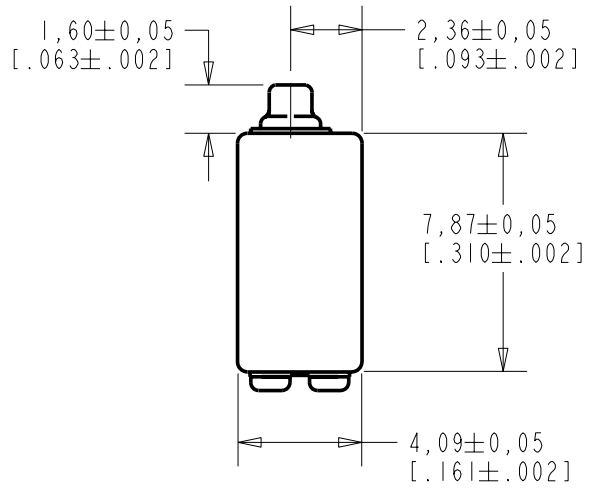
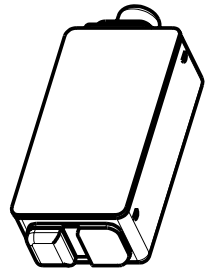
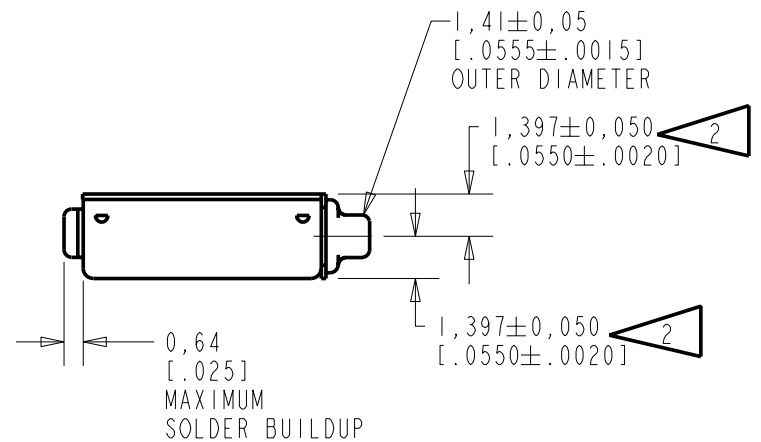
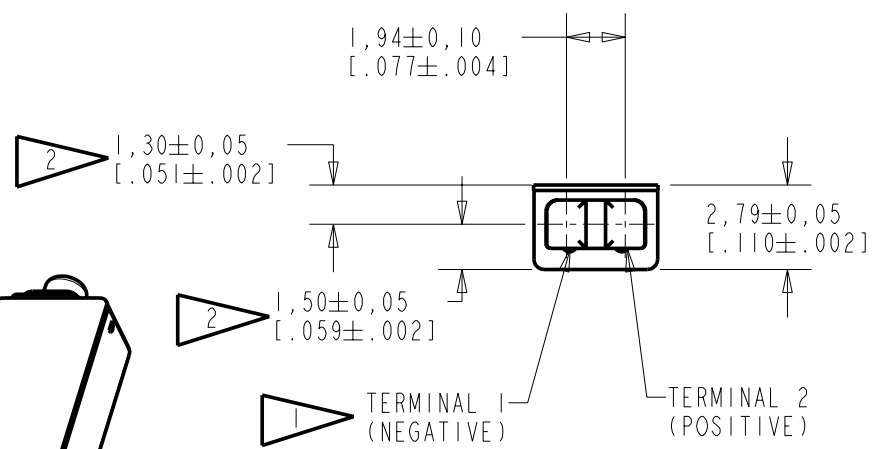


**FTEC-30114-104**  
SHT 1.1



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. HORIZONTAL LOCATION FOR TERMINAL CENTERED TO ±0,17 [0,007].



