

| | | | |
|----------|-----------|----------------------|-----------------------------------|
| DATE | 17.7.08 | SPECIFICATION | BOSAN HI-TECH CO., LTD. |
| MODEL NO | BST-0835A | | BEST QUALITY, SPECIALIZED SERVICE |
| PAGE | 1/9 | | HI-TECH PRODUCTS |



BOSAN HITECH CO., LTD

254-13, Dodang-dong, Wonmi-gu, Bucheon-city, Kyungki-do, Korea

Tel) 82-32-683-0207, 82-32-678-0318

Fax) 82-32-682-0207

E-mail : master@bosanhitech.com

Specification Sheet

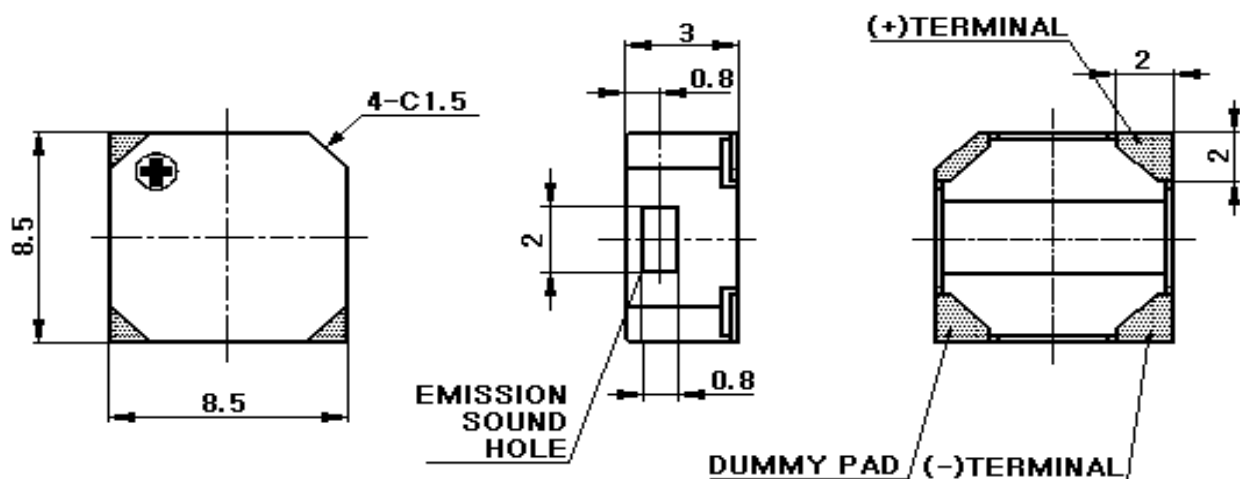
(MODEL : BST-0835A)

<Non Washable Type>

BOSAN HITECH CO., LTD.

| | | | |
|----------|-----------|----------------------|-----------------------------------|
| DATE | 17.7.08 | SPECIFICATION | BOSAN HI-TECH CO., LTD. |
| MODEL NO | BST-0835A | | BEST QUALITY, SPECIALIZED SERVICE |
| PAGE | 2/9 | | HI-TECH PRODUCTS |

1. DIMENSION



UNIT : mm
TOLERANCE : ± 0.3
HOUSING MATERIAL : LCP

| | | | | | | |
|----------------------------|----|------|--------|-------|------------------|------|
| C H A N G E | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | NO | DATE | BEFORE | AFTER | REASON OF CHANGE | SIGN |


| | | | |
|----------|-----------|----------------------|-----------------------------------|
| DATE | 17.7.08 | SPECIFICATION | BOSAN HI-TECH CO., LTD. |
| MODEL NO | BST-0835A | | BEST QUALITY, SPECIALIZED SERVICE |
| PAGE | 3/8 | | HI-TECH PRODUCTS |

2. SCOPE

THIS SPECIFICATION IS APPLIED TO THE DYNAMIC MAGNET TRANSDUCER ASSEMBLY WHICH IS USED AS ALERT IN A CELLULAR PORTABLE PRODUCTS.

