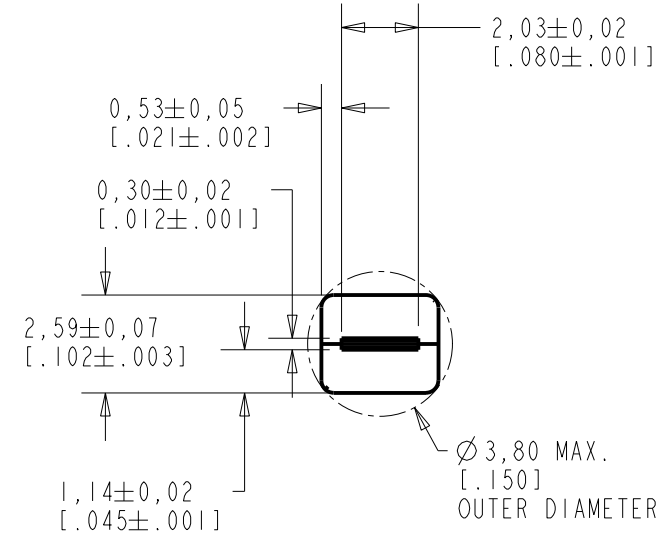
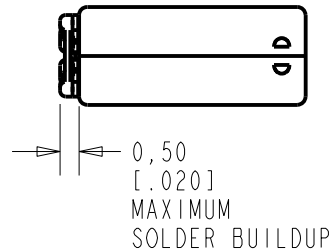
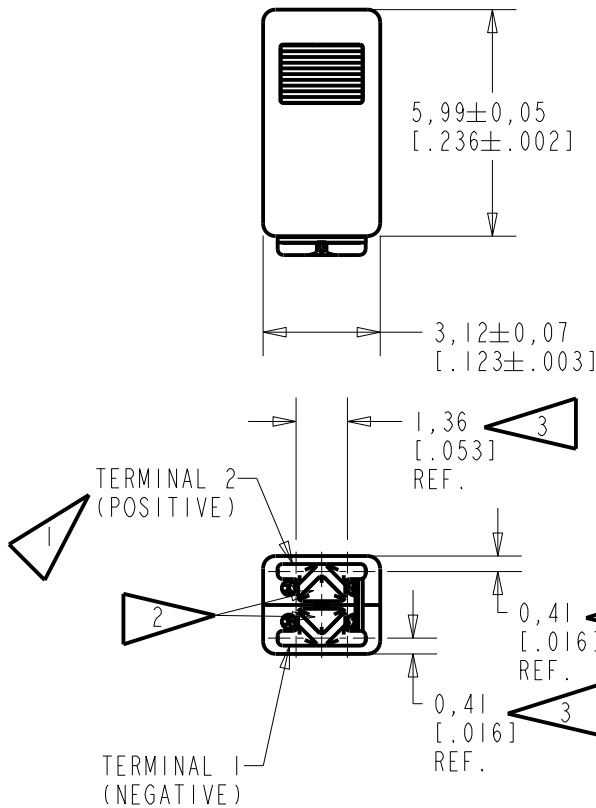


**GD-31133-000**

**SHT 1.1**

NOTES:

- 1 A POSITIVE GOING VOLTAGE AT TERMINAL 2, RELATIVE TO TERMINAL 1, CAUSES AN INCREASE IN PRESSURE AT THE SOUND OUTLET.
- 2 TERMINAL ELECTRICALLY CONNECTED TO CASE.
- 3 DIMENSION TO APPROXIMATE CENTER OF TERMINAL PAD.



