

SPECIFICATION FOR APPROVAL

Customer :

Description : Magnetic Transducer

Soberton Part No. : GT-0905A

Date : 2008-10-01

Customer Model No. :

| | |
|------------------------------------|--|
| Date of Approval | |
| Authorization Signature | |

Soberton Inc.

211 N. First Street
Minneapolis, MN. 55401

612-849-6205

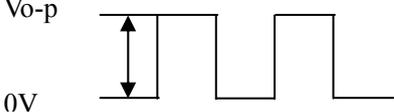
info@soberton.us

| Approved | Checked | Design |
|---------------------------|---------------------------------|------------------------------|
| Ryan 2008/10/01 | Wang Cheng 2008/10/01 | Song Qi 2008/10/01 |

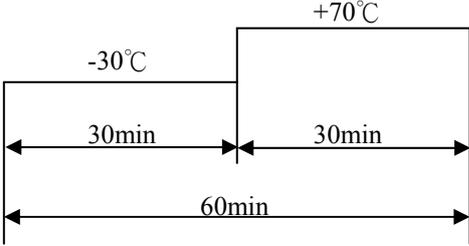
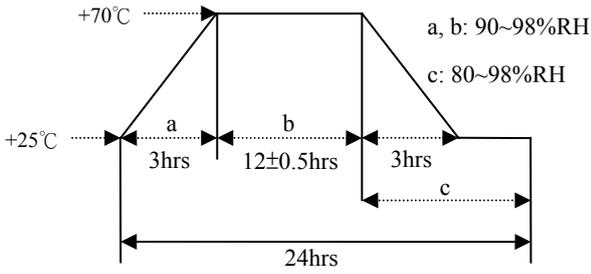
This specification applies magnetic transducer, GT-0905A

B:SPECIFICATION

■ Test condition: TEMP=+25±2 °C Related humidity=65±5% Air pressure:860-1060mbar

| NO. | Item | Unit | Specification | Condition |
|-----|-------------------------------------|-------|----------------|------------------------------------------------------------------------------------------------------|
| 1 | Rated Voltage | Vo-p | 5.0 |  |
| 2 | Operating Voltage | Vo-p | 4.0 - 6.0 | |
| 3 | Mean Current | mA | Max. 80 | Applying rated voltage & rated frequency, square wave 1/2 duty |
| 4 | Coil Resistance | Ω | 30 ± 5 | |
| 5 | Sound Output | dBA | 85 at 10cm | Distance at 10cm(A-weight free air), Applying rated voltage & rated frequency, square wave, 1/2 duty |
| 6 | Rated Frequency | Hz | 2730±200 | |
| 7 | Operating Temp | °C | -20 ~ +60 | |
| 8 | Storage Temp | °C | -30 ~ +70 | |
| 9 | Dimension | mm | Φ 9 × H 4.5 | See attached drawing. |
| 10 | Weight | gram | 0.6 | |
| 11 | Material | | PPO (Black) | |
| 12 | Terminal | | Pin type | See attached drawing |
| 13 | Environmental Protection Regulation | | RoHS Compliant | |
| 14 | Storage life | month | 3 | 3 months preservation at room temp(25±3°C), Humidity40% |

C:ENVIRONMENT TEST

| No. | Item | Test condition | Evaluation standard |
|-----|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | High temp. test | After being placed in a chamber at +70°C for 96 hours. | After the test the part shall meet specifications without any degradation in appearance and performance except SPL. after 4 hours at +25°C, The SPL shall be in ± 10 dBA compared with initial one. |
| 2 | Low temp. test | After being placed in a chamber at -30°C for 96 hours. | |
| 3 | Thermal shock | The part shall be subjected to 10 cycles. One cycle shall consist of;  | |
| 4 | Temp. / Humidity Cycle | The part shall be subjected to 10 cycle and consist of;  | |

