

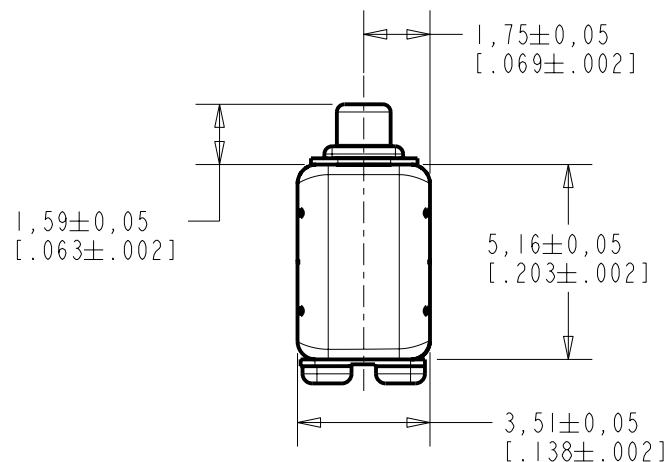
HC-23774-000

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].



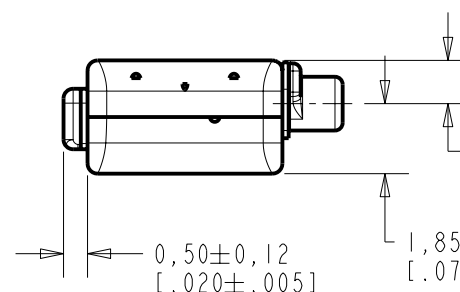
$\varnothing 1,42 \pm 0,02$
[.056±.001]
OUTER DIAMETER

$1,14 \pm 0,05$
[.045±.002]

$R0,81 \pm 0,05$
[.032±.002]
(4 PLS.)

$3,92 \pm 0,05$
[.154±.002]

$1,85 \pm 0,05$
[.073±.002]



$1,55 \pm 0,05$
[.061±.002]

$1,94 \pm 0,10$
[.077±.004]

$3,00 \pm 0,05$
[.118±.002]

$1,45 \pm 0,05$
[.057±.002]

TERMINAL 1
(NEGATIVE)

TERMINAL 2
(POSITIVE)



SCALE 2:1

NOMINAL WEIGHT
.23 GRAMS

DIMENSIONS IN MILLIMETERS [INCHES]

KNOWLES ELECTRONICS
ITASCA, ILLINOIS U.S.A.

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
B	C10103946	2-20-06	Released	B
A	C10103365	11-29-05		
SCALE: 5:1			DR. BY DATE	
DO NOT SCALE DRAWING			AB 11-29-05	
TITLE: RECEIVER			CK. BY DATE	
OUTLINE DRAWING			GJP 12-5-05	
HC-23774-000			APP. BY DATE	
SHT 1.1			GJP 12-5-05	

