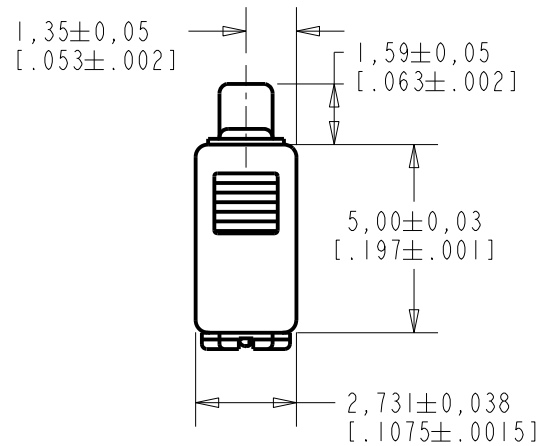


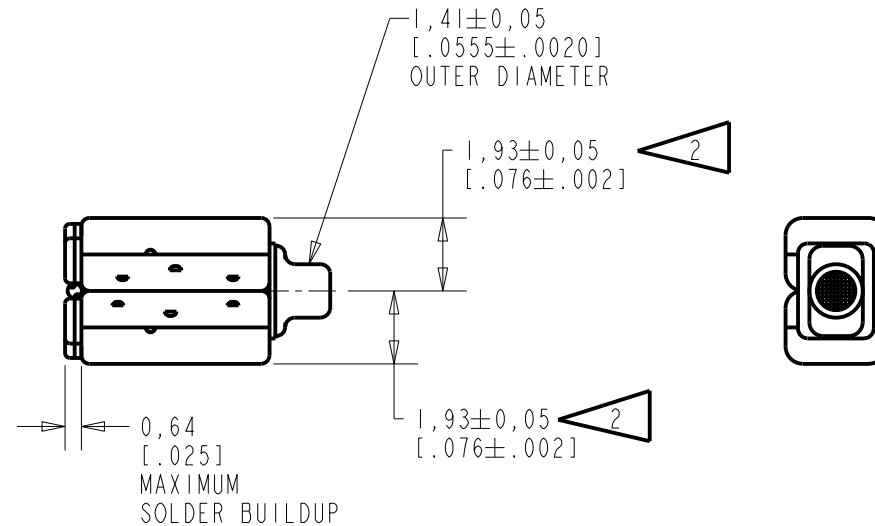
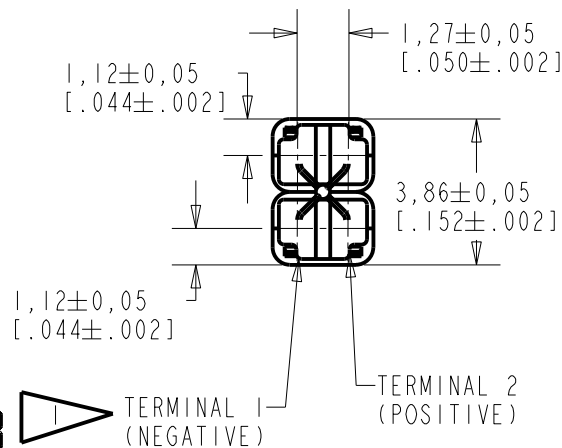
**SWFK-32254-000**  
SHT 1.1



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.

**RED CONTROLLED**



SCALE 2:1  
NOMINAL WEIGHT 0.19 GRAMS  
DIMENSIONS IN MILLIMETERS [INCHES]

| Revision | C.O. #    | Implementation Date | RELEASE LEVEL | REVISION |
|----------|-----------|---------------------|---------------|----------|
| A        | PI0000067 | 7-14-15             | Active        | A        |

|                      |          |                |         |         |
|----------------------|----------|----------------|---------|---------|
| SCALE:               | 5:1      |                | DR. BY  | DATE    |
| DO NOT SCALE DRAWING |          |                | LW      | 7-14-15 |
| TITLE:               | RECEIVER | SWFK-32254-000 | CK. BY  | DATE    |
| OUTLINE DRAWING      |          | SHT 1.1        | GJP     | 7-16-15 |
|                      |          |                | APP. BY | DATE    |
|                      |          |                | GJP     | 7-16-15 |