3. ELECTRICAL SPECIFICATIONS

ALL DATA AT 25 °C, HUMIDITY 40% ~ 80% UNLESS OTHERWISE SPECIFIED.

| ITEMS | SPECIFICATIONS | CONDITIONS |
|-------------------------------|-----------------|---|
| RATED VOLTAGE | 5.0 Vo-p |  |
| OPERATING VOLTAGE | 3.0V ~ 7.0Vo-p | |
| RATED CURRENT | MAX 80 mA | |
| COIL RESISTANCE | 30ohm +/-5 | |
| SOUND PRESSURE LEVEL (AT10cm) | MIN. 90dBA | * f=2,400Hz, Vo-p=5.0Vdc *1/2 DUTY SQUARE WAVE |
| RATED FREQUENCY | 2,700Hz | |
| OPERATING TEMP. | -30 °C ~ +75 °C | |
| STORAGE TEMP. | -40 °C ~ +85 °C | |

| | | | | | | |
|----------------------------|----|------|--------|-------|------------------|------|
| C H A N G E | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | NO | DATE | BEFORE | AFTER | REASON OF CHANGE | SIGN |

| | | | |
|----------|-----------|----------------------|-----------------------------------|
| DATE | 17.7.08 | SPECIFICATION | BOSAN HI-TECH CO., LTD. |
| MODEL NO | BST-0835A | | BEST QUALITY, SPECIALIZED SERVICE |
| PAGE | 4/9 | | HI-TECH PRODUCTS |

4. RELIABILITY

TEMPERATURE CHARACTERISTICS

- #. All data taken at -30°C and +85°C will be referenced to initial data taken at +25°C.
- #. Component must be fully stabilized at temperature extremes before data taken, which may require up to a 4 hour soak.

STATIC HUMIDITY

- #. Precondition at 25°C for 60 minutes. After 72 hours at 40°C with 90% to 95% relative humidity, allow to dry at room ambient for 4 hours.

VIBRATION (RANDOM)

- #. To vibrate randomly at 6 g's or 0.04 g /Hz power spectral density from 10 to 2000 Hz for 15 minutes per plane or
- #. Sinusoidal vibration 10 to 60 Hz, 0.06" double amplitude or 15 g's whichever is less for 1/2 hour per plane X,Y,Z.

OPERATING LIFE

- #. To subject samples to 85°C at 85% RH for 168Hr at full rated power.

COMPONENT SHEAR TEST

- #. To subject sample on PC Board to a tensile pull strength of 1Kg force for 30 seconds.

DROP TEST

- #. While assembled in a dummy case, 5 free falls onto a concrete floor from a height of 150cm.

| | | | | | | |
|----------------------------|----|------|--------|-------|------------------|------|
| C H A N G E | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | NO | DATE | BEFORE | AFTER | REASON OF CHANGE | SIGN |

| | | | |
|----------|-----------|-------------------------------|-----------------------------------|
| DATE | 17.7.08 | SPECIFICATION FOR APPROVAL | BOSAN HI-TECH CO., LTD. |
| MODEL NO | BST-0835A | | BEST QUALITY, SPECIALIZED SERVICE |
| PAGE | 5/9 | | HI-TECH PRODUCTS |

5. Environmental Information

This product meets ROHS standard and information of every parts below can be subjected.