D: RELIABILITY TEST

| No. | Item | Test condition | Evaluation standard |
|-----|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Operating life test | □ Applying rated voltage, rated frequency, square wave, 1/2 duty cycle : Ordinary temperature The part shall be subjected to 96 hours at room temperature. | After the test the part shall meet specifications without any degradation in appearance and performance except SPL. after 4 hours at +25°C, The SPL shall be in ± 10 dBA compared with initial one. |

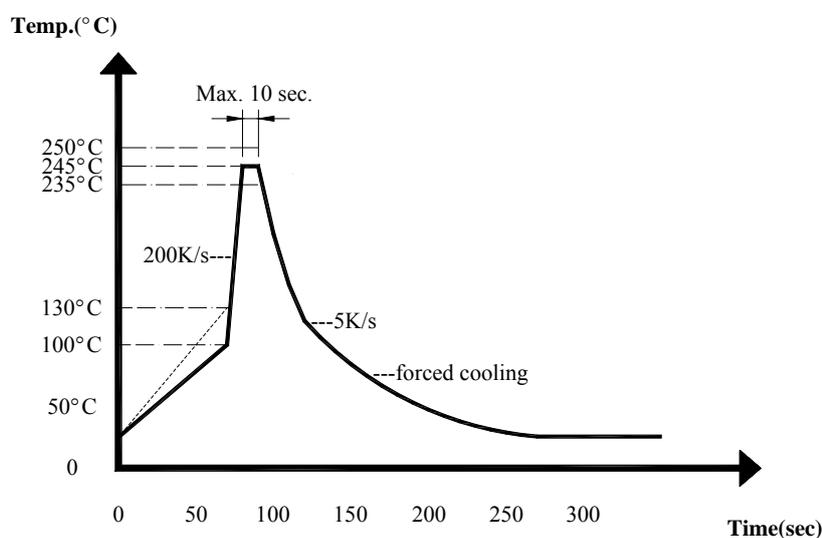
TEST CONDITION.

Standard Test Condition : a)Temperature: +5~+35°C b)Humidity:45~85% c)Pressure: 860~1060mbar

Judgment Test Condition :a)Temperature:+25±2°C b)Humidity:60~70% c)Pressure: 860~1060mbar

| No | Item | Test condition | Evaluation standard |
|----|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Solder ability | Lead terminal are immersed in rosin for 5 seconds and then immersed in Solder bath of $+260\pm 5^{\circ}\text{C}$ for 3 ± 0.5 second | 95% Min. lead terminals shall be wet with solder |
| 2 | Soldering Heat Resistance | Lead terminal are immersed in soldering bath of $+260\pm 5^{\circ}\text{C}$ for 5 ± 0.5 Second. | No interference in operation |
| 3 | Hand Soldering Heat Resistance | Lead terminal are soldering of $+350\pm 5^{\circ}\text{C}$, 2.0 ± 0.5 Second. | |
| 4 | Terminal Mechanical Strength | Apply the terminal with 9.8N(1kg) strength for 10 ± 1 sec. | No damage and cutting off |
| 5 | Vibration | The part shall be subjected to a vibration cycle of 10Hz to 55Hz in a period of 1 minute. Total peak amplitude shall be 1.52mm(9.3G). The vibration test shall consist of 2 hours per axis in each three axes(X、Y、Z). | After the test the part shall meet specifications without any damage in appearance and performance except SPL. The SPL shall be in ± 10 dBA compared with initial one. |
| 6 | Drop test | The part only shall be dropped from a height of 75cm onto a 40mm thick wooden board 1 times. | |