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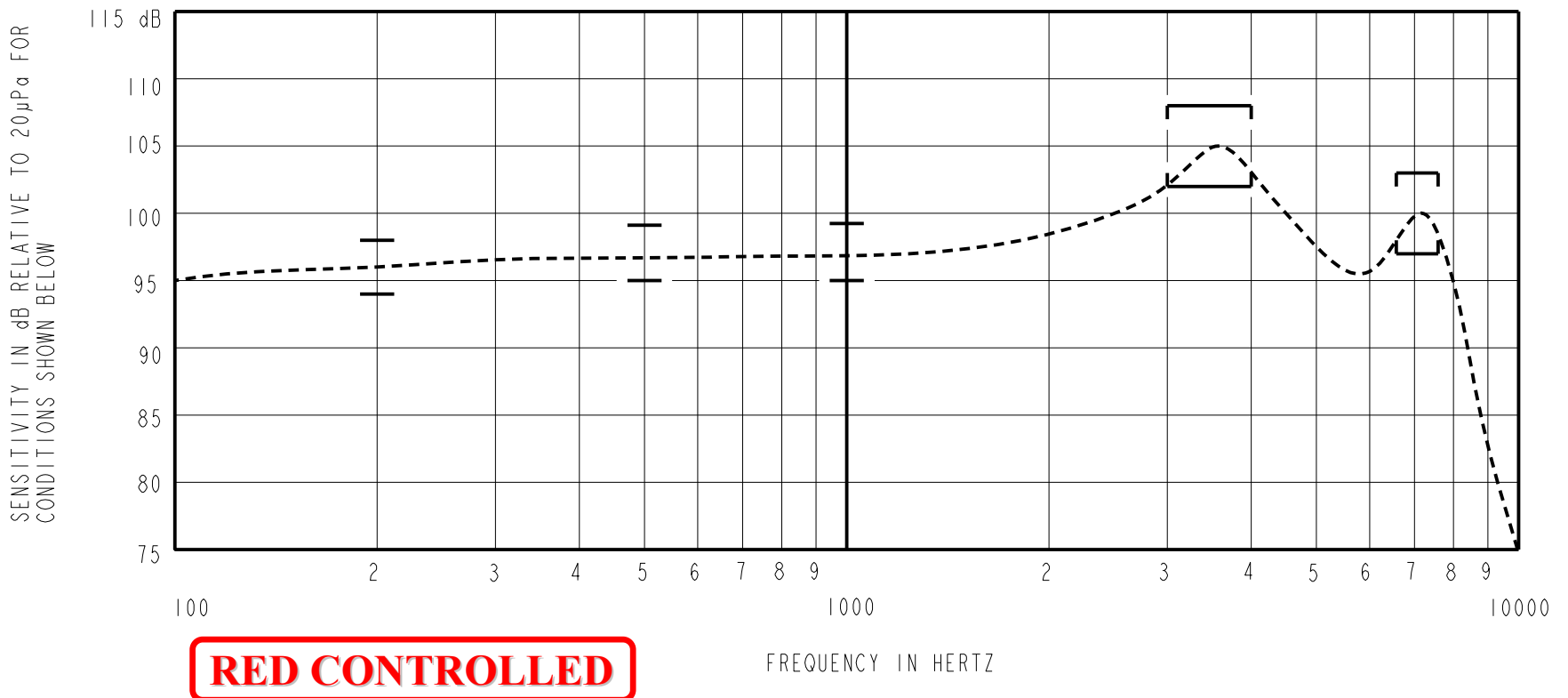
A PAIR OF MAGNETIC BALANCED ARMATURE RECEIVERS WITH TAPERED REED INTENDED FOR USE AS THE HIGH FREQUENCY DRIVER IN A HI-FI SYSTEM.

TYPE 1

SWFK-32254-000

SHEET 2.1

NOTE: SPECIFICATIONS FOLLOWED BY AN ASTERISK (\*) ARE 100% TESTED.  
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            | -3.0    | -1.0    | +1.0    |
| 500            | -2.0    | 0.0     | +2.0    |
| 1000           | -2.0    | 97.0    | +2.0    |
| 3000-4000 PEAK | +5.0    | +8.0    | +11.0   |
| 6600-7600 PEAK | 0.0     | +3.0    | +6.0    |

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 (%) |
|----------------|------------------|-------------|-----------|
| 1166           | .094             | 0           | 5         |
| 1750           | .094             | 0           | 5         |
| 1750           | .265             | 0           | 10        |