DESCRIPTION

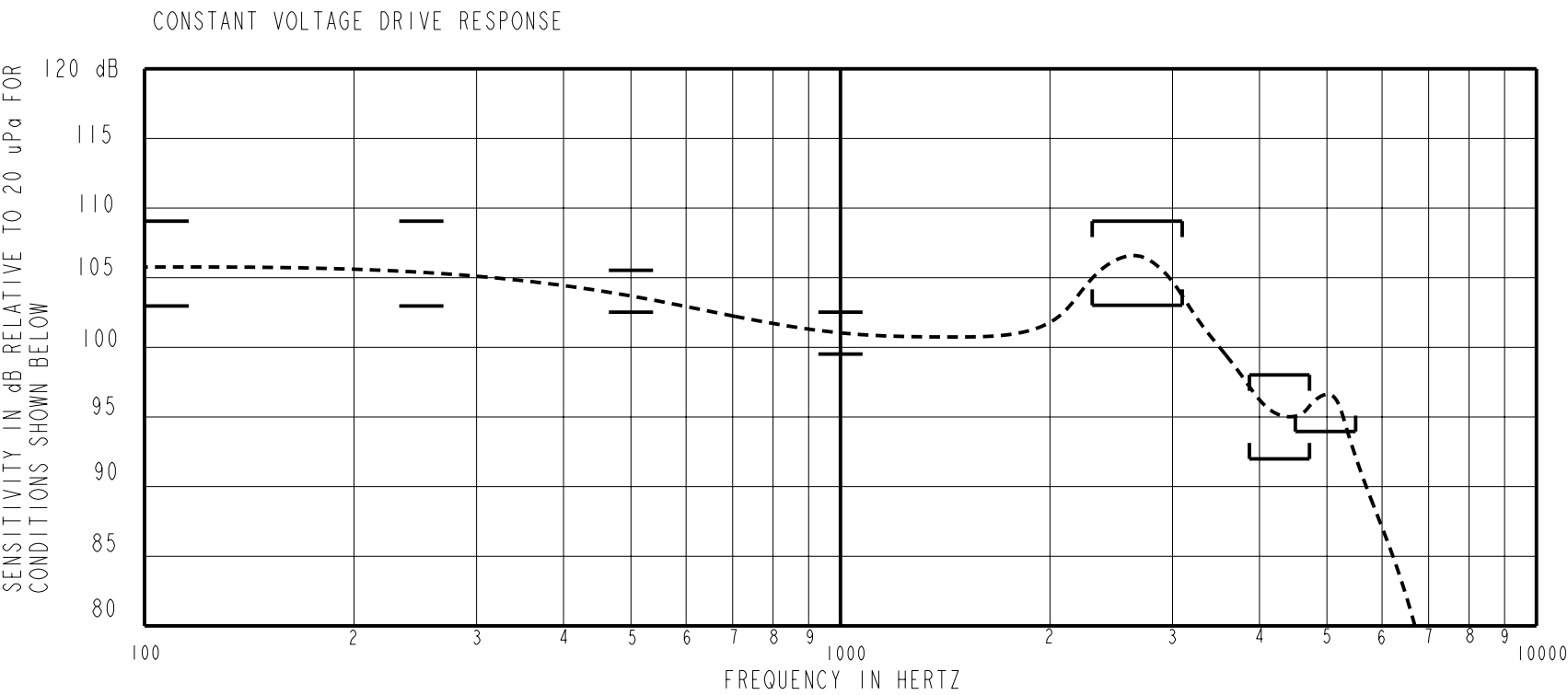
NO DAMPING

HC-23774-000

SHEET 2.1

THE HC-23774-000 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 HIGH IMPEDANCE AND IS UNDAMPED.

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



ACOUSTICAL

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

FREQUENCY (Hz)	MINIMUM	NOMINAL	MAXIMUM
100	+2	+5	+8
250	+2	+5	+8
500	1.5	+3	+4.5
1000	-1.5	101.0	+1.5
2300-3100 PEAK	+2	+5	+8
3890-4750 VALLEY	-9	-6	-3
4500-5500 PEAK	-7	---	---

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	0.671 V	0	5
1350	0.671 V	0	5
500	1.89 V	0	10

TABLE 2.

TEST CONDITIONS

NOMINAL SOURCE VOLTAGE	0.671 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 126)

TABLE 3.

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

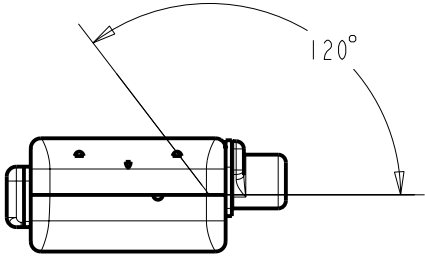
ELECTRICAL

DC RESISTANCE	685Ω ±10%	*
IMPEDANCE @ 500 Hz	1132Ω ±15%	*
IMPEDANCE @ 1 kHz	2072Ω ±20%	*
INDUCTANCE @ 500Hz	287 ±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: 96.5% Sn, 3% Ag, 0.5% Cu (LEAD FREE)

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 (12.55 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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ITASCA, ILLINOIS U.S.A.

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
B	C10103946	2-20-06	Released	B
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-23774-000 SHT 2.1	APP. BY GJP DATE 12-5-05

Mouser Electronics

Authorized Distributor

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[Knowles:](#)

[HC-23774-000](#)