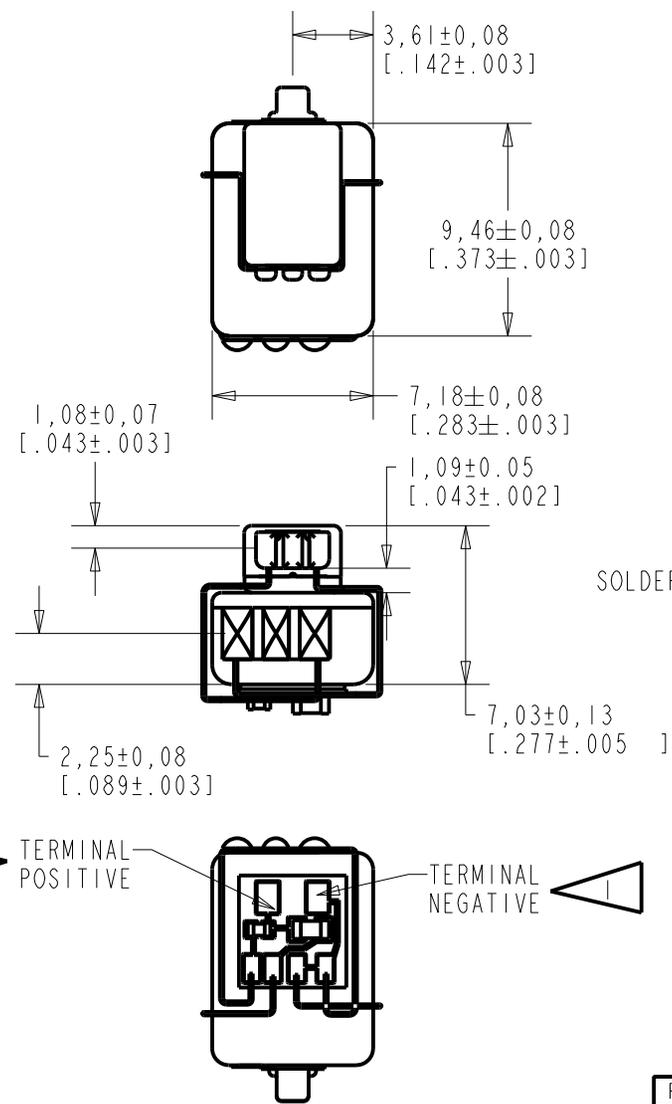
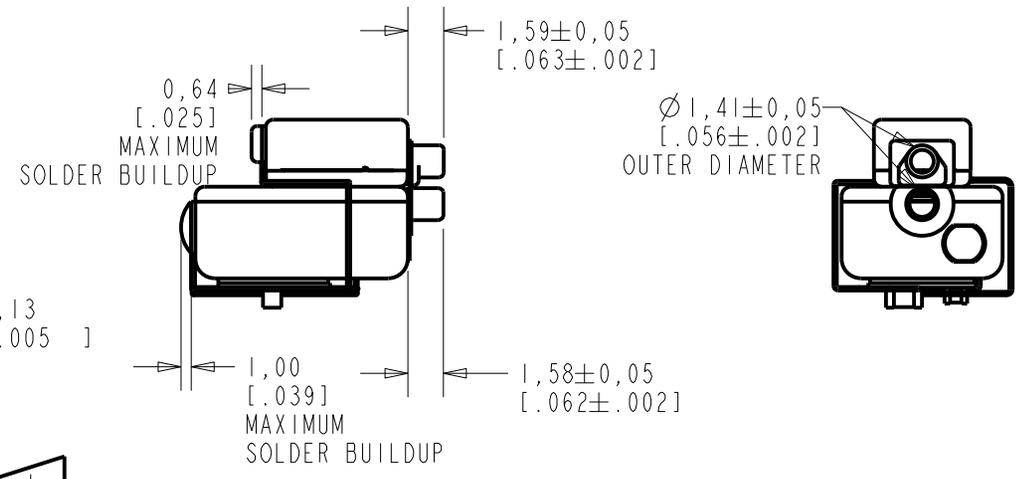


HE-31751-000
SHT 1.1



NOTES:

A POSITIVE GOING VOLTAGE AT THE POSITIVE TERMINAL RELATIVE TO THE NEGATIVE TERMINAL CAUSES A DECREASE IN PRESSURE AT THE SOUND OUTLETS.



SCALE 1:1

NOMINAL WEIGHT
1.36 GRAM

DIMENSIONS IN MILLIMETERS [INCHES]