- ICP-AES analysis data
- MSDS data

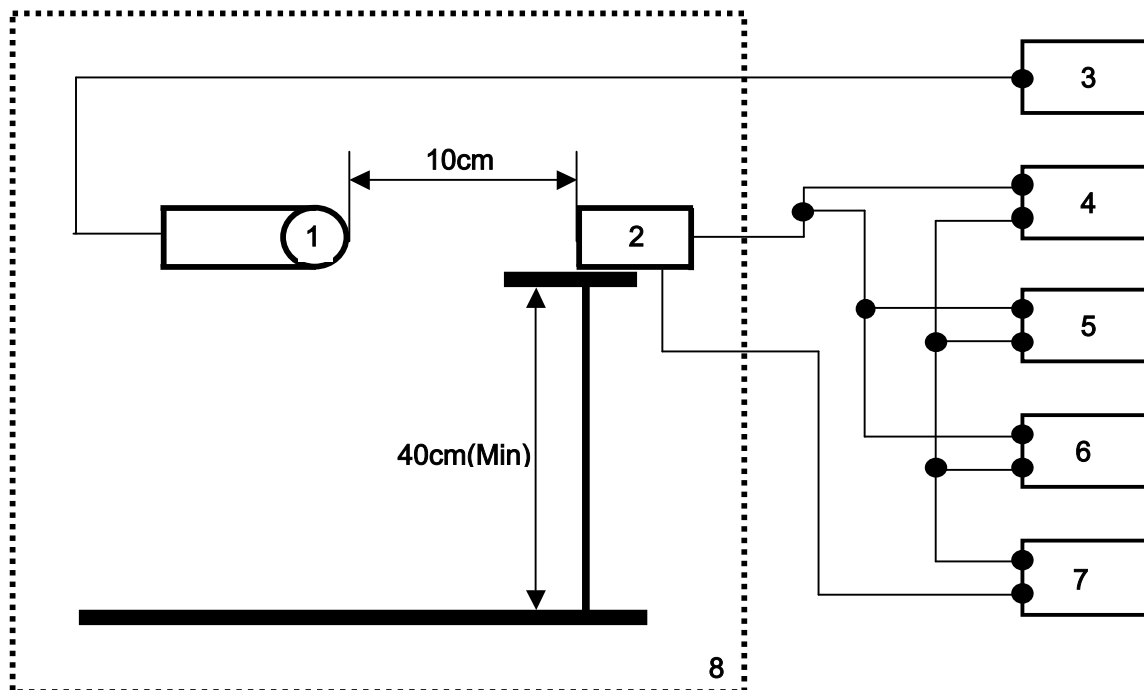
| Type | Substances / Material | ppm(amount) |
|-----------|---|--------------|
| Class I | Cadmium and compounds | 3.7 |
| | Lead and compounds | 477 |
| | Mercury and compounds | Not detected |
| | Chrom(VI) and compounds | Not detected |
| | Polybrominated biphenyls (PBBs) | Not detected |
| | Polybrominated diphenylethers(PBDEs) | Not detected |
| Class II | Polychlorinated biphenyls (PCBs) | Not detected |
| | Polychlorinated Terphenyls (PCTs) | Not detected |
| | Polychlorinated naphthalences (PCNs) | Not detected |
| | Ozone depleting substances(CFCs, HCFCs, Halons) | Not detected |
| | Asbestos and compounds | Not detected |
| | Formaldehydes | Not detected |
| | Short-chain chlorinated paraffins | Not detected |
| | (Alkane 10 ~ 13 Carbon chain) | Not detected |
| | Azo colorants | Not detected |
| | Nickel and compounds | Not detected |
| | Organic tin compounds | Not detected |
| | Arsenic and compounds | Not detected |
| Class III | Phthalates | Not detected |
| | PVC | Not detected |
| | Beryllium and compounds | Not detected |
| | Other Chlorinated flame retardants | Not detected |
| | Other Chlorinated flame retardants (TBBP-A) | Not detected |

| | | | | | | |
|----------------------------|----|------|--------|-------|------------------|------|
| C H A N G E | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | NO | DATE | BEFORE | AFTER | REASON OF CHANGE | SIGN |

| | | | |
|----------|-----------|----------------------|-----------------------------------|
| DATE | 17.7.08 | SPECIFICATION | BOSAN HI-TECH CO., LTD. |
| MODEL NO | BST-0835A | | BEST QUALITY, SPECIALIZED SERVICE |
| PAGE | 6/9 | | HI-TECH PRODUCTS |

5. ELECTRICAL CHARACTERISTICS MEASUREMENT

1) SETTING UP OF MEASURING SYSTEM

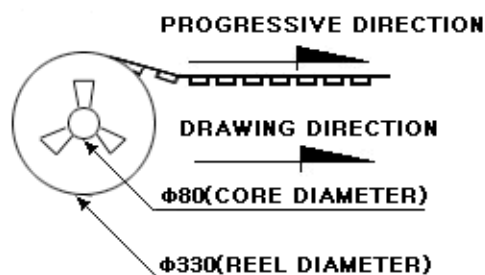
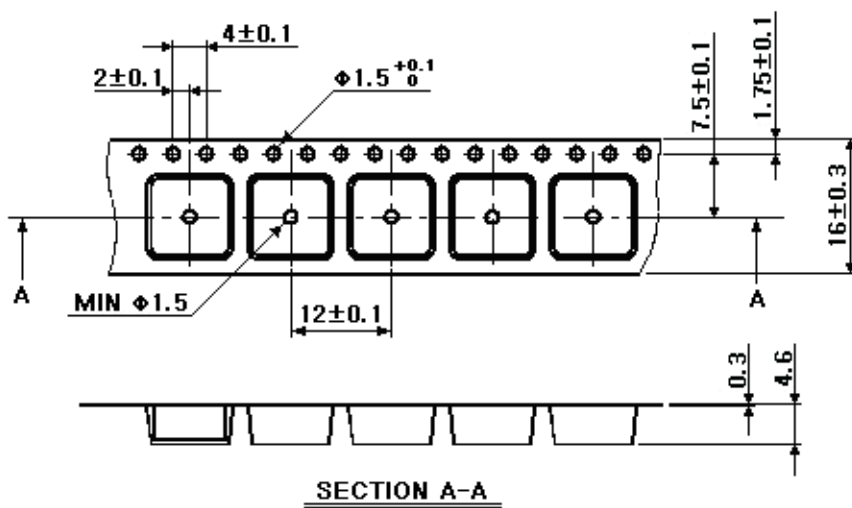