* Wave Soldering profile of lead-free

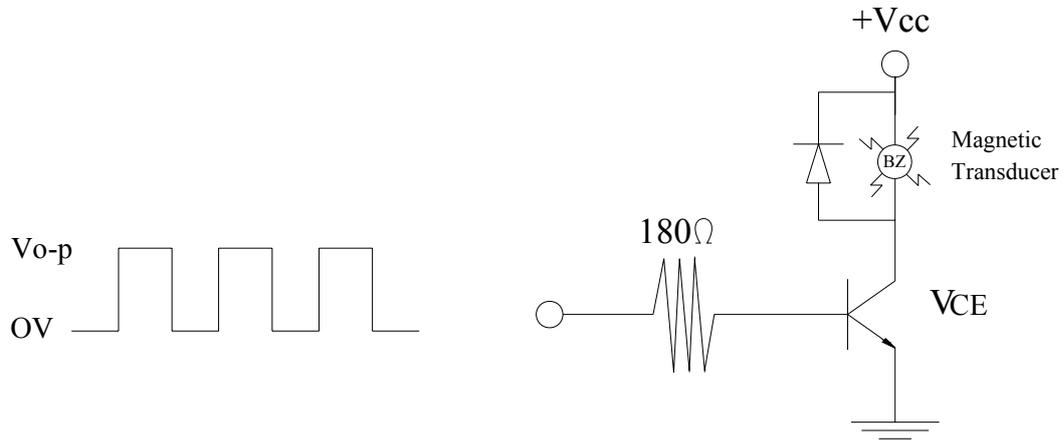


Recommendable wave soldering condition is as follows.

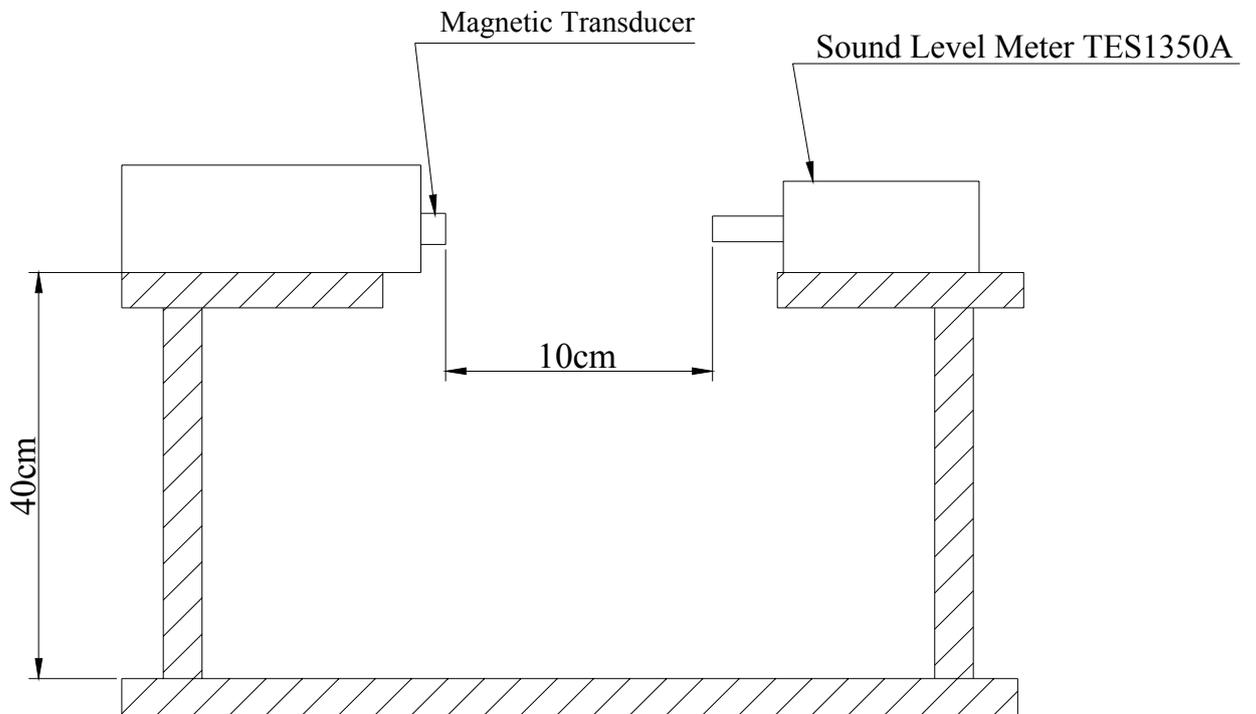
Note 1: It is requested that wave soldering should be executed after heat of product goes down to normal temperature.