NOMINAL WEIGHT  
.35 GRAM

DIMENSIONS IN MILLIMETERS [INCHES]

**RED CONTROLLED**

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
B	C10107383	4-2-08	Active	B
A	C10105843	5-29-07		
SCALE: 4:1				
DO NOT SCALE DRAWING			DR. BY	DATE
TITLE: RECEIVER			MMM	5-29-07
			FTEC-30114-104	
OUTLINE DRAWING			GJP	5-30-07
			SHT 1.1	
			GJP	5-30-07

**KNOWLES ELECTRONICS**  
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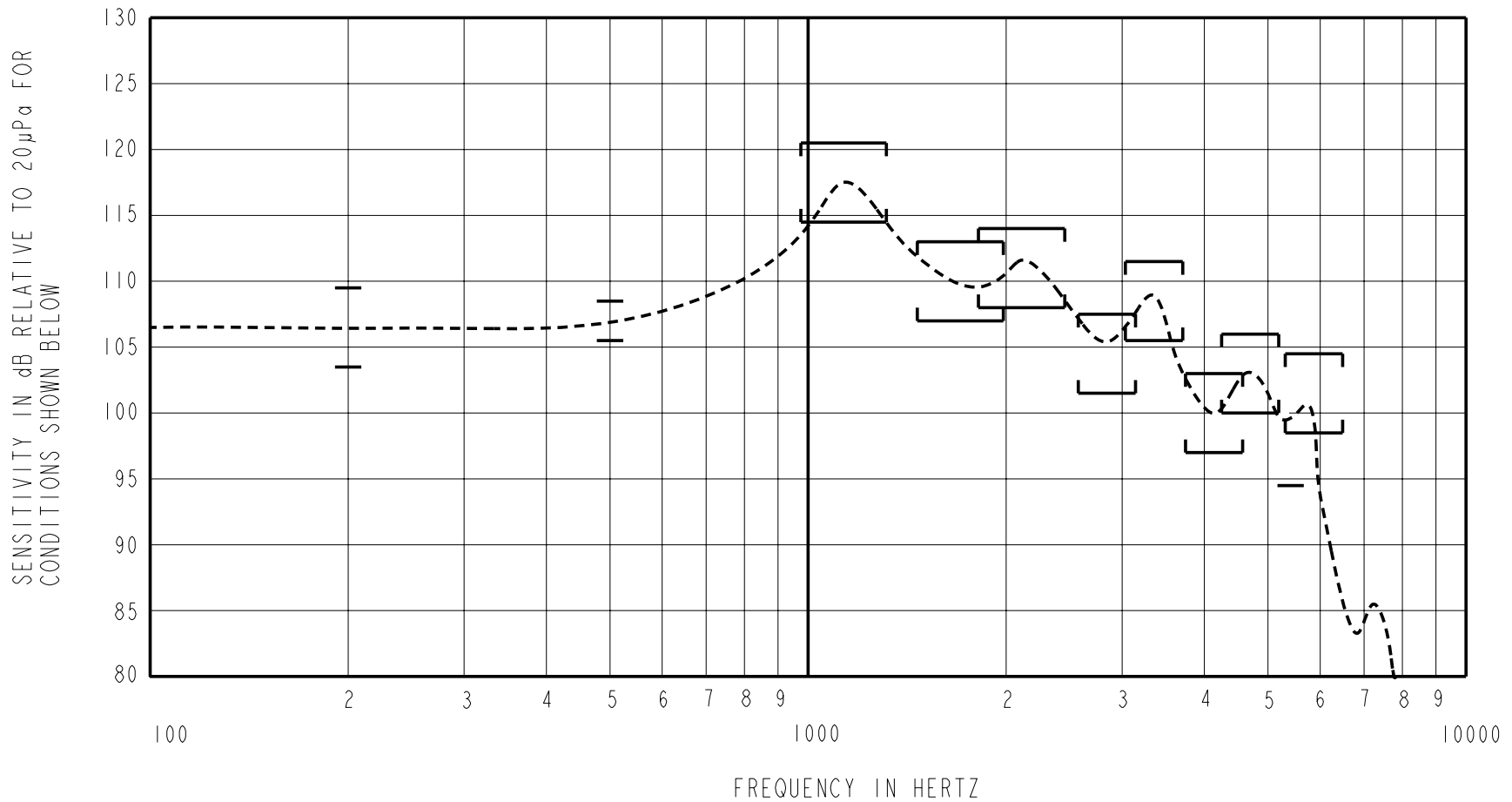
THE FTEC-30114-104 IS A FERROFLUID DAMPED RECEIVER. THE AMPLITUDE OF PEAK #2 OF THE RESPONSE CURVE IS +4 dB RELATIVE TO THE SENSITIVITY AT 500 Hz UNDER CONSTANT VOLTAGE DRIVE CONDITIONS. THIS UNIT IS A BALANCED ARMATURE RECEIVER INTENDED FOR USE IN BTE HEARING AIDS, AND IS 1/2 THE SIZE OF AN EF RECEIVER.

