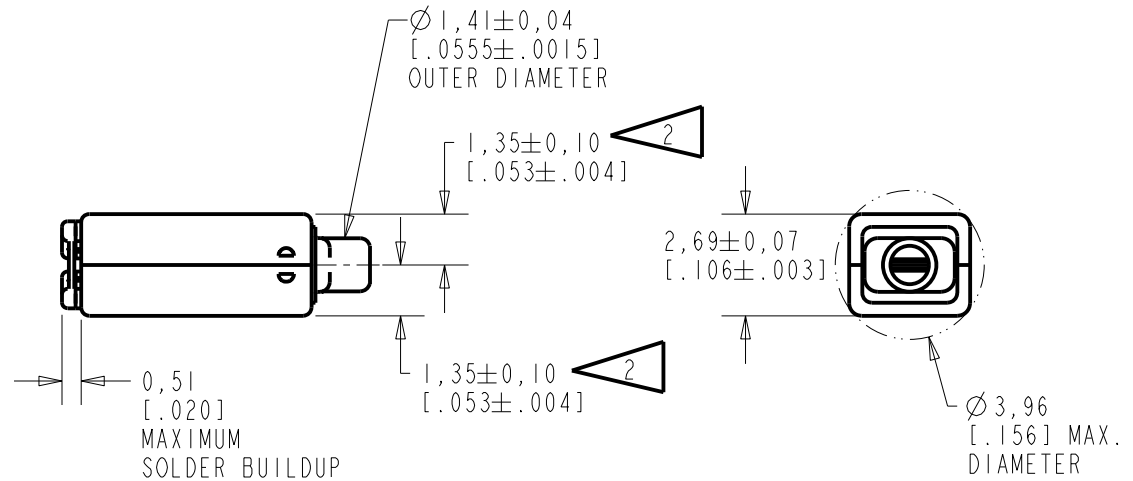
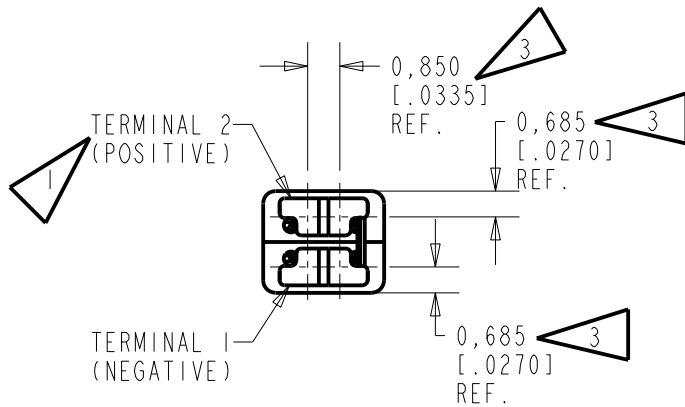
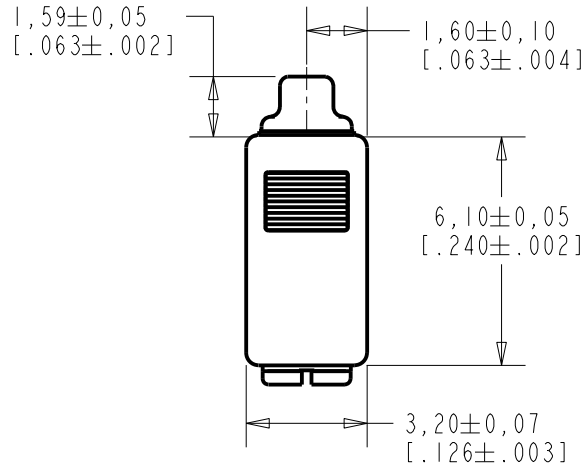


**GD30-31593-000**  
SHT 1.1



NOTES:

- 1 A POSITIVE GOING VOLTAGE AT TERMINAL 2, RELATIVE TO TERMINAL 1, CAUSES AN INCREASE IN PRESSURE AT THE SOUND OUTLET.
- 2 LOCATED FROM TWO SURFACES FOR CUSTOMER CONVENIENCE. ONLY APPLICABLE FROM ONE SURFACE, NOT TO BE USED TOGETHER.
- 3 DIMENSION TO APPROXIMATE CENTER OF TERMINAL PAD.



