
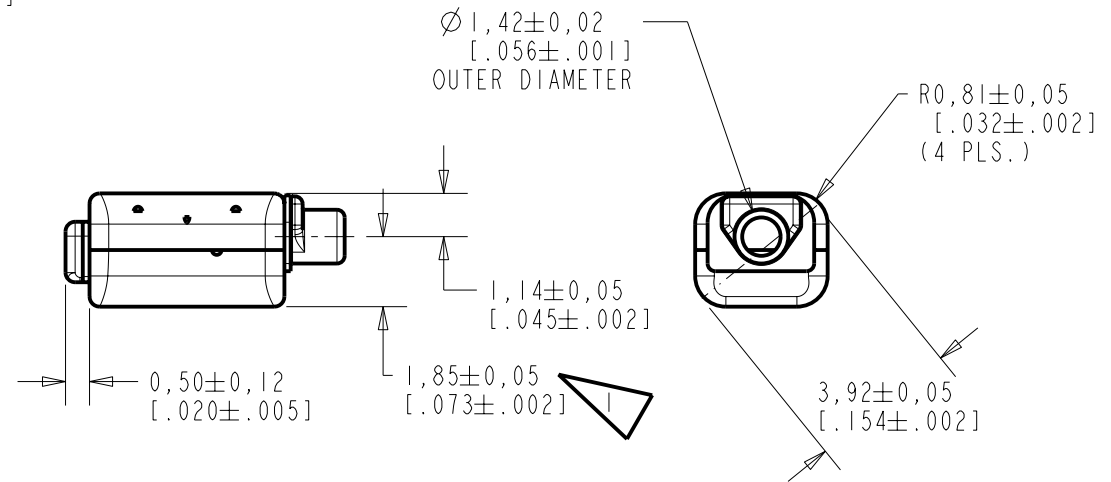
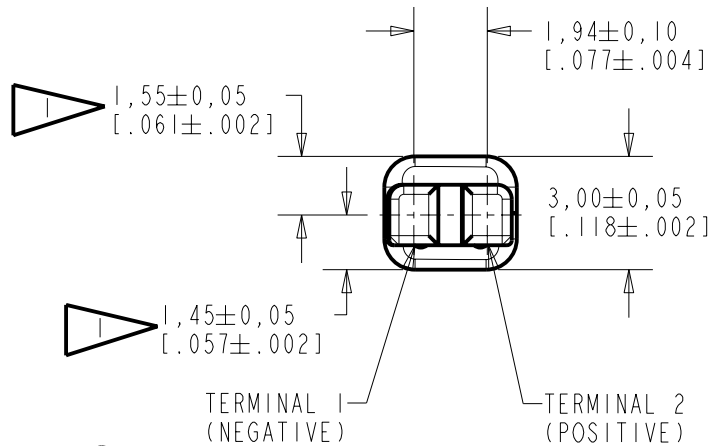
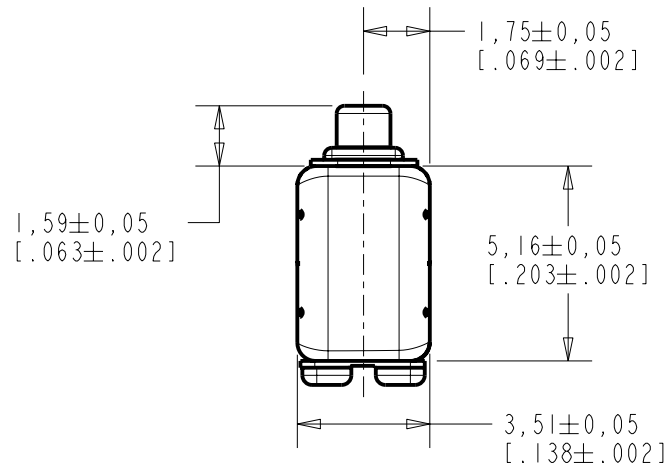


**HC-23767-000**  
SHT 1.1

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
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-23767-000		APP. BY	DATE
SHT 1.1		GJP	12-5-05