TABLE 2

TEST CONDITIONS

|                        |   |
|------------------------|---|
| NOMINAL SOURCE VOLTAGE | 0.94 V rms, 0 mA DC BIAS  |
| SOURCE IMPEDANCE       | <0.2 Ohm  |
| TUBING                 | 10 mm [.394"] LONG, 1mm [.039"] I.D.                            |
| COUPLER CAVITY         | 2 CM <sup>3</sup> , SIMULATED ANSI S3.7 TYPE HA-3 (IEC 60318-5) |

TABLE 3

ELECTRICAL

|                    |                |                                    |
|--------------------|----------------|------------------------------------|
| DC RESISTANCE      | 6.3 Ohms ± 10% |                                    |
| IMPEDANCE @ 500 Hz | 6.8 Ohms ± 20% | MEASURED WITH 5.8 mArms, 0dc DRIVE |
| IMPEDANCE @ 1kHz   | 7.2 Ohms ± 20% | MEASURED WITH 5.8 mArms, 0dc DRIVE |

TABLE 4

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 FROM -17°C TO 63°C.  
STORAGE: -40°C TO 63°C.

| Revision | C.O. #    | Implementation Date | RELEASE LEVEL | REVISION |
|----------|-----------|---------------------|---------------|----------|
| A        | PI0000067 | 7-14-15             | Active        | A        |