SCALE 2:1  
0.19 GRAMS

DIMENSIONS IN MILLIMETERS [INCHES]

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
A	CI0113627	5-15-12	Design	A
SCALE: 5:1				DR. BY DATE
DO NOT SCALE DRAWING			OO 5-15-12	
TITLE: RECEIVER			CD30-31593-000	CK. BY DATE
OUTLINE DRAWING			SHT 1.1	GJP 5-22-12
				APP. BY DATE
				GJP 5-22-12

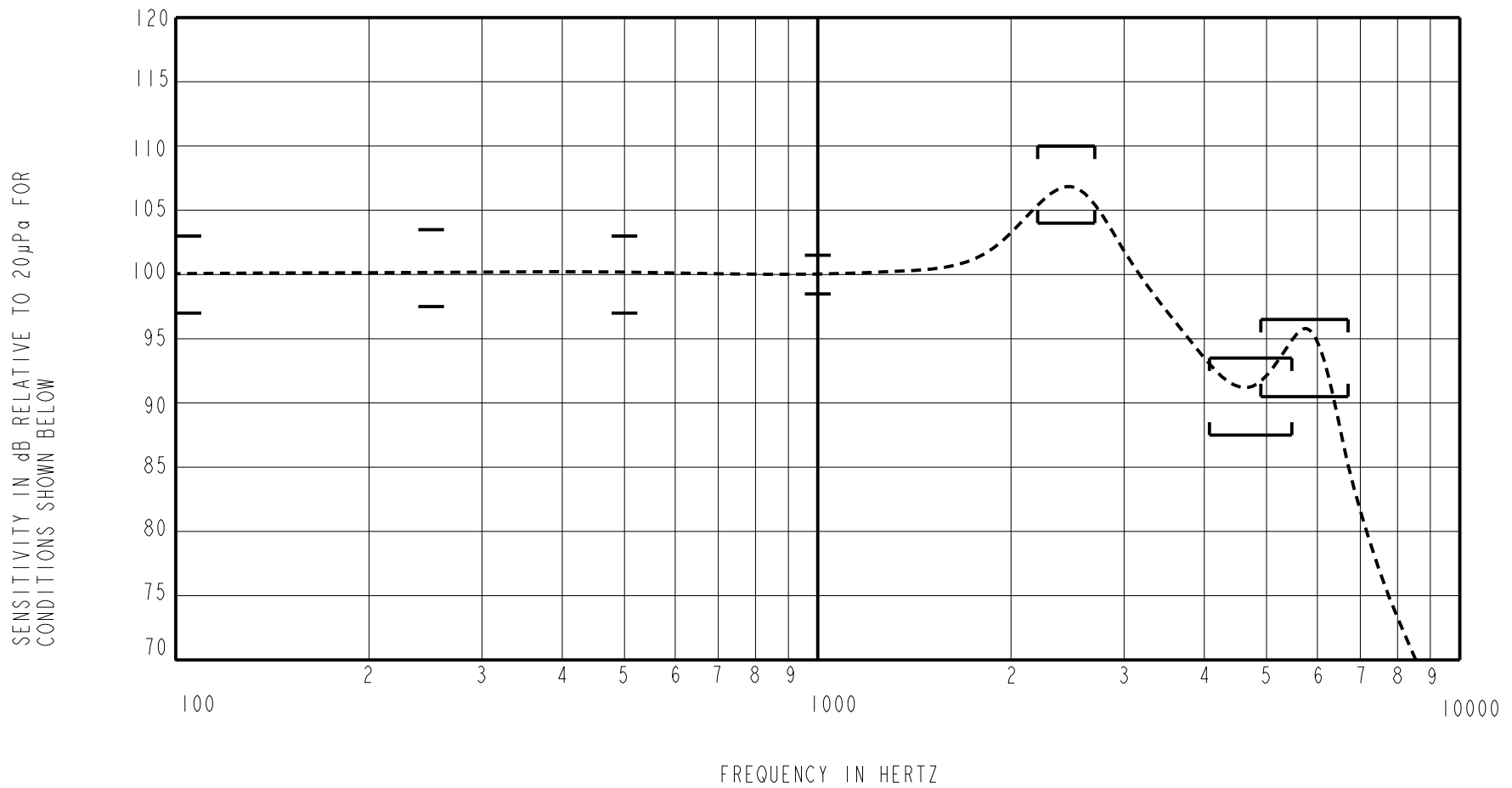
**KNOWLES ELECTRONICS**  
ITASCA, ILLINOIS U.S.A.