**KNOWLES ELECTRONICS**  
ITASCA, ILLINOIS U.S.A.

**DESCRIPTION**

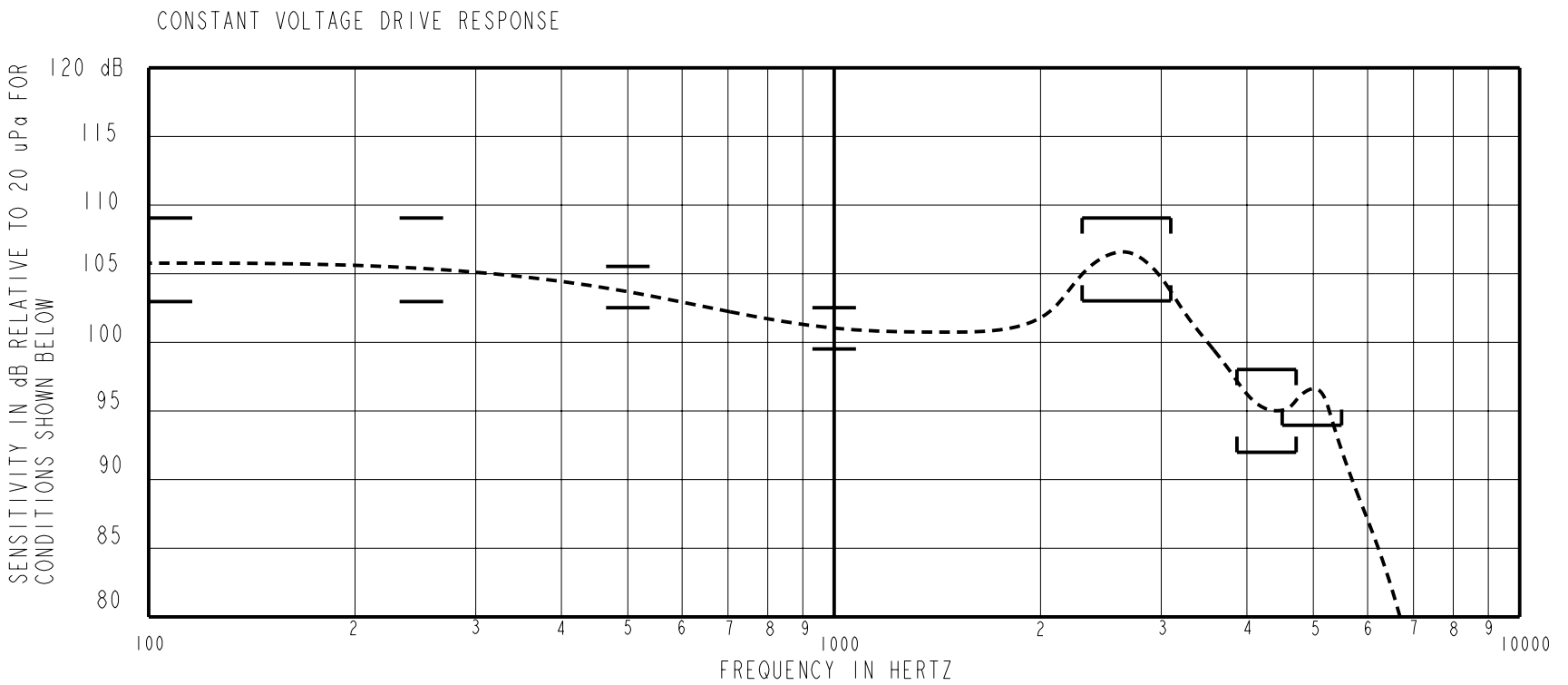
NO DAMPING

HC-23767-000

SHEET 2.1

THE HC-23767-000 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 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 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	+1.0	+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	.169 V	0	5
1350	.169 V	0	5
500	.475 V	0	10

TABLE 2.

**TEST CONDITIONS**

NOMINAL SOURCE VOLTAGE	.169 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	44Ω ±10%	*
IMPEDANCE @ 500 Hz	67Ω ±15%	*
IMPEDANCE @ 1 kHz	117Ω ±20%	*
INDUCTANCE @ 500Hz	16mH ±15%	
CAPACITANCE @ 10 MHz	6pF ±20%	

TABLE 4.

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

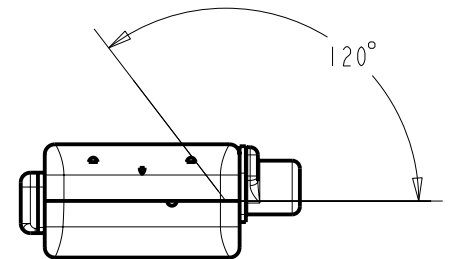
**MAGNETIC RADIATION**

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 (3.14 Vrms AT 2700 Hz SIGNAL, 1 HOUR)

MECHANICAL SHOCK

LEAK TEST AFTER AGING (NO LEAK AFTER ANY OF THE ABOVE TESTS)

**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		
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			AB	11-29-05
			HC-23767-000	
			GJP	12-5-05
			APP. BY	DATE
			GJP	12-5-05
			SHT 2.1	