Note 2: Peak wave temperature of $235^{\circ}\text{C} \sim 250^{\circ}\text{C}$ maximum of 10 sec. .

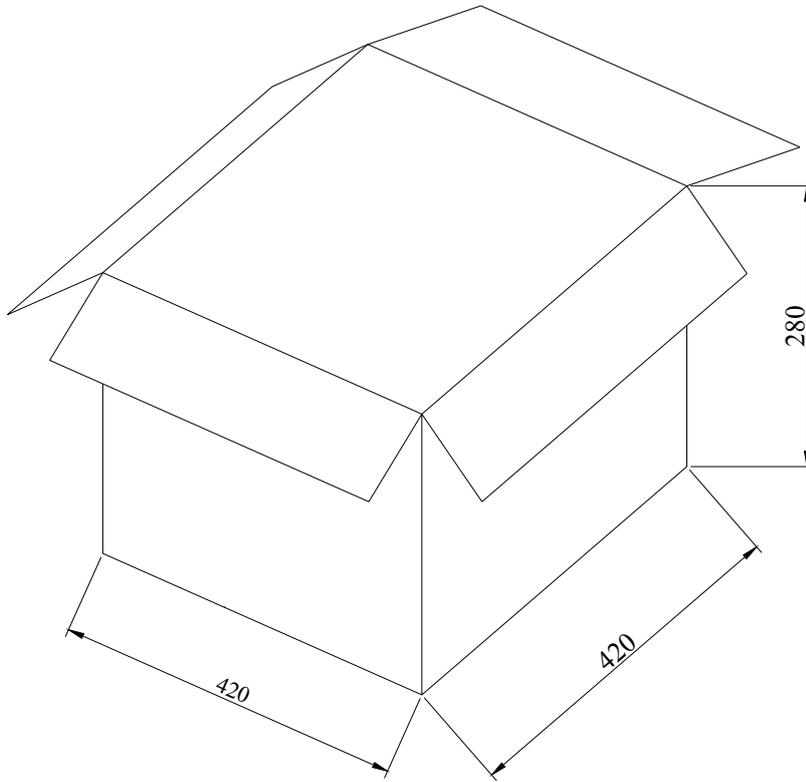
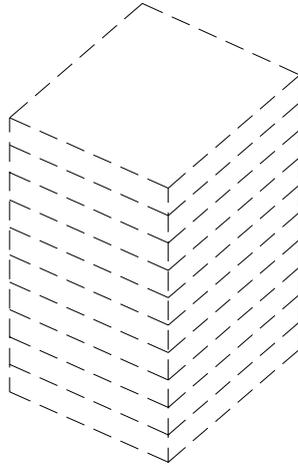
F: MEASUREMENT METHOD



