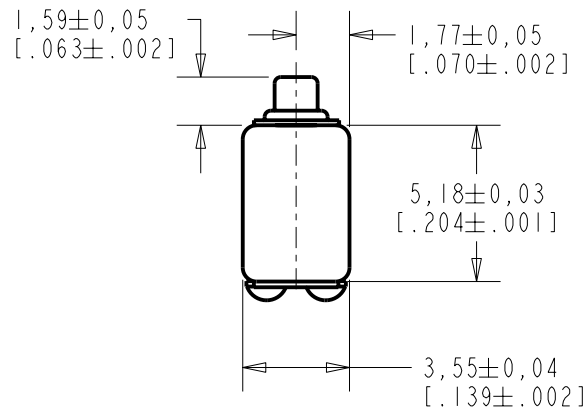


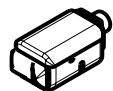
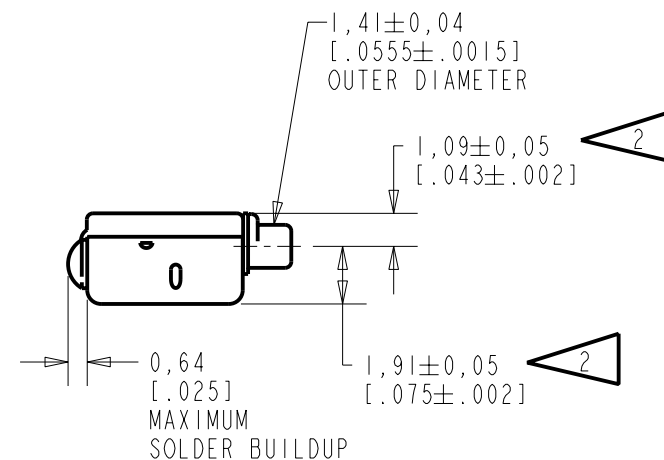
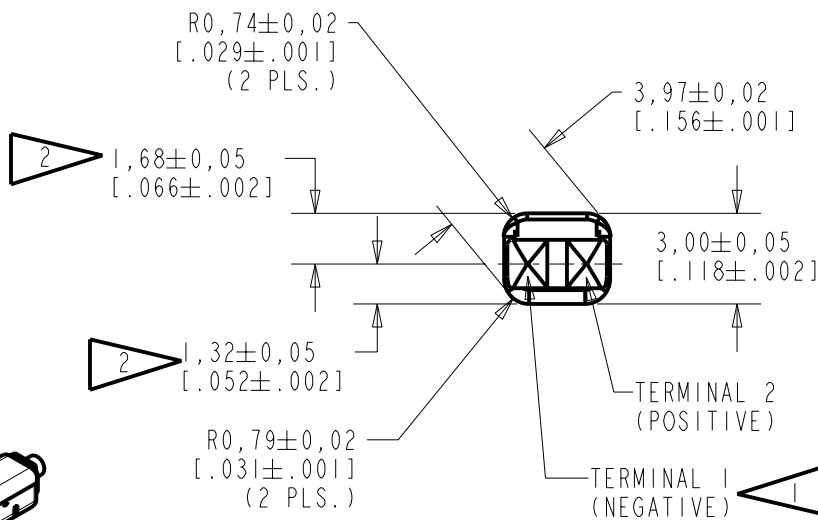
FFC-23981-104

SHT 1.1



NOTES:

- 1 A POSITIVE GOING VOLTAGE AT TERMINAL 2, RELATIVE TO TERMINAL 1, CAUSES A DECREASE IN PRESSURE AT THE SOUND OUTLET.
- 2 LOCATED FROM TWO SURFACES FOR CUSTOMER CONVENIENCE. ONLY APPLICABLE FROM ONE SURFACE, NOT TO BE USED TOGETHER.



SCALE 2:1

NOMINAL WEIGHT
.23 GRAMS

DIMENSIONS IN MILLIMETERS [INCHES]

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
C	CI0104171	4-28-06	Released	C
B	CI0104011	3-10-06		
A	CI0103207	9-30-05		

SCALE: 4:1		DR. BY	DATE
DO NOT SCALE DRAWING		MMM	9-30-05
		CK. BY	DATE
TITLE: RECEIVER OUTLINE DRAWING		GJP	10-3-05
		FFC-23981-104 SHT 1.1	
		APP. BY	DATE
		GJP	10-3-05