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TITLE: **RECEIVER**  
PERFORMANCE SPECIFICATION




**SWFK-32254-000**  
SHT 2.1

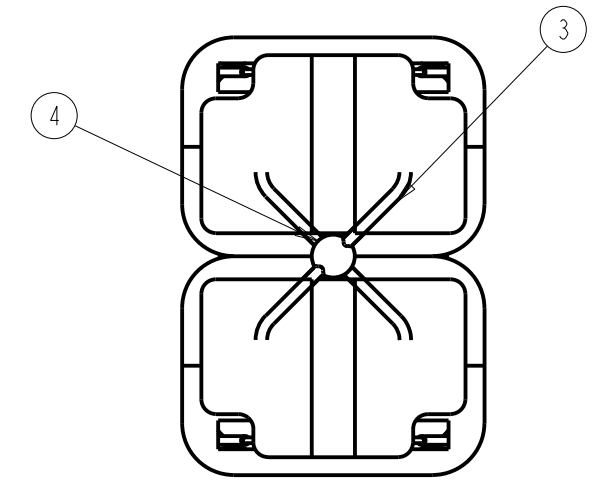
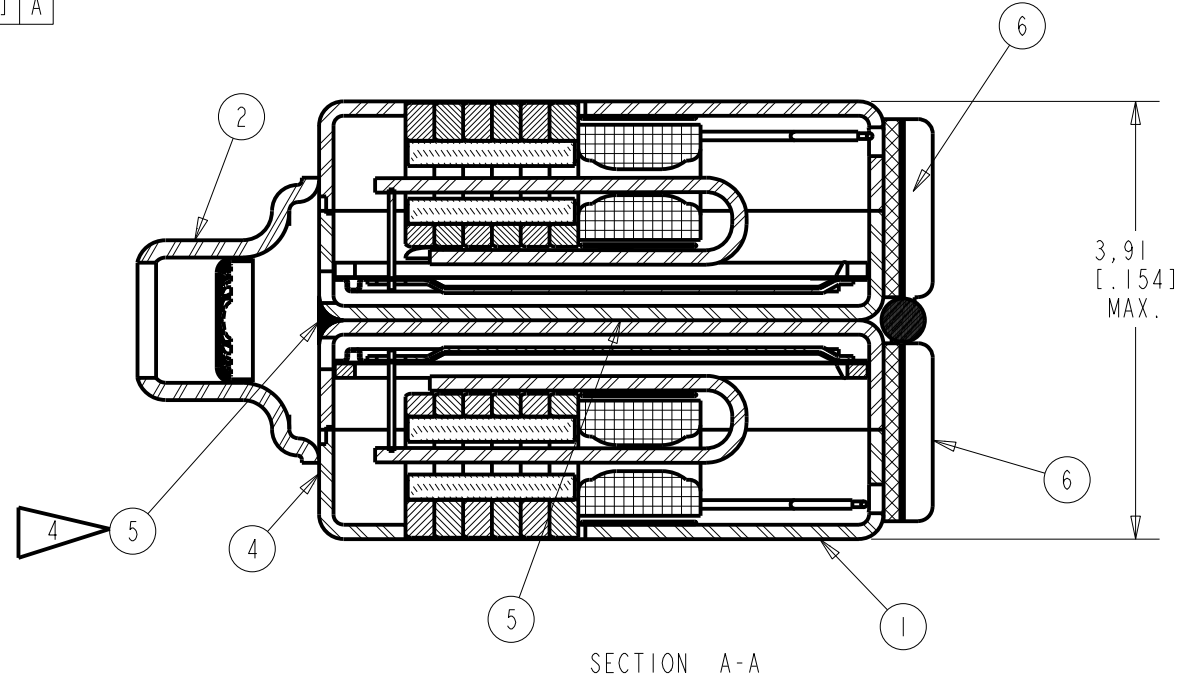
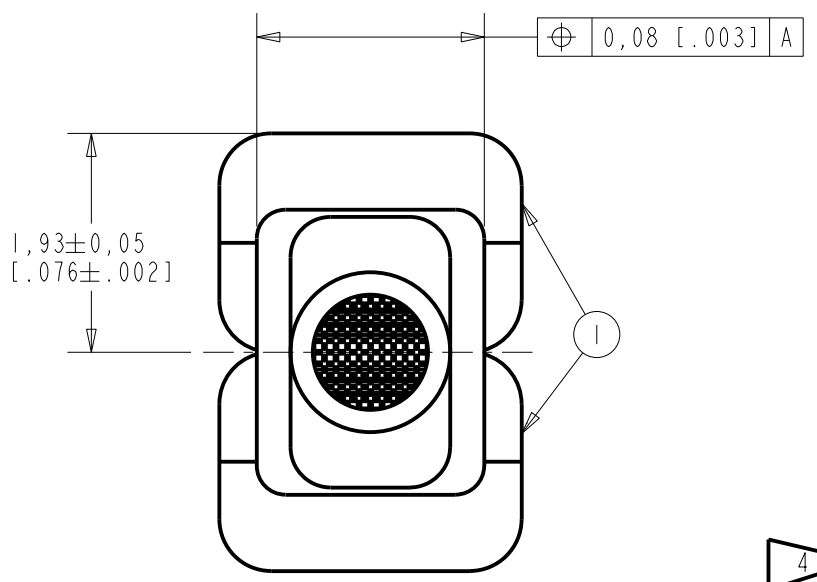
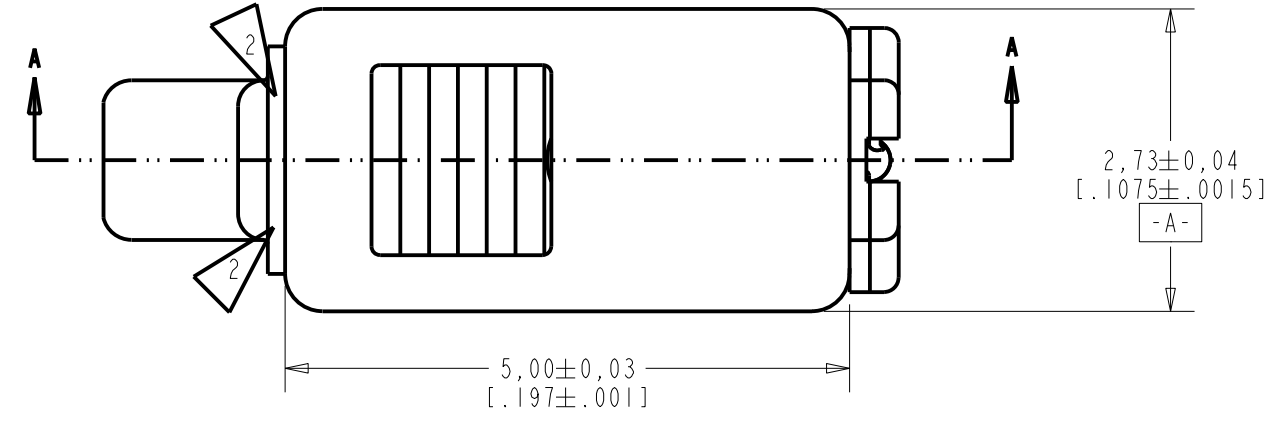
|         |         |
|---------|---------|
| DR. BY  | DATE    |
| LW      | 7-14-15 |
| CK. BY  | DATE    |
| GJP     | 7-16-15 |
| APP. BY | DATE    |
| GJP     | 7-16-15 |

SWFK-32254-000

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- NOTES:
- ITEM NUMBERS (SHOWN THUS ) CORRESPOND TO ITEM NUMBER ON BILL OF MATERIAL.
  -  AIRTIGHT SEAL ALL AROUND.
  - THIS ASSEMBLY IS GLUED TOGETHER AND THE TUBE IS WELDED TO THE CUPS.
  -  SEAL JOINT ACROSS FRONT OF RECEIVER.



