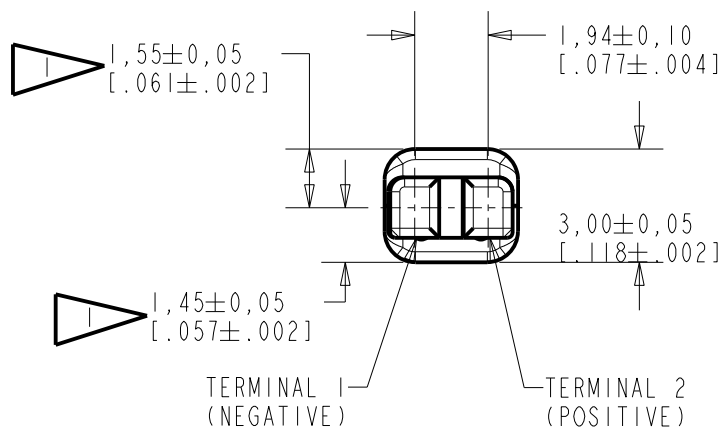
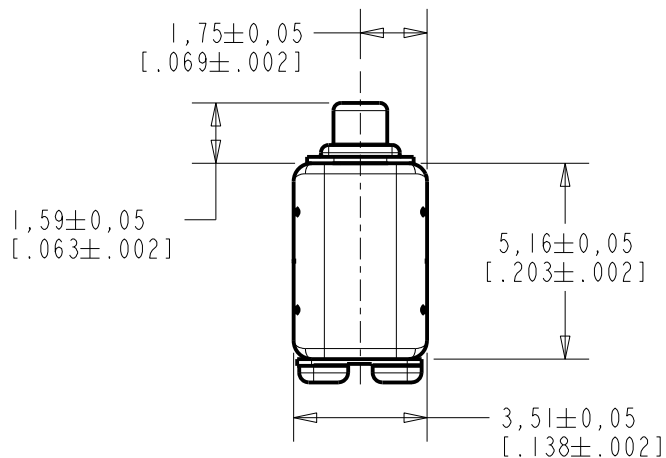


HC-23768-000

SHT 1.1

NOTE:

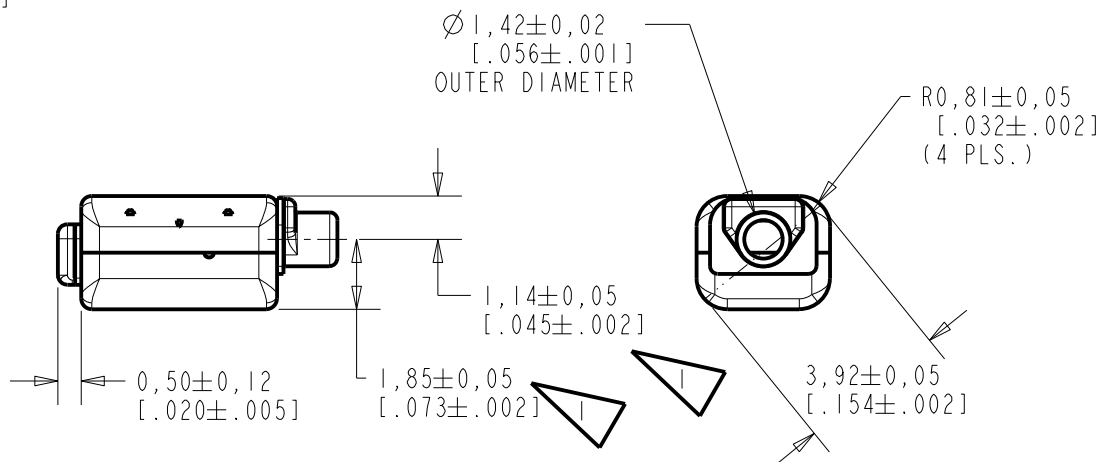
LOCATED FROM TWO SURFACES FOR CUSTOMER CONVENIENCE. ONLY APPLICABLE FROM ONE SURFACE, NOT TO BE USED TOGETHER. HORIZONTAL LOCATION FOR TERMINAL CENTERED TO $\pm 0,17$ [.007].



SCALE 2:1

NOMINAL WEIGHT
.23 GRAMS

DIMENSIONS IN MILLIMETERS [INCHES]



| Revision | C.O. # | Implementation Date | RELEASE LEVEL | REVISION |
|----------|-----------|---------------------|---------------|----------|
| C | CI0112180 | 2-28-11 | Active | C |
| B | CI0103946 | 2-20-06 | | |
| A | CI0103365 | 11-29-05 | | |

SCALE: 5:1

DO NOT SCALE DRAWING

TITLE: RECEIVER
OUTLINE DRAWING

HC-23768-000
SHT 1.1

| DR. BY | DATE |
|---------|----------|
| AB | 11-29-05 |
| CK. BY | DATE |
| GJP | 12-5-05 |
| APP. BY | DATE |
| GJP | 12-5-05 |

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ITASCA, ILLINOIS U.S.A.