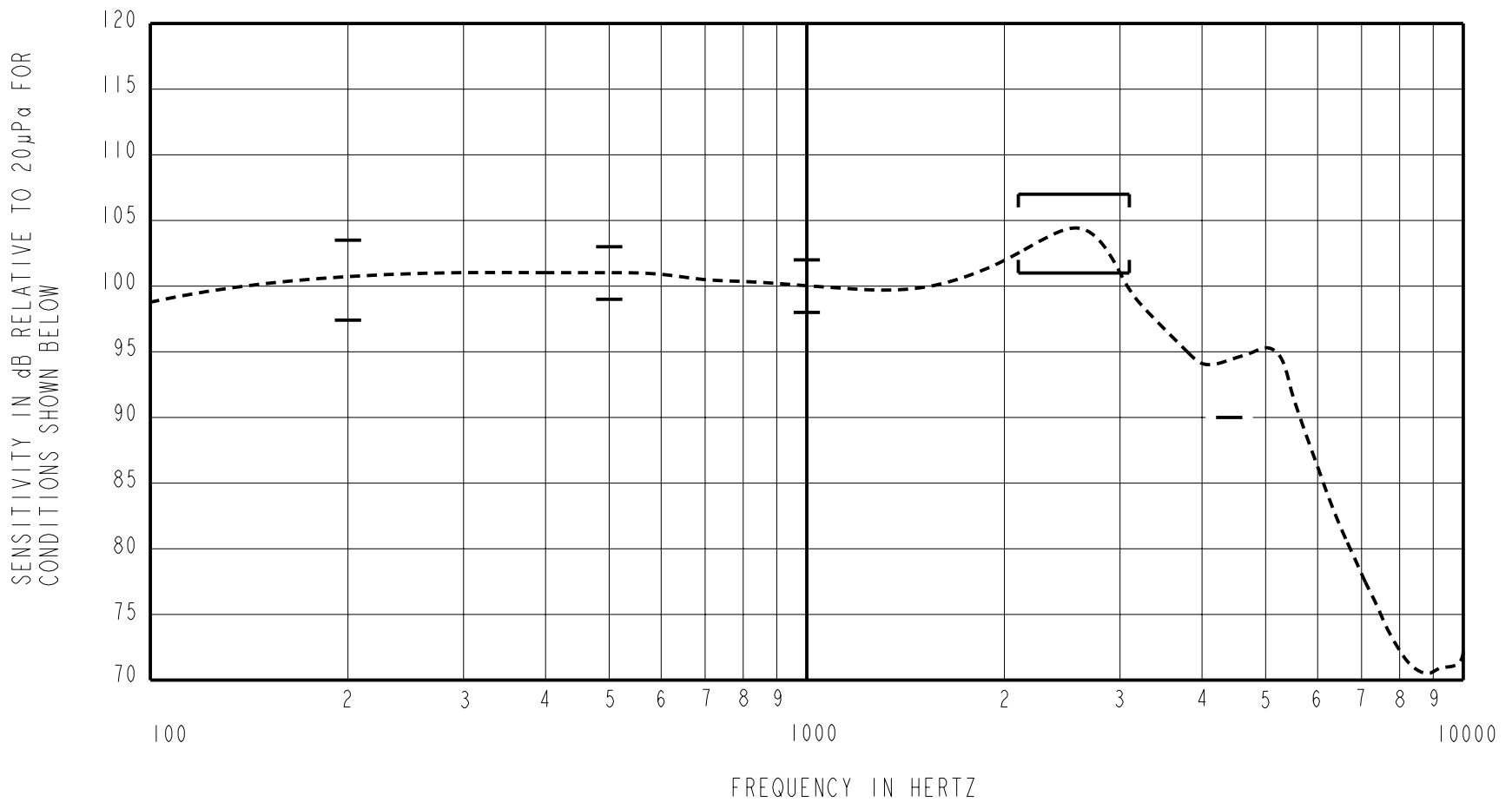
KNOWLES ELECTRONICS
ITASCA, ILLINOIS U.S.A.

THE FFC-23981-104 IS A FERROFLUID DAMPED FC-6171 RECEIVER WITH AN 88 OHM NOMINAL IMPEDANCE AND A PEAK OF 4dB RELATIVE TO THE SENSITIVITY AT 1kHz UNDER CONSTANT VOLTAGE DRIVE CONDITIONS.

FERROFLUID & TYPE III
DAMPING

FFC-23981-104
SHEET 2.1

CONSTANT VOLTAGE DRIVE CONDITIONS



ACOUSTICAL

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

FREQUENCY (Hz)	MINIMUM	NOMINAL	MAXIMUM
200	-2.5	+0.5	+3.5
500	-1.0	+1.0	+3.0
1000	-2.0	100.0	+2.0
2100 - 3100	+1.0	+4.0	+7.0
4400	-10.0	---	---

PORT LOCATION: 12C

TABLE 1

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

FREQUENCY (Hz)	AC DRIVE (V rms)	DC BIAS (V)	LIMIT (%)
500	0.42	0	10
870	0.15	0	6
1300	0.15	0	6

TABLE 2

TEST CONDITIONS

NOMINAL SOURCE VOLTAGE	0.15 V rms, 0 mA DC BIAS
SOURCE IMPEDANCE	<1 Ohm
TUBING	10mm [.394"] LONG, 1mm [.039"] I.D.
COUPLER CAVITY	2 CM ³ , SIMULATED ANSI S3.7 TYPE HA-3 (IEC 126)

TABLE 3

ELECTRICAL

DC RESISTANCE	56 Ohms ± 10%
IMPEDANCE @ 500 Hz	65 Ohms ± 15%
IMPEDANCE @ 1kHz	88 Ohms ± 15%

TABLE 4

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

TEMPERATURE: OPERATING RANGE FROM 0°C TO 63°C (SENSITIVITY WILL NOT VARY BY MORE THAN ±3 dB WITHIN RANGE)
SENSITIVITY AT 0°C IS 2dB LOWER THAN THE SENSITIVITY AT ROOM TEMPERATURE.
DELTA PEAK IS 1.5dB HIGHER AT BODY TEMPERATURE (37°C)
STORAGE RANGE FROM -40°C TO 63°C

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
C	C10104171	4-28-06	Released	C
B	C10104011	3-10-06		
A	C10103207	9-30-05		

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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

TITLE: **RECEIVER** **FFC-23981-104**
PERFORMANCE SPECIFICATION **SHT 2.1**

DR. BY	DATE
MMM	9-30-05
CK. BY	DATE
GJP	10-3-05
APP. BY	DATE
GJP	10-3-05