DIMENSIONS IN MILLIMETERS [INCHES]

|                               |                  |  |  |                                    |
|-------------------------------|------------------|--|--|------------------------------------|
| MATERIAL SEE BILL OF MATERIAL |                  | FINISH ---   | RELEASE LEVEL<br><b>Active</b>                               | REVISION<br><b>A</b>               |
| REF. NONE                     | A C.O. P10000067 | UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES | SCALE: 15:1  | DO NOT SCALE DRAWING               |
|                               |                  |  | <b>KNOWLES ELECTRONICS</b><br><b>ITASCA, ILLINOIS U.S.A.</b> |                                    |
|                               |                  | THIRD ANGLE PROJECTION                               | TITLE<br><b>RECEIVER ASSEMBLY</b>                            | DR. BY DATE<br><b>LW 7-14-15</b>   |
|                               |                  |  |  | CH. BY DATE<br><b>GJP 7-16-15</b>  |
|                               |                  |  |  | APP. BY DATE<br><b>GJP 7-16-15</b> |
|                               |                  |  |  | <b>SWFK-32254-000</b>              |
|                               |                  |  |  | SHEET <b>3.1</b>                   |

|                       |     |         |                                |                          |                       |               |
|-----------------------|-----|---------|--------------------------------|--------------------------|-----------------------|---------------|
| <b>SWFK-32254-000</b> |     |         | <b>KNOWLES ELECTRONICS</b>     |                          | <b>SWFK-32254-000</b> |               |
| Sheet <b>4.1</b>      |     |         | <b>ITASCA, ILLINOIS U.S.A.</b> |                          | Sheet <b>4.1</b>      |               |
| Dr.                   | By  | Date    | Subject:                       | <b>RECEIVER ASSEMBLY</b> | <b>A</b>              | <b>Active</b> |
| Ch.                   | GJP | 7-14-15 |                                |                          |                       |               |
| App.                  | GJP | 7-16-15 |                                |                          |                       |               |

| COL. 1           | 2         | 3                  | 4                           | Item No. | Line No. |
|------------------|-----------|--------------------|-----------------------------|----------|----------|
| Part or Dwg. no. | Tot. Req. | Nomenclature:      | Applicable Specs or Remarks |          |          |
| WBFK-31142-000   | 2         | RECEIVER ASSEMBLY  |                             | 1        | 1        |
| FH-172-022       | 1         | TUBE ASSEMBLY      |                             | 2        | 2        |
| 103-012          | A/R       | WIRE               |                             | 3        | 3        |
| 13-825-3145      | A/R       | CEMENT             |                             | 4        | 4        |
| 13-637           | 1         | LOCTITE 496 CEMENT |                             | 5        | 5        |
| 285-007-221      | 1         | SOLDER LEAD FREE   |                             | 6        | 6        |

**RED CONTROLLED**

|          |  |           |   |
|----------|--|-----------|---|
| REVISION | A  | P10000067 | <b>SWFK-32254-000</b><br>Sheet <b>4.1</b> |
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|          | <small>REV: D</small>  |           |   |

PRODUCTION TEST INFORMATION

|                             |                   |
|-----------------------------|-------------------|
| SOFTWARE REVISION PXI FCAAT | SOFTWARE 2.5 MIN. |
| HARDWARE REVISION PXI FCAAT | 1065E.008 MIN     |
| TEST BOARD                  | T4530             |
| TEST COUPLER                | T8049             |

PHASE TEST

| FREQUENCY<br>(Hz) | AC DRIVE<br>(mArms) | DEGREE LIMIT |     |
|-------------------|---------------------|--------------|-----|
|                   |                     | MIN          | MAX |
| 500               | 5.8                 | 140          | 220 |

**RED CONTROLLED**

| Revision | C.O. #    | Implementation Date | RELEASE LEVEL | REVISION |
|----------|-----------|---------------------|---------------|----------|
|          |           |                     | <b>Active</b> | <b>A</b> |
| A        | PI0000067 | 7-14-15             |               |          |
|          |           |                     |               |          |

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TITLE: **RECEIVER**  
PERFORMANCE SPECIFICATION

**SWFK-32254-000**  
**SHT 5.1**