

# SMC-1850 Geophone



## High Temperature Geophone

### Features

- Small size, high output
- Patented PCB header
- 100% burn-in of basic units
- All units tested at 200° C
- Ideal for VSP, tri-axial and gimbal downhole operations
- Full one year warranty



SMC-1850

The AMC-1850 High Temperature Geophone has been tested at 200° C for more than 300 hours with no loss in performance specifications. Its design structure and super strength magnetic field makes the output of this small geophone equal to or greater than the output of larger units. Rotating dual coil construction withstands serere shocks and rough handling. The patented PCB header provides easy and reliable electrical connections.

Standard natural frequencies are 8, 10, 14 and 30 Hz. Coil resistance is 1850 Ohms. All units are available in both vertical and horizontal models, and are ideal for VSP, tri-axial and gimbal downhole operations.

## Specifications

### Frequency

Natural Frequency (Fn)	10 Hz ±5%	14 Hz ±7%	30 Hz ±1.5%
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### Resistance

Standard DC Resistance	1850 Ω ±5%
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### Distortion

Total Harmonic Distortion	Less than 1% at 12 Hz or natural frequency whichever is larger
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### Sensitivity

Intrinsic Voltage Sensitivity (G)	1.02 V/in/sec, (.040 V/cm/sec) ±5%
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### Damping

Open Circuit Damping	70 ±10%	50 ±10%	22 ±10%
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All specifications apply to measurements made after a heat cycle of 200°C and after unit returns to room temperature (25°C).

Units will operate at larger tilt angles, but performance will not necessarily meet specifications.

NOTE: THE SMC-1850 IS **NOT** HERMETICALLY SEALED.

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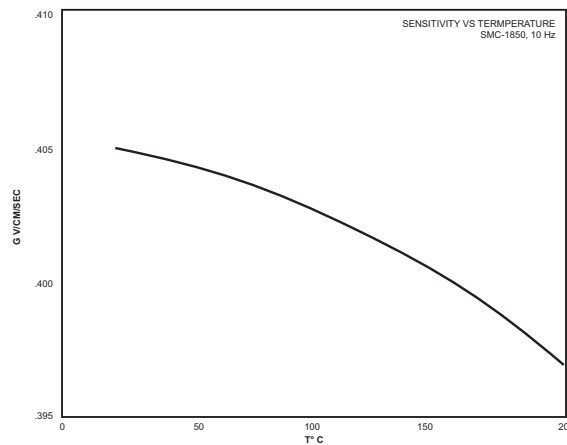
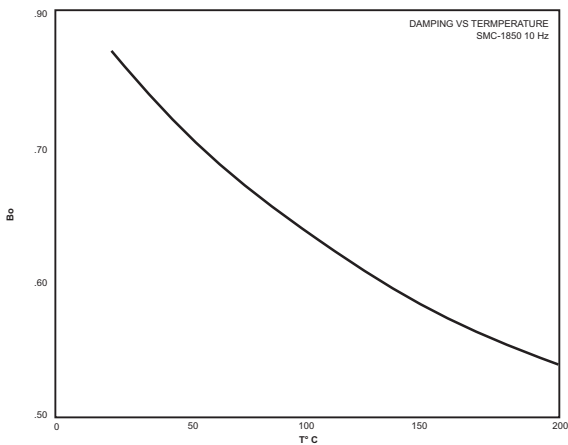
## Physical Specifications

Operating Position	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert to Horiz
Maximum tilt within specifications	10°	3°	20°	5°	30°	10°	180°
Suspended Mass	0.23 oz (6.6 g)						
Maximum Coil Excursion	0.02 in p-p (3.0 mm p-p)						
Temperature Limits	-40° F to 392° F (-40° C to 200° C)						
<b>Dimensions</b>							
Case Length	1.04 in (2.64 cm)						
Case Diameter	.0875 in (2.22 cm)						
Weight	1.52 oz (44 g)						

## Temperature Characteristics

Natural Frequency	Negligible temperature dependency
Coil Resistance	$R_t = 1,8750 (1 + 0.00393 (t - 25^\circ\text{C}))$

## Curves



Specifications are subject to change without notice



OYO GEOSPACE • 7007 Pinemont • Houston, Texas 77040 • U.S.A. • [www.geospacetechnology.com](http://www.geospacetechnology.com)  
 Tel: 713 986-4444 • Fax: 713 986-4445



### Regional Offices

OYO Geospace Canada, Inc.  
 2735-37 Avenue N.E.  
 Calgary, Alberta, Canada T1Y 5R8  
 403 250-9600

OYO Geo-Impulse International LLC  
 Kirovogradskaya, 36  
 Ufa, Baskortostan, Russia 450001  
 011 (7) 3472 25 39 73

OYO Geospace China  
 Room 700, 7th Floor, Lido Office Tower, Lido Place  
 Jichang Road, Jiang Tai Road, Beijing, 100004 P.R.China  
 011 (86) 10 643 78 758

OYO Instruments, Europe Ltd.  
 F3 Bramingham Business Park, Enterprise Way, Luton  
 Bedfordshire LU3 4BU, England  
 011 44 (0) 1582 573 980