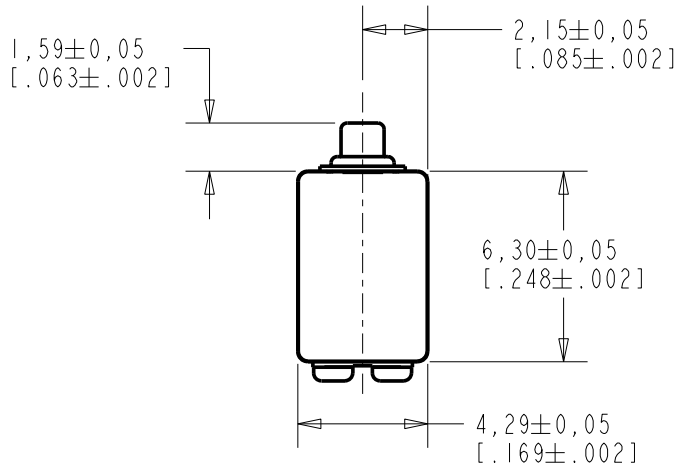


FED-23732-104

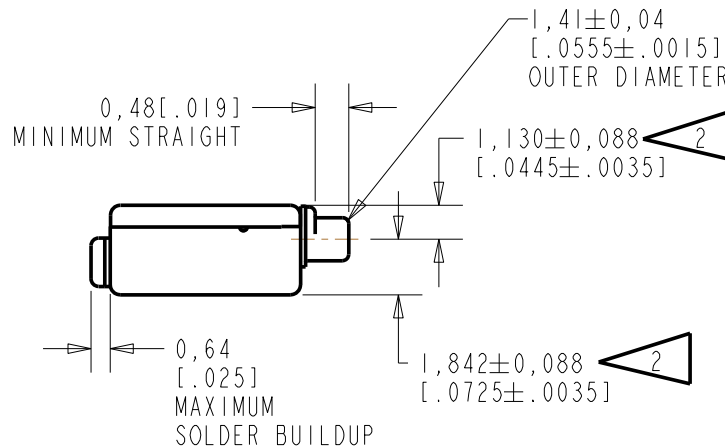
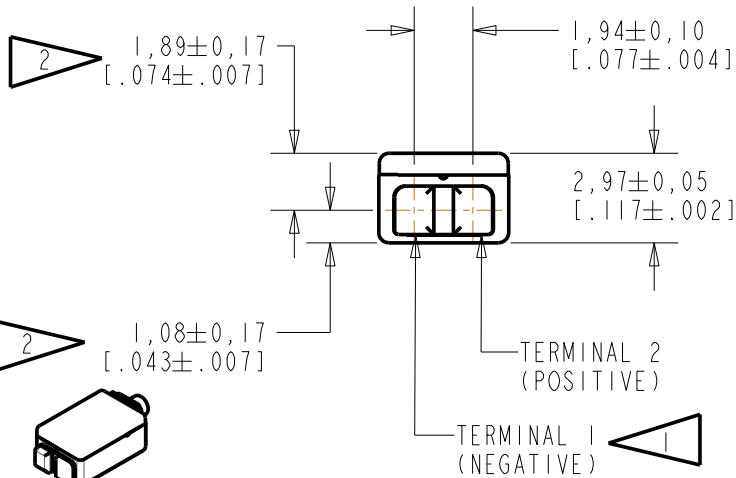
SHT 1.1



NOTE:

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. HORIZONTAL LOCATION FOR TERMINAL CENTERED TO $\pm 0,17$ [.007].



SCALE 2:1

NOMINAL WEIGHT
.31 GRAMS

DIMENSIONS IN MILLIMETERS [INCHES]

| Revision | C.O. # | Implementation Date | RELEASE LEVEL | REVISION |
|----------|-----------|---------------------|---------------|----------|
| B | C10107990 | 11-17-08 | Active | B |
| A | C10103596 | 1-31-06 | | |

| | | |
|------------------------------------|--------------------------|------------------------------|
| SCALE: 4:1 | DR. BY: CRG | DATE: 1-31-06 |
| DO NOT SCALE DRAWING | CK. BY: GJP | DATE: 2-8-06 |
| TITLE: RECEIVER OUTLINE DRAWING | FED-23732-104 SHT 1.1 | APP. BY: GJP DATE: 2-8-06 |