| NO | EQUIPMENT | REMARKS |
|----|---------------------------|-----------------|
| 1 | CONDENSER MIC. | |
| 2 | DEVICE UNDER TEST | MAGNETIC BUZZER |
| 3 | F.F.T, OR S.P.L INDICATOR | |
| 4 | OSCILLATOR | |
| 5 | FREQUENCY COUNTER | |
| 6 | VOLTAGE METER | |
| 7 | AMPERE METER | |
| 8 | SOUND PROOF ROOM | |

| | | | | | | |
|----------------------------|----|------|--------|-------|------------------|------|
| C H A N G E | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | NO | DATE | BEFORE | AFTER | REASON OF CHANGE | SIGN |

| | | | | | |
|----------|-----------|----------------------|-----------------------------------|--|--|
| DATE | 17.7.08 | SPECIFICATION | BOSAN HI-TECH CO., LTD. | | |
| MODEL NO | BST-0835A | | BEST QUALITY, SPECIALIZED SERVICE | | |
| PAGE | 7/9 | | HI-TECH PRODUCTS | | |

6. PACKING FORMAT



REMARK

1. Each corner without specification is max R0.25.
2. Emboss carrier tape is as per JIS C0806 standard.
3. Diameter of reel is Φ330mm and core is Φ80mm.
4. Quantity packed in a reel : 1,000pcs

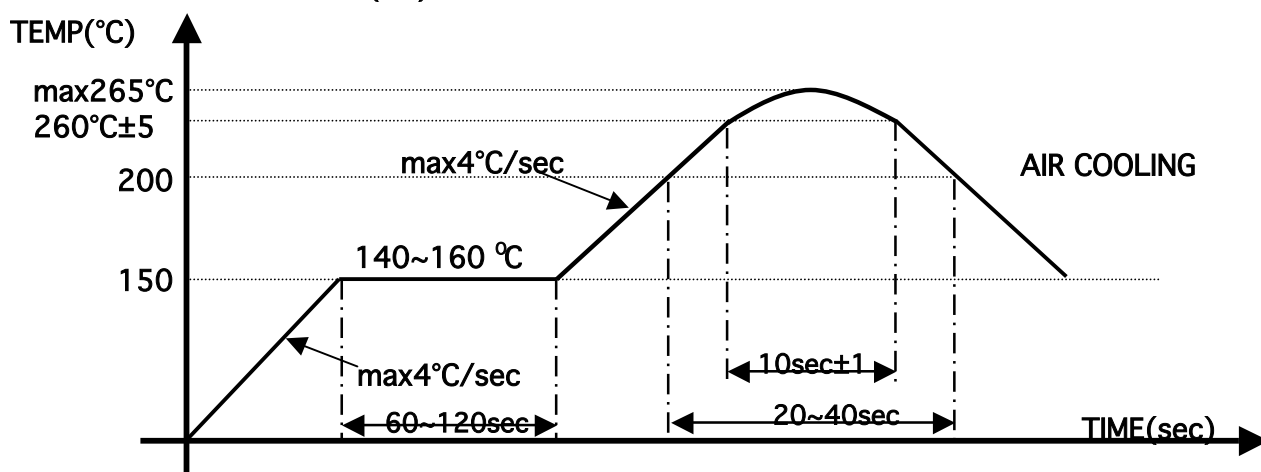
| | | | | | | |
|--------|----|------|--------|-------|------------------|------|
| CHANGE | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | NO | DATE | BEFORE | AFTER | REASON OF CHANGE | SIGN |

| | | | |
|----------|-----------|----------------------|-----------------------------------|
| DATE | 17.7.08 | SPECIFICATION | BOSAN HI-TECH CO., LTD. |
| MODEL NO | BST-0835A | | BEST QUALITY, SPECIALIZED SERVICE |
| PAGE | 8/9 | | HI-TECH PRODUCTS |

7. SOLDERING CONDITION

1) REFLOW CONDITION PROFILE

#. TEMPERATURE PROFILE(°C)