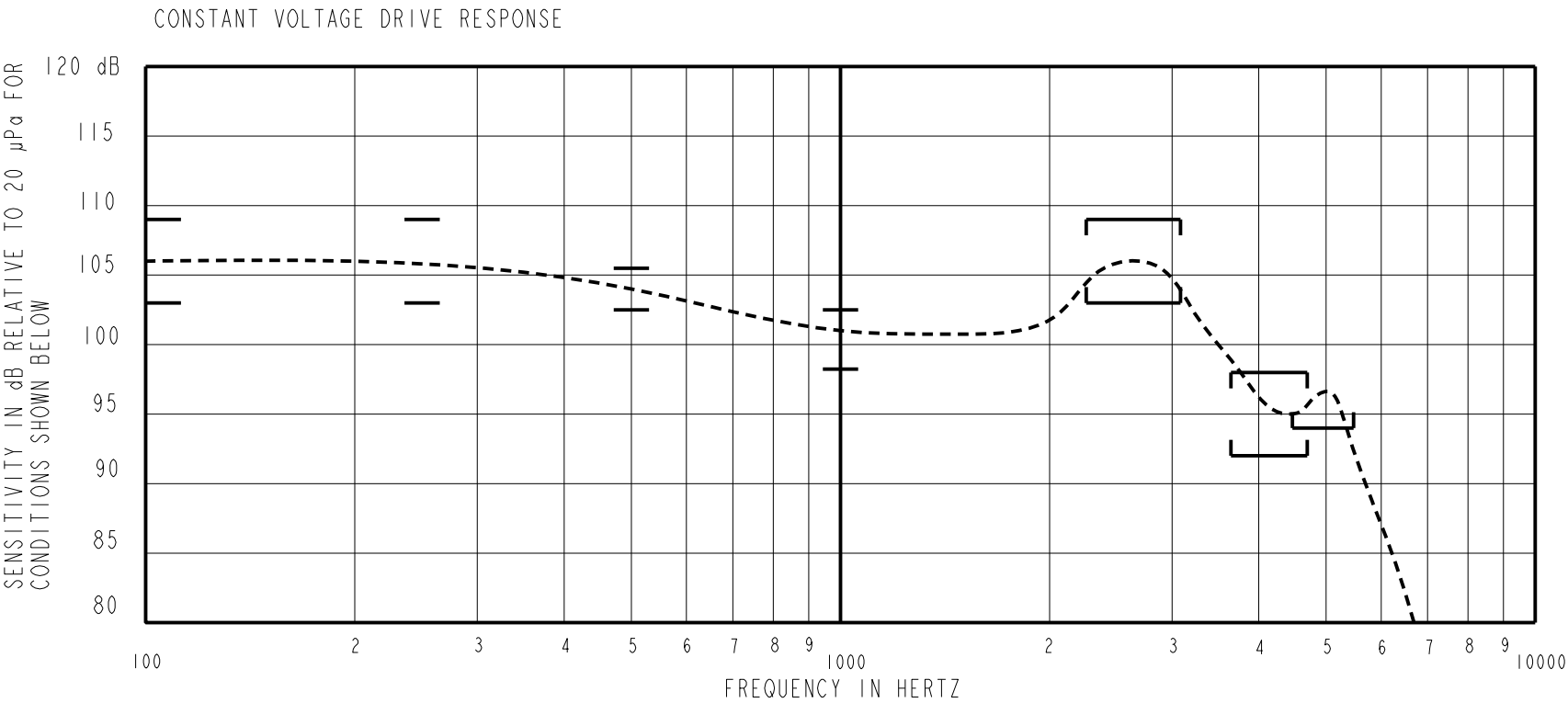
DESCRIPTION

NO DAMPING

HC-23768-000
SHEET 2.1

THE HC-23768-000 IS A MAGNETIC BALANCED ARMATURE RECEIVER INTENDED FOR USE IN ITC AND CIC HEARING INSTRUMENTS. THE HC FAMILY OFFERS 6 dB HIGHER OUTPUT LEVELS IN THE SAME SIZE PACKAGE AS THE FC FAMILY. ALL HC UNITS HAVE SHOCK PROTECTION. THIS MODEL HAS MEDIUM-LOW IMPEDANCE AND IS UNDAMPED.

NOTE: SPECIFICATIONS FOLLOWED BY AN ASTERISK (*) ARE 100% TESTED.