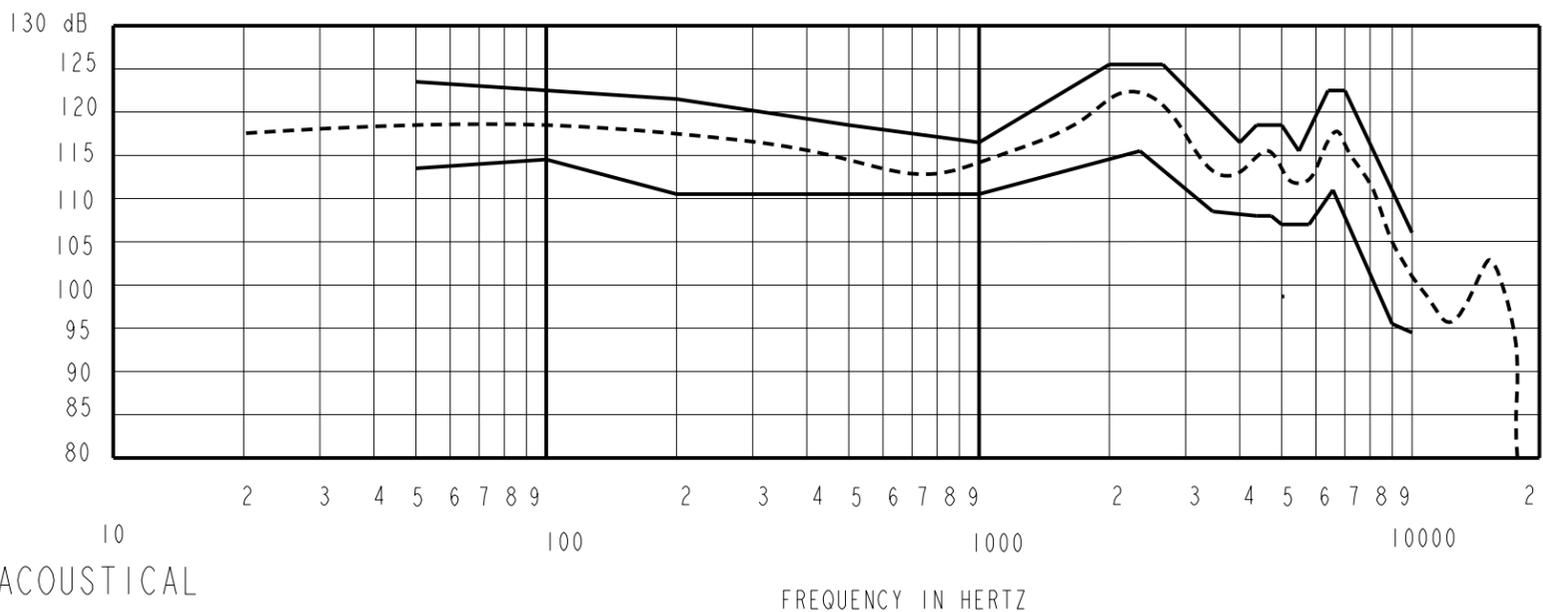
| Revision | C.O. # | Implementation Date | RELEASE LEVEL | REVISION |
|----------|-----------|---------------------|---------------|----------|
| A | C40101062 | 8-2-12 | Active | A |

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| | | |
|----------------------|--------------|---------------|
| SCALE: 3:1 | DR. BY: LW | DATE: 8-2-12 |
| DO NOT SCALE DRAWING | CK. BY: GJP | DATE: 8-23-12 |
| TITLE: RECEIVER | APP. BY: GJP | DATE: 8-23-12 |
| OUTLINE DRAWING | | |
| | HE-31751-000 | |
| | SHT 1.1 | |

CONSTANT VOLTAGE DRIVE CONDITIONS (WITH VENT BLOCKED).

SENSITIVITY IN dB RELATIVE TO 20μPa FOR CONDITIONS SHOWN BLEW



ACOUSTICAL

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

| FREQUENCY (Hz) | MINIMUM | NOMINAL | MAXIMUM |
|----------------|---------|---------|---------|
| 50 | +0.0 | +5.0 | +10.0 |
| 100 | +1.0 | +5.0 | +9.0 |
| 200 | +0.0 | +4.0 | +8.0 |
| 500 | -3.0 | +1.0 | +5.0 |
| 1000 | -3.0 | 113.5 | +3.0 |
| 2000 | --- | --- | +12.0 |
| 2400 | +2.0 | --- | --- |
| 2700 | --- | --- | +12.0 |
| 3500 | -5.0 | --- | --- |
| 4000 | --- | --- | +3.5 |
| 4400 | -5.5 | --- | +5.5 |
| 4750 | -5.5 | --- | --- |
| 5000 | -6.5 | +0.0 | +5.5 |
| 5500 | --- | --- | +2.5 |
| 5800 | -6.5 | --- | --- |
| 6300 | --- | --- | +9.0 |
| 6700 | -2.5 | --- | --- |
| 7000 | --- | --- | +9.0 |
| 9000 | -18.0 | --- | --- |
| 10000 | -19.0 | -12.5 | -7.5 |

TABLE 1

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

| FREQUENCY (Hz) | AC DRIVE (V rms) | DC BIAS (mA) | LIMIT (%) |
|----------------|------------------|--------------|-----------|
| 20-8000 | 0.13 | 0 | 4 |

TABLE 2

TEST CONDITIONS

| | |
|------------------------|-------------------------|
| NOMINAL SOURCE VOLTAGE | 0.13 V rms, 0mA DC BIAS |
| SOURCE IMPEDANCE | <1 Ohm |
| TUBING | TUBELESS |
| COUPLER CAVITY | IEC 60318-4 |

TABLE 3

ELECTRICAL

| | |
|--------------------|------------------|
| DC RESISTANCE | 23.9 Ohms ± 10% |
| IMPEDANCE @ 500 Hz | 47.7 Ohms ± 20% |
| IMPEDANCE @ 1kHz | 118.1 Ohms ± 20% |

TABLE 4

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

MECHANICAL

PORT LOCATION: 12S
SOLDER TYPE: SAC305 (LEAD FREE)

TEMPERATURE:

OPERATING: SENSITIVITY AT 1kHz WILL NOT VARY BY MORE THAN +1/-3 dB FROM 0°C TO 63°C

STORAGE: -40°C TO 63°C

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| Revision | C.O. # | Implementation Date | RELEASE LEVEL | REVISION |
|----------|-----------|---------------------|---------------|----------|
| A | C40101062 | 8-2-12 | Active | A |

| | | | |
|--|--|---------|---------|
| 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 PERFORMANCE SPECIFICATION | | LW | 8-2-12 |
| | | GJP | 8-23-12 |
| HE-31751-000 SHT 2.1 | | APP. BY | DATE |
| | | GJP | 8-23-12 |