SCALE 2:1  
0.16 GRAMS

DIMENSIONS IN MILLIMETERS [INCHES]

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
C	C10113289	3-30-12	<b>Active</b>	<b>C</b>
B	C10112587	6-28-11		
A	C10112084	2-11-11		

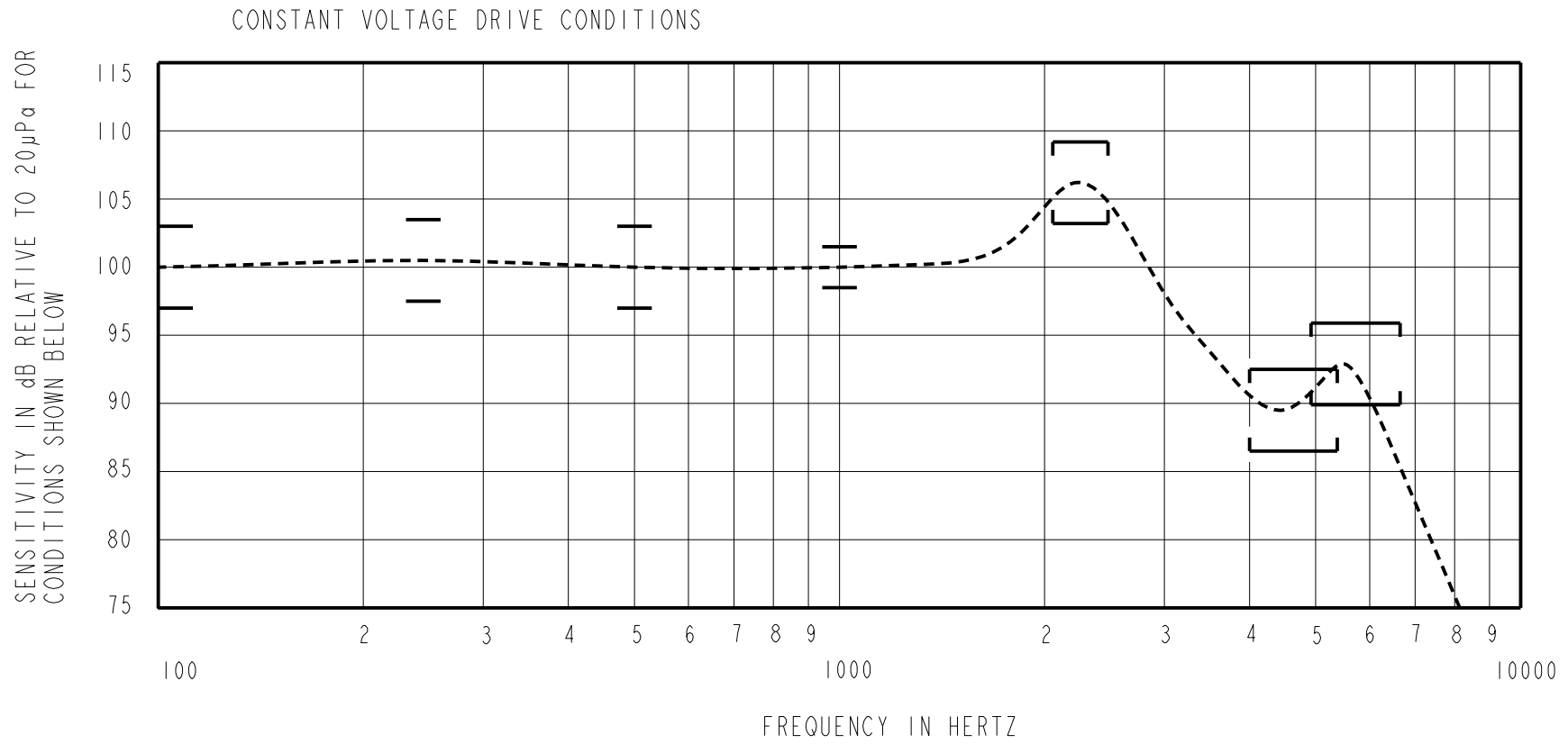
SCALE: 5:1		DR. BY: KL	DATE: 2-11-11
DO NOT SCALE DRAWING			
TITLE: RECEIVER		GD-31133-000	
OUTLINE DRAWING		SHT 1.1	
		CK. BY: GIP	DATE: 2-13-11
		APP. BY: GJP	DATE: 2-13-11

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

INTENDED FOR USE IN CIC, RIC, AND MINI-BTE APPLICATIONS. THIS IS A PAIR OF GE RECEIVERS WITH VERY LOW VIBRATION IN ALL DIRECTIONS. ONE GE RECEIVER IS REVERSE MAGNETIZED FOR MAGNETIC LEAKAGE CONSIDERATIONS. BOTH DAUGHTER UNITS HAVE THE CENTER TERMINAL CONNECTED TO CASE.