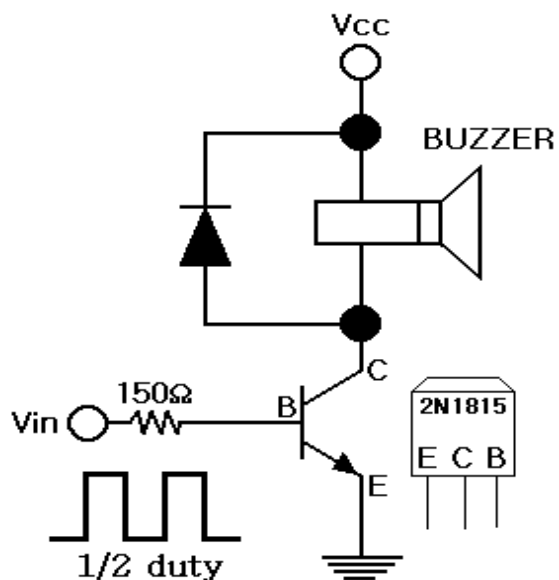
2) MANUAL SOLDERING

THE TEMPERATURE OF SOLDERING IRON : 350°C WITHIN 10 SECONDS.

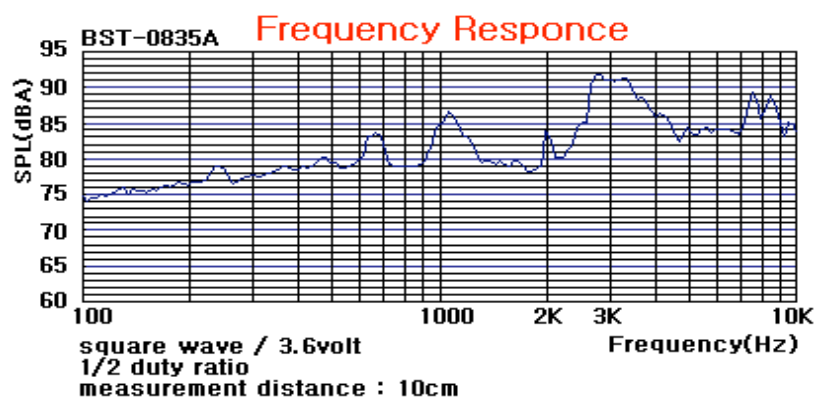
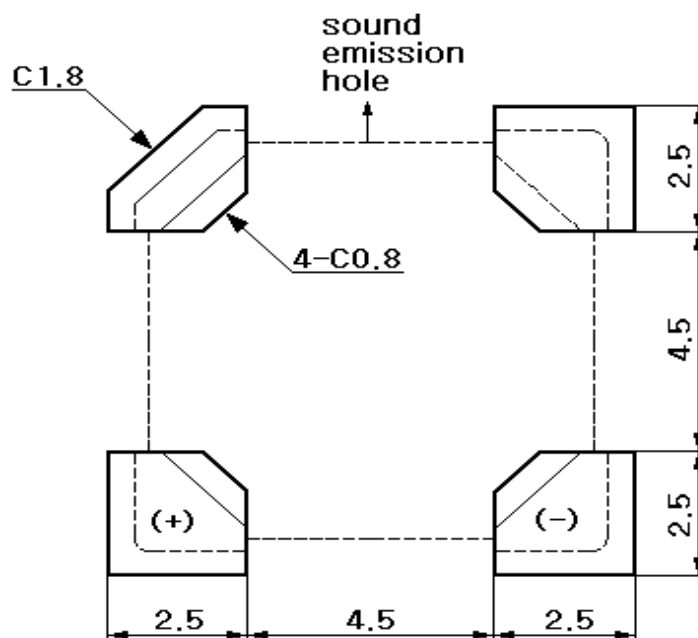
| | | | | | | |
|----------------------------|----|------|--------|-------|------------------|------|
| C H A N G E | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | NO | DATE | BEFORE | AFTER | REASON OF CHANGE | SIGN |

| | | | | |
|----------|-----------|---------------|-----------------------------------|--|
| DATE | 17.7.08 | SPECIFICATION | BOSAN HI-TECH CO., LTD. | |
| MODEL NO | BST-0835A | | BEST QUALITY, SPECIALIZED SERVICE | |
| PAGE | 9/9 | | HI-TECH PRODUCTS | |

<Standard Drive Circuit>



<Recommended foot print layout>



| | | | | | | |
|----------------------------|----|------|--------|-------|------------------|------|
| C H A N G E | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | NO | DATE | BEFORE | AFTER | REASON OF CHANGE | SIGN |