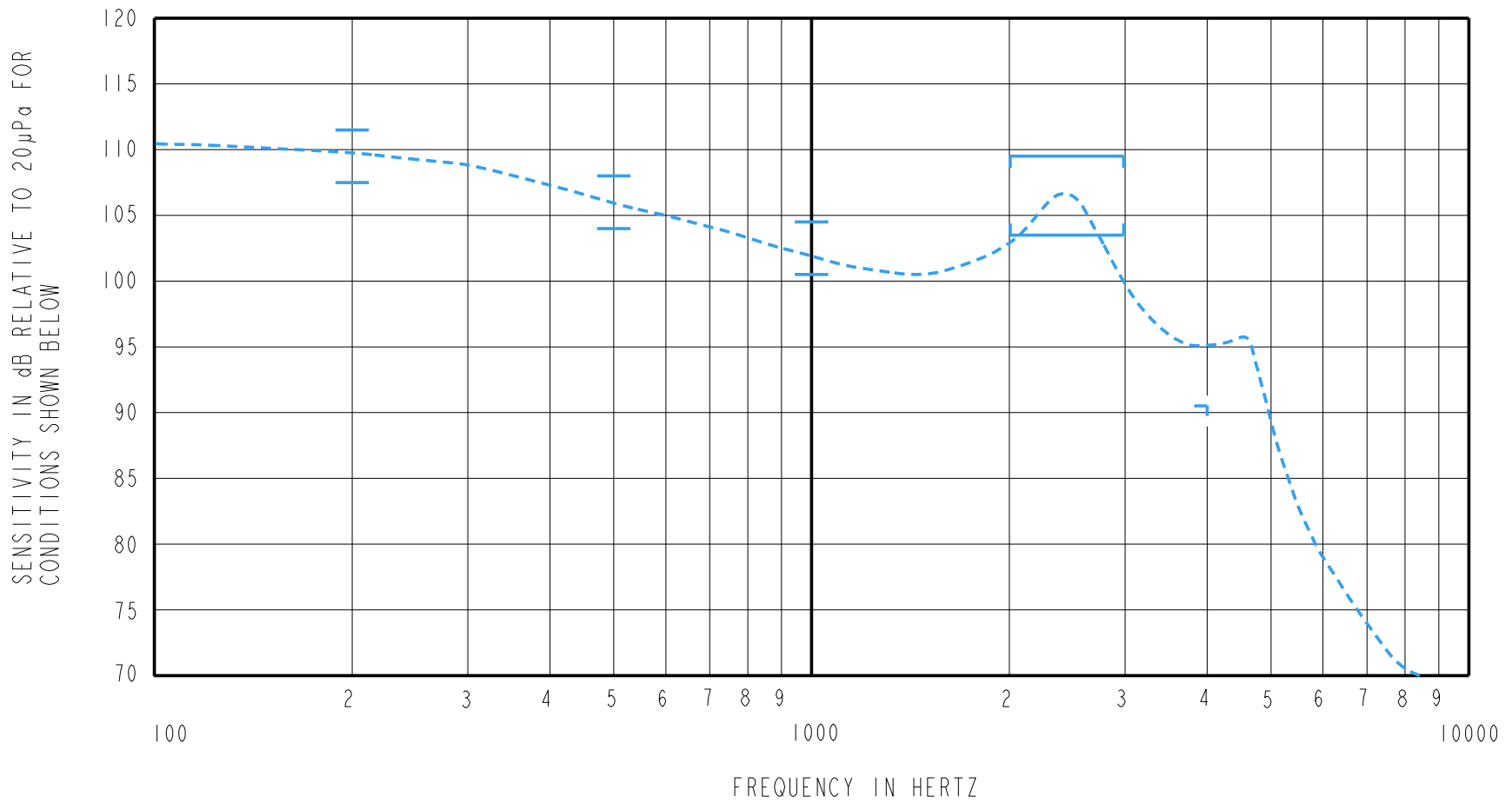
KNOWLES ELECTRONICS
ITASCA, ILLINOIS U.S.A.

THE FED-23732-104 IS A FERROFLUID DAMPED ED-23732 RECEIVER WITH PEAK OF 4dB RELATIVE TO THE SENSITIVITY AT 1kHz UNDER CONSTANT VOLTAGE DRIVE CONDITIONS.

FERROFLUID DAMPING

FED-23732-104
SHEET 2.1

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 | +5.0 | +7.0 | +9.0 |
| 500 | +1.5 | +3.5 | +5.5 |
| 1000 | -2.0 | 102.5 | +2.0 |
| 2000 - 3000 | +1.0 | +4.0 | +7.0 |
| 4000 | -12.0 | --- | --- |

PORT LOCATION: 12C

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 (%) |
|----------------|------------------|--------------|-----------|
| 500 | 1.24 | 0 | 10 |
| 830 | 0.44 | 0 | 5 |
| 1250 | 0.44 | 0 | 5 |

TABLE 2

TEST CONDITIONS

| | |
|------------------------|---|
| NOMINAL SOURCE VOLTAGE | 0.44 V rms, 0mA DC BIAS |
| SOURCE IMPEDANCE | <1 Ohm |
| TUBING | 10mm [.394"] LONG, 1mm [.039"] I.D. |
| COUPLER CAVITY | 2 CM ³ , SIMULATED ANSI S3.7 TYPE HA-3 (IEC 126) |

TABLE 3

ELECTRICAL

| | |
|--------------------|----------------|
| DC RESISTANCE | 196 OHMS ± 10% |
| IMPEDANCE @ 500 Hz | 380 OHMS ± 15% |
| IMPEDANCE @ 1 kHz | 680 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 1dB HIGHER AT BODY TEMPERATURE (37°C)
STORAGE RANGE FROM -40°C TO 63°C.

| Revision | C.O. # | Implementation Date | RELEASE LEVEL | REVISION |
|--|-----------|---------------------|---------------|--------------|
| B | C10107990 | 11-17-08 | Active | B |
| A | C10103596 | 1-31-06 | | |
| 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 | | | | |
| TITLE: RECEIVER | | FED-23732-104 | | DR. BY DATE |
| PERFORMANCE SPECIFICATION | | SHT 2.1 | | CRG 1-31-06 |
| | | | | CK. BY DATE |
| | | | | GJP 2-8-06 |
| | | | | APP. BY DATE |
| | | | | GJP 2-8-06 |

KNOWLES ELECTRONICS
ITASCA, ILLINOIS U.S.A.