FERROFLUID DAMPED

FTEC-30114-104

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 500 Hz IS dB RELATIVE TO 20µPa. ALL OTHER VALUES IN dB RELATIVE TO THE SENSITIVITY AT 500 Hz.

FREQUENCY (Hz)	MINIMUM	NOMINAL	MAXIMUM
200	-3.5	-0.5	+2.5
500	-1.5	107.0	+1.5
975-1315	+7.5	+10.5	+13.5
1465-1980	0	+3.0	+6.0
1815-2455	+1.0	+4.0	+7.0
2575-3145	-5.5	-2.5	+0.5
3035-3710	-1.5	1.5	+4.5
3745-4575	-10.0	-7.0	-4.0
4250-5190	-7	-4	-1
5412	-12.5	---	---
5310-6490	-8.5	-5.5	-2.5

TABLE 1

**ELECTRICAL**

DC RESISTANCE	22 OHMS ± 10%
IMPEDANCE @ 500 Hz	30 OHMS ± 15%
INDUCTANCE @ 500 Hz	7.2 mH ± 15%
CAPACITANCE @ 10 MHz	9.0 pF ± 20%

TABLE 4

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

**RED CONTROLLED**

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

FREQUENCY (Hz)	AC DRIVE (V rms)	DC BIAS (mA)	LIMIT (%)
382	0.109	0	5
573	0.109	0	5
573	0.218	0	10

TABLE 2

**MECHANICAL**

PORT LOCATION: IIS

SOLDER TYPE: SAC305

**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 2 dB LOWER THAN THE SENSITIVITY AT ROOM TEMPERATURE. DELTA PEAK IS 1 dB HIGHER AT BODY TEMPERATURE (37°C) STORAGE RANGE FROM -40°C TO 63°C

**TEST CONDITIONS**

NOMINAL SOURCE VOLTAGE	0.109 V rms, TO DELIVER 0.35 mVA AT 500 Hz
SOURCE IMPEDANCE	<1 Ohm
TUBING	8mm X 1mm ID + 28mm X 1.5mm ID EAR HOOK SIMULATOR + 25mm X 2mm ID TUBE + 18mm X 3mm ID TUBE
COUPLER CAVITY	2 cm <sup>3</sup> , SIMULATED ANSI S3.7 TYPE HA-3 (IEC 126)

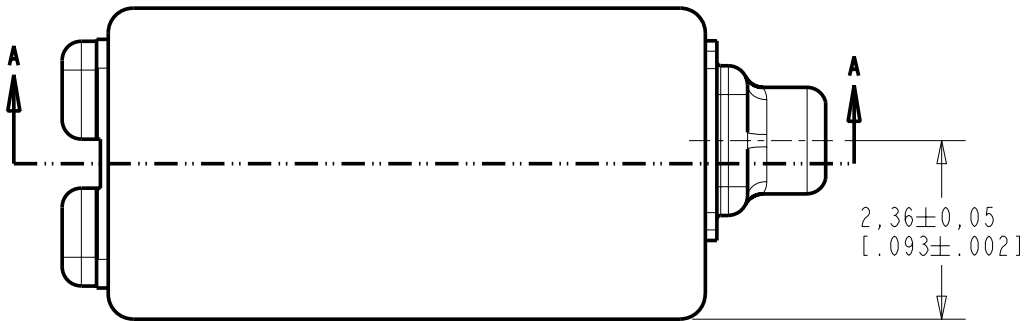
TABLE 3

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
B	C10107383	4-2-08	Active	B
A	C10105843	5-29-07		
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 FTEC-30114-104 PERFORMANCE SPECIFICATION SHT 2.1			MMM	5-29-07
			CK. BY	DATE
			GJP	5-30-07
			APP. BY	DATE
			GJP	5-30-07


