Hz through resonance
Maximum transverse sensitivity	%
Capacitance	pF

#### Accessories

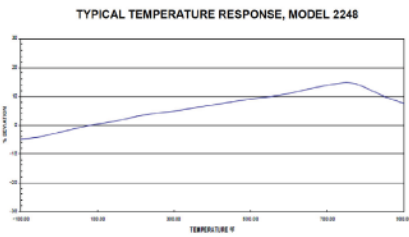
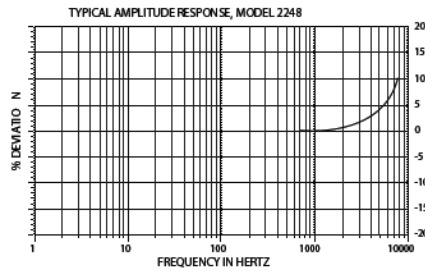
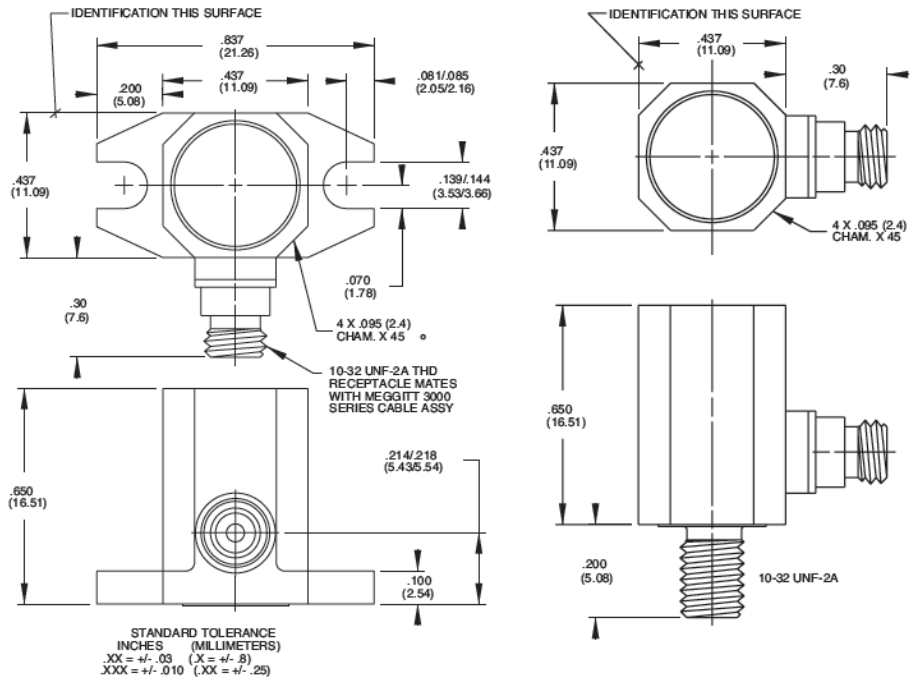
SUPPLIED	EH535 Mounting screws 6-32 (Model 2248) 3075M6-120 or 3075M6-120-US Cable assembly, 900°F (+482°C)
OPTIONAL	Model 1001-120 Cable assembly, 550°F (+288°C)



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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. 010121



Note: Due to continuous process improvement, specifications are subject to change without notice. TCO Review # 336