G: INSPECTION FIXTURE

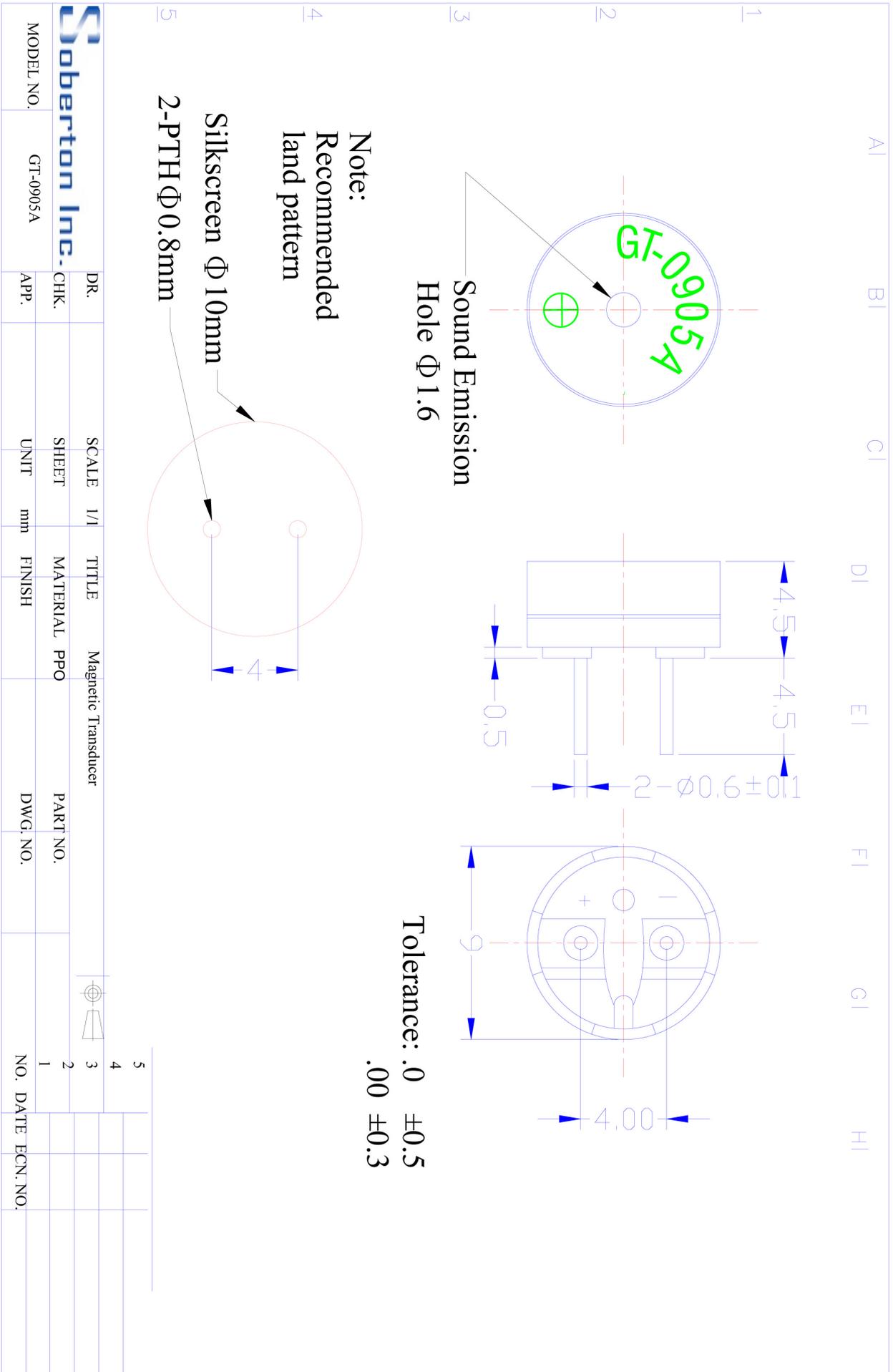


H: PACKING



| Packing | Dimension (mm) | Quantity (piece) |
|----------|-----------------|------------------|
| 1 Tray | -- | 100 pcs |
| 10 Tray | -- | 1,000 pcs |
| 1 Carton | 420 * 420 * 280 | 4,000 pcs |

I : DRAWING



| | | | | | | |
|-----------------------|----------|------|-------|---------------------|-------------------|--|
| Sobertron Inc. | | DR. | SCALE | TITLE | PART NO. | |
| MODEL NO. | GT-0905A | CHK. | 1/1 | Magnetic Transducer | | |
| | | