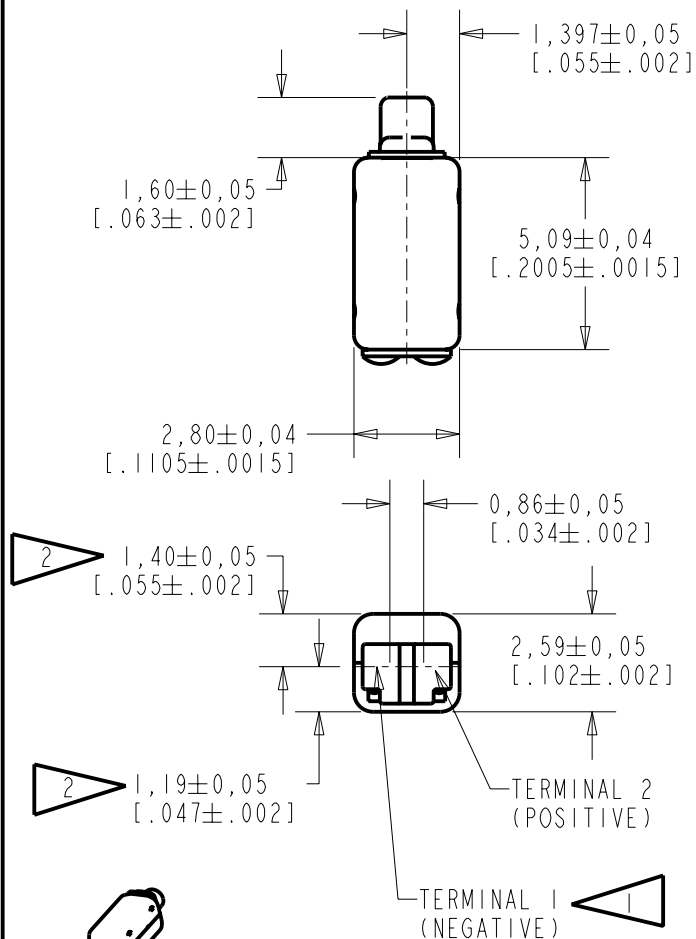


FFH-23373-104

SHT 1.1



SCALE 2:1

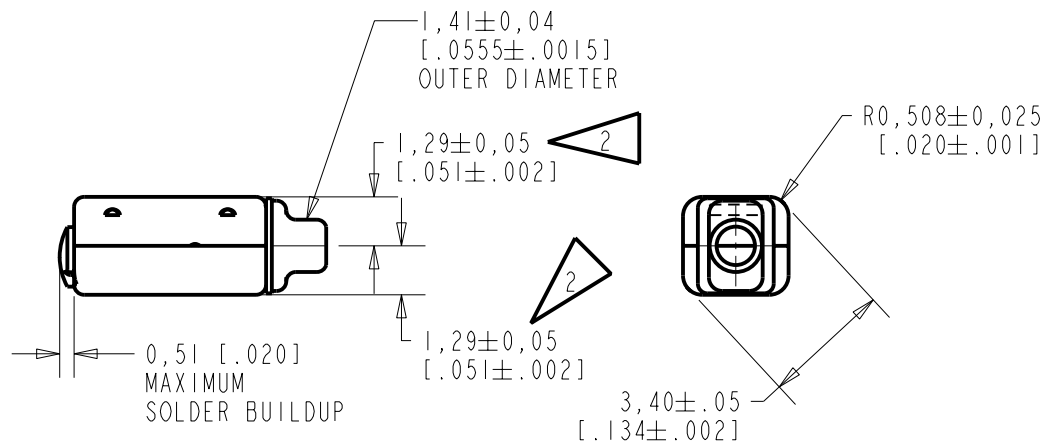
NOMINAL WEIGHT  
.18 GRAMS

DIMENSIONS IN MILLIMETERS [INCHES]

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NOTES:

- 1 A POSITIVE GOING VOLTAGE AT TERMINAL 2, RELATIVE TO TERMINAL 1, CAUSES A DECREASE IN PRESSURE AT THE SOUND OUTLET.
- 2 LOCATED FROM TWO SURFACES FOR CUSTOMER CONVENIENCE. ONLY APPLICABLE FROM ONE SURFACE, NOT TO BE USED TOGETHER.

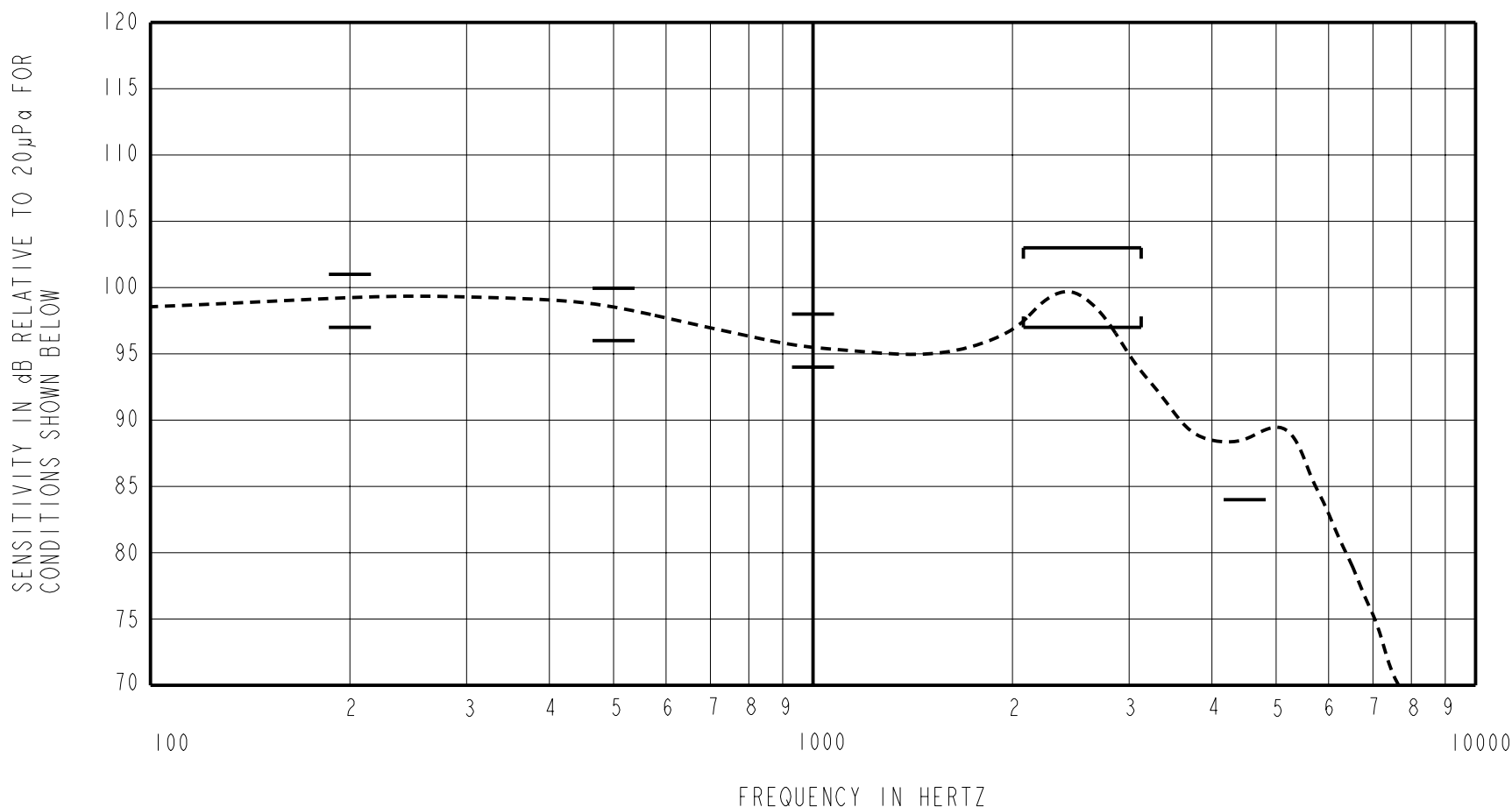


| Revision | C.O. #    | Implementation Date | RELEASE LEVEL | REVISION |
|----------|-----------|---------------------|---------------|----------|
|          |           |                     | Released      | A        |
| A        | C10103482 | 12-7-05             |               |          |

|                      |  |         |         |
|----------------------|--|---------|---------|
| SCALE: 5:1           |  | DR. BY  | DATE    |
| DO NOT SCALE DRAWING |  | CRG     | 12-7-05 |
| TITLE: RECEIVER      |  | CK. BY  | DATE    |
| OUTLINE DRAWING      |  | GJP     | 12-8-05 |
| FFH-23373-104        |  | APP. BY | DATE    |
| SHT 1.1              |  | GJP     | 12-8-05 |

THE FFH-23373-104 IS A FERROFLUID DAMPED FH-23373 RECEIVER WITH A PEAK OF 4dB RELATIVE TO THE SENSITIVITY AT 1kHz UNDER CONSTANT VOLTAGE DRIVE CONDITIONS.

CONSTANT VOLTAGE DRIVE CONDITIONS



ACOUSTICAL

SENSITIVITY  
 DEVICE WILL PRODUCE THE SPL LISTED BELOW UNDER TEST CONDITIONS DESCRIBED IN TABLE 3.  
 NOMINAL SENSITIVITY AT 1kHz IS dB RELATIVE TO 20µPa. ALL OTHER VALUES  
 IN dB RELATIVE TO THE SENSITIVITY AT 1kHz.

| FREQUENCY (Hz) | MINIMUM | NOMINAL | MAXIMUM |
|----------------|---------|---------|---------|
| 200            | 1.0     | 2.0     | 5.0     |
| 500            | 0.0     | 2.0     | 4.0     |
| 1000           | -2.0    | 96.0    | 2.0     |
| 2100 - 3100    | 1.0     | 4.0     | 7.0     |
| 4500           | -12.0   | ---     | ---     |

PORT LOCATION: 12S

TABLE 1

TOTAL HARMONIC DISTORTION  
 DEVICE WILL NOT EXCEED TOTAL HARMONIC DISTORTION LEVELS LISTED BELOW.

| FREQUENCY (Hz) | AC DRIVE (V rms) | DC BIAS (V) | LIMIT (%) |
|----------------|------------------|-------------|-----------|
| 500            | 0.50             | 0           | 10        |
| 870            | 0.18             | 0           | 6         |
| 1300           | 0.18             | 0           | 6         |

TABLE 2

TEST CONDITIONS

|                        |   |
|------------------------|---|
| NOMINAL SOURCE VOLTAGE | 0.18 V rms, 0 mA DC BIAS                                    |
| SOURCE IMPEDANCE       | <1 Ohm  |
| TUBING                 | 10mm [.394"] LONG, 1mm [.039"] I.D.                         |
| COUPLER CAVITY         | 2 CM <sup>3</sup> , SIMULATED ANSI S3.7 TYPE HA-3 (IEC 126) |

TABLE 3

ELECTRICAL

|                    |                |
|--------------------|----------------|
| DC RESISTANCE      | 125 Ohms ± 10% |
| IMPEDANCE @ 500 Hz | 190 Ohms ± 15% |
| IMPEDANCE @ 1kHz   | 280 Ohms ± 15% |

TABLE 4

ISOLATION: CASE WILL BE ELECTRICALLY ISOLATED FROM THE COIL CIRCUIT.

TEMPERATURE: OPERATING RANGE FROM 0°C TO 63°C (SENSITIVITY WILL NOT VARY BY MORE THAN ±3 dB WITHIN RANGE)  
 SENSITIVITY AT 0°C IS 2dB LOWER THAN THE SENSITIVITY AT ROOM TEMPERATURE.  
 DELTA PEAK IS 1.5dB HIGHER AT BODY TEMPERATURE (37°C)  
 STORAGE RANGE FROM -40°C TO 63°C

| Revision   | C.O. #    | Implementation Date | RELEASE LEVEL | REVISION |
|--|-----------|---------------------|---------------|----------|
|  |           |                     | Released      | A        |
| A  | C10103482 | 12-7-05             |               |          |
| WHEN TEST LIMITS ARE USED TO ESTABLISH INCOMING INSPECTION ACCEPTANCE/REJECTION CRITERIA, CORRELATION OF TEST EQUIPMENT WITH KNOWLES IS ALSO REQUIRED FOR ELIMINATION OF EQUIPMENT AND TEST METHOD VARIATION |           |                     | DR. BY        | DATE     |
| TITLE: RECEIVER<br>PERFORMANCE SPECIFICATION   |           |                     | CRG           | 12-7-05  |
|  |           |                     | FFH-23373-104 |          |
|  |           |                     | GJP           | 12-8-05  |
|  |           |                     | APP. BY       | DATE     |
|  |           |                     | GJP           | 12-8-05  |

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