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FTEC-30114-104




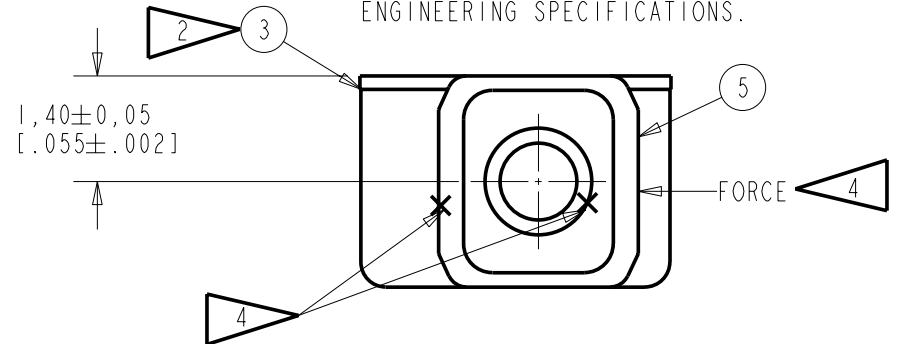
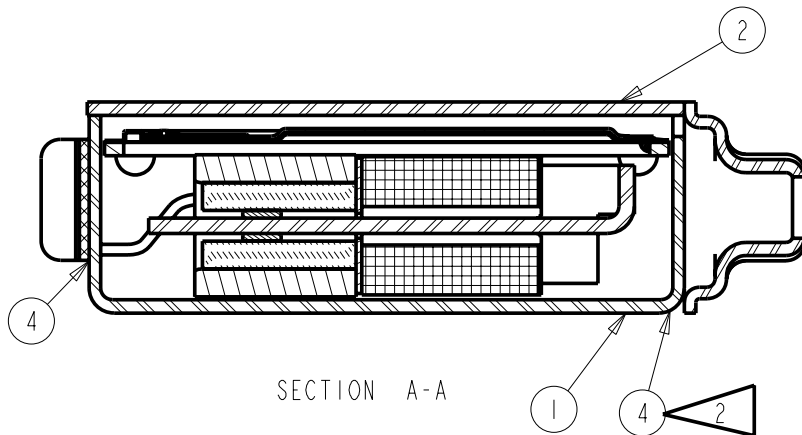
NOTES:

1. ITEM NUMBERS (SHOWN THUS ) ON DRAWING CORRESPOND WITH ITEM NUMBERS ON BILL OF MATERIAL.

 AIRTIGHT SEAL ALL AROUND.

3. COVER WELD REQUIREMENTS STATED ON SHEET 3.2.

 WELD ITEM (5) TO ITEM (1) AT LOCATIONS SHOWN. MINIMUM TUBE WELD STRENGTH IN DIRECTION SHOWN MUST MEET PRODUCT ENGINEERING SPECIFICATIONS.



SECTION A-A

DIMENSIONS IN MILLIMETERS [INCHES]