NO DAMPING

CD-31133-000  
SHEET 2.1



### ACOUSTICAL

SENSITIVITY DEVICE WILL PRODUCE THE SPL LISTED BELOW UNDER TEST CONDITIONS DESCRIBED IN TABLE 4. NOMINAL SENSITIVITY AT 1kHz IS dB RELATIVE TO 20 $\mu$ Pa. ALL OTHER VALUES IN dB RELATIVE TO THE SENSITIVITY AT 1kHz.

LIMIT TYPE	FREQUENCY (Hz)	MINIMUM	NOMINAL	MAXIMUM
REL	100	-3	0	3
REL	250	-2.5	0.5	3.5
REL	500	-3	0	3
REF	1000	-1.5	100	1.5
PEAK	2070 - 2530	+3.2	6.2	9.2
VALLEY	4000 - 5400	-13.5	-10.5	7.5
PEAK	4930 - 6670	-10.1	-7.1	-4.1

TABLE 1

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

FREQUENCY (Hz)	AC DRIVE (Vrms)	DC BIAS (V)	LIMIT (%)
767	0.172	0	3
1150	0.172	0	3
767	0.484	0	8
1150	0.484	0	8

TABLE 2

MAXIMUM OUTPUT LEVEL (TYPICAL)

POWER (mW)	500 Hz SPL (dB)	REQUIRED VOLTAGE (Vrms)	Peak SPL (dB)	REQUIRED VOLTAGE (Vrms)
10	114.0	0.9	121.0	1.3
50	117.0	2.0	123.0	2.5

TABLE 3

### TEST CONDITIONS

NOMINAL SOURCE VOLTAGE	0.172 Vrms, 0 mA DC BIAS
SOURCE IMPEDANCE	<1 Ohm
TUBING	10 mm [.394"] LONG X 1 mm [.039"] I.D. ("ITE")
COUPLER CAVITY	2 CM <sup>3</sup> , SIMULATED ANSI S3.7 TYPE HA-3 (IEC 60318-5)

TABLE 4

### ELECTRICAL

DC RESISTANCE @ 20°C	78.9 Ohms $\pm$ 10%
IMPEDANCE @ 500 Hz	87.3 Ohms $\pm$ 15%
IMPEDANCE @ 1 kHz	105.2 Ohms $\pm$ 15%
INDUCTANCE @ 500 Hz	8.5 mH TYPICAL
CAPACITANCE @ 10 MHz	4.6 pF TYPICAL

TABLE 4

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

### MECHANICAL

PORT LOCATION: 12N

SOLDER TYPE: SAC305

TEMPERATURE

OPERATING: SENSITIVITY WILL NOT VARY MORE THAN  $\pm$ 3 dB FROM -17°C TO 63°C

STORAGE: -40°C TO 63°C

SHOCK RESISTANCE: 90% SURVIVAL RATE WITH THD @ 1/3 PEAK FREQUENCY LESS THAN 10%, THD @ 1/2 PEAK FREQUENCY LESS THAN 20% AND LESS THAN 3dB CHANGE IN SENSITIVITY AT 1kHz WHEN SUBJECTED TO 15 kg.

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ITASCA, ILLINOIS U.S.A.

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
C	C10113289	3-30-12	<b>Active</b>	<b>C</b>
B	C10112587	6-28-11		
A	C10112084	2-11-11		
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: <b>RECEIVER</b> PERFORMANCE SPECIFICATION			KL	2-11-11
			CD-31133-000	
SHT 2.1			CK. BY	DATE
			GIP	2-13-11
			APP. BY	DATE
			GJP	2-13-11