INTENDED FOR USE IN CIC, RIC, AND MINI-BTE APPLICATIONS. THIS IS A PAIR OF GE30 RECEIVERS WITH VERY LOW VIBRATION IN ALL DIRECTIONS. ONE GE30 RECEIVER IS REVERSE MAGNETIZED FOR MAGNETIC LEAKAGE CONSIDERATIONS. THIS RECEIVER HAS ANNEALED MUMETAL CUPS TO REDUCE MAGNETIC LEAKAGE.

NO DAMPING

CD30-31593-000  
SHEET 2.1

CONSTANT VOLTAGE DRIVE CONDITIONS



**ACOUSTICAL**

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

LIMIT TYPE	FREQUENCY (Hz)	MINIMUM	NOMINAL	MAXIMUM
REL	100	-3.0	0.0	+3.0
REL	250	-2.5	+0.5	+3.5
REL	500	-3.0	0.0	+3.0
REF	1000	-1.5	100.0	+1.5
PEAK	2250-2750	+3.5	+6.5	+9.5
VALLEY	3995-5405	-12.0	-9.0	-6.0
PEAK	4900 - 6700	-8.5	-5.5	-2.5

TABLE 1

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

FREQUENCY (Hz)	AC DRIVE (Vrms)	DC BIAS (V)	LIMIT (%)
833	0.244	0	3
1250	0.244	0	3
833	0.690	0	8
1250	0.690	0	8

TABLE 2

MAXIMUM OUTPUT LEVEL (TYPICAL)

POWER (mW)	500 Hz SPL (dB)	REQUIRED VOLTAGE (Vrms)	Peak SPL (dB)	REQUIRED VOLTAGE (Vrms)
10	113.9	1.3	124.1	2.0
50	119.6	3.0	128.5	3.9

TABLE 3

**TEST CONDITIONS**

NOMINAL SOURCE VOLTAGE	0.244 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)
MAXIMUM DRIVE VOLTAGE	2.27 Vrms

TABLE 4

**ELECTRICAL**

DC RESISTANCE @ 20°C	165 Ohms ± 10%
IMPEDANCE @ 500 Hz	184 Ohms ± 15%
IMPEDANCE @ 1 kHz	223 Ohms ± 15%
INDUCTANCE @ 500 Hz	22.2 mH TYPICAL
CAPACITANCE @ 10 MHz	6.3 pF TYPICAL

TABLE 5

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

**MECHANICAL**

PORT LOCATION: 12S

SOLDER TYPE: SAC305

TEMPERATURE

OPERATING: SENSITIVITY WILL NOT VARY MORE THAN +1/-3 dB AT 500 Hz 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 15,000 G.

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Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
A	CI0113627	5-15-12	Design	A

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		OO	5-15-12
		GJP	5-22-12
CD30-31593-000 SHT 2.1		APP. BY	DATE
		GJP	5-22-12