RELEASE LEVEL	REVISION
Active	B

MATERIAL SEE BILL OF MATERIAL

FINISH ---

SCALE: 10:1

DO NOT SCALE DRAWING

**RED CONTROLLED**

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DR. BY DATE  
MMM 5-29-07

CH. BY DATE  
GJP 5-30-07

APP. BY DATE  
GJP 5-30-07

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

THIRD ANGLE PROJECTION



TITLE

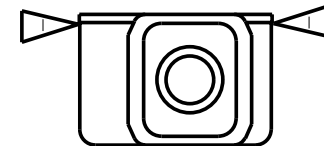
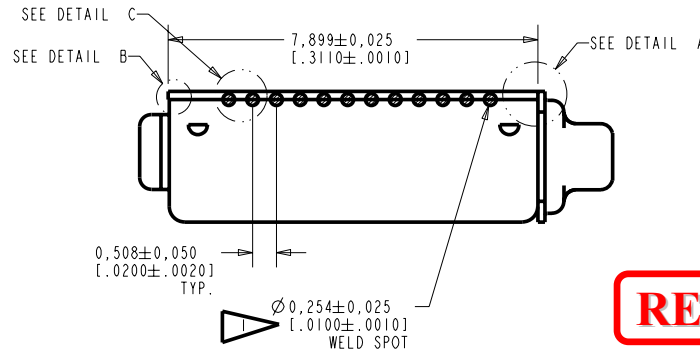
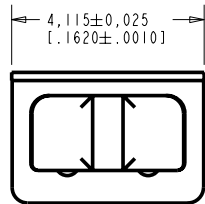
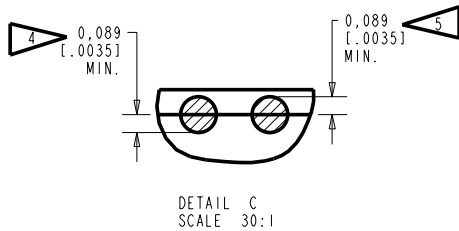
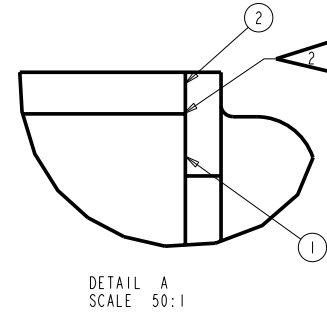
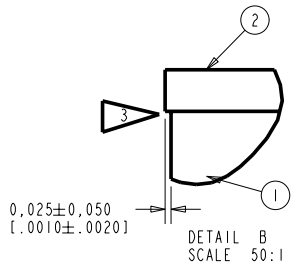
**RECEIVER  
ASSEMBLY**

**FTEC-30114-104**

SHEET 3.1

FTEC-30114-104

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**RED CONTROLLED**

NOTES:

- 1 DRAWING DEPICTS COVER WELD. WELD ITEM (2) TO ITEM (1) 12 WELDS PER SIDE, WELD PENETRATION DEPTH 0.064 ± 0.025 [.0025 ± .0010] MEASURED AT CUP-TO-COVER SEAM. RE-WELD REWORK NOT PERMITTED. 0.008 [.0003] MAX. SEAM GAP PERMITTED ALL AROUND BEFORE SEALING.
- 2 ITEM (2) MUST NOT EXTEND BEYOND ITEM (1) ON SURFACE WITH ACOUSTIC OUTLET SLOT.
- 3 ITEM (2) PERMITTED TO EXTEND BEYOND ITEM (1) AS DIMENSIONED ON SURFACE WITH TERMINAL PAD.
- 4 MINIMUM WELD SPOT OVERLAP ON CUP.
- 5 MINIMUM WELD SPOT OVERLAP ON COVER.

DIMENSIONS IN MILLIMETERS [INCHES]

RELEASE LEVEL	REVISION
Active	B
SCALE: 10:1	DO NOT SCALE DRAWING
DR. BY DATE MM 5-29-07 CH. BY DATE GJP 5-30-07 APP. BY DATE GJP 5-30-07	
TITLE <b>RECEIVER ASSEMBLY</b>	
SHEET <b>3.1</b>	

MATERIAL		SEE BILL OF MATERIAL	FINISH	---
REF.	NOTE		UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES	
A	l.c.o. C10105843		THIRD ANGLE PROJECTION	
B	l.c.o. C10107383			
EDITED SHEET 2.1				
SJ 4-2-08				

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<b>FTEC-30114-104</b>		<b>KNOWLES ELECTRONICS</b>		<b>FTEC-30114-104</b>	
Sheet <b>4.1</b>		ITASCA, ILLINOIS U.S.A.		Sheet <b>4.1</b>	
Dr.	By MMM	Date 5-29-07	Subject: <b>RECEIVER ASSEMBLY</b>	Revision	
Ch.	GJP	5-30-07		<b>B</b>	
App.	GJP	5-30-07			
COL. 1			2	3	4
Part or Dwg. no.			Tot. Req.	Nomenclature:	Applicable Specs or Remarks
FTEC-102-400			1	MOTOR, CUP, FERROFLUID & DIAPHRAGM ASSEMBLY	1
TEC-015			1	FLAT COVER	2
13-092-130101			A/R	CEMENT	3
13-092-130203			A/R	CEMENT	4
TEC-018			1	TUBE ASSEMBLY	5

**RED CONTROLLED**

REVISION	A	c.o. C10105843
	B	c.o. C10107383
EDITED SHEET 2.1 SJ 4-2-08		

**FTEC-30114-104**  
Sheet **4.1**

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FTEC-30114-104-104-REV-D