ACOUSTICAL

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

| FREQUENCY (Hz) | MINIMUM | NOMINAL | MAXIMUM |
|------------------|---------|---------|---------|
| 100 | +2.0 | +5.0 | +8.0 |
| 250 | +2.0 | +5.0 | +8.0 |
| 500 | +1.5 | +3.0 | +4.5 |
| 1000 | -1.5 | 101.0 | +1.5 |
| 2300-3100 PEAK | +2.0 | +5.0 | +8.0 |
| 3680-4720 VALLEY | -9.0 | -6.0 | -3.0 |
| 4500-5500 PEAK | -7.0 | --- | --- |

TABLE 1.

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

| FREQUENCY (Hz) | DRIVE (V RMS) | DC BIAS (mA) | LIMIT (%) |
|----------------|---------------|--------------|-----------|
| 900 | 0.238 V | 0 | 5 |
| 1350 | 0.238 V | 0 | 5 |
| 500 | 0.671 V | 0 | 10 |

TABLE 2.

TEST CONDITIONS

| | |
|------------------------|---|
| NOMINAL SOURCE VOLTAGE | 0.238 Vrms, 0 Vdc BIAS |
| SOURCE IMPEDANCE | < 1 Ω |
| TUBING | 10 mm (.394) LONG, 1 mm (.039) ID. |
| COUPLER CAVITY | 2 CC SIMULATED ANSI S3.7 TYPE HA-3, (IEC 60318-5) |

TABLE 3.

POLARITY *
POSITIVE SIGNAL APPLIED TO TERMINAL 2 WILL PRODUCE A DECREASE IN SOUND PRESSURE AT THE SOUND OUTLET.

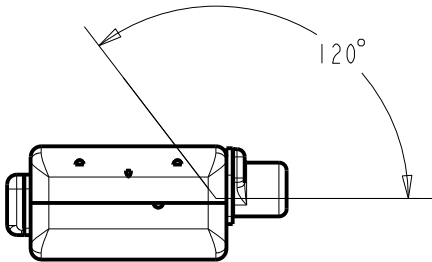
ELECTRICAL

| | | |
|----------------------|-----------|---|
| DC RESISTANCE | 83Ω ±10% | * |
| IMPEDANCE @ 500 Hz | 120Ω ±15% | * |
| IMPEDANCE @ 1 kHz | 205Ω ±20% | * |
| INDUCTANCE @ 500Hz | 35mH ±15% | |
| CAPACITANCE @ 10 MHz | 6pF ±20% | |

TABLE 4.

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

MAGNETIC RADIATION
WORST CASE: FIELD WILL BE LESS THAN LEVEL STATED BELOW AT AMPLIFIER CLIPPING (.920 V).
134 dB re 1µA/m
DISTANCE OF 6.3 mm FROM CENTER OF RECEIVER
ANGLE OF 120 DEGREES FROM TUBE



MECHANICAL

PORT LOCATION: 12C

SOLDER TYPE: SAC 305

TEMPERATURE
OPERATING: SENSITIVITY WILL NOT VARY MORE THAN +1/-3 dB FROM -17°C TO 63°C
STORAGE: -40°C TO 63°C

RELIABILITY
UNITS WILL SURVIVE ANY OF THE FOLLOWING ACCELERATED LIFE TESTS, REPORT AVAILABLE FROM QA DEPARTMENT

HALT TEST (8 WEEKS, 63°C, 95% RH, 0.83V, 500 Hz SIGNAL)
HIGH TEMPERATURE STORAGE (63°C, 72 HOURS)
LOW TEMPERATURE STORAGE (-40°C, 72 HOURS)
DAMP HEAT CYCLING (ALTERNATE 25°C TO 63°C, 93% RH, 20 CYCLES)
THERMAL SHOCK (-40°C TO 63°C, 5 CYCLES)
SOLDER/DESOLDER CYCLING (5 CYCLES)
SOLDER PAD STRENGTH (STRENGTH > 1.8 LBS.)
STRESS TEST (4.45 Vrms AT 2700 Hz SIGNAL, 1 HOUR)
MECHANICAL SHOCK
LEAK TEST AFTER AGING (NO LEAK AFTER ANY OF THE ABOVE TESTS)

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| Revision | C.O. # | Implementation Date | RELEASE LEVEL | REVISION |
|--|-----------|---------------------|-------------------------|-----------------------------------|
| C | C10112180 | 2-28-11 | Active | C |
| B | C10103946 | 2-20-06 | | |
| A | C10103365 | 11-29-05 | | |
| 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 AB | DATE 11-29-05 |
| TITLE: RECEIVER | | | CK. BY GJP | DATE 12-5-05 |
| PERFORMANCE SPECIFICATION | | | HC-23768-000 SHT 2.1 | APP. BY GJP DATE 12-5-05 |

Mouser Electronics

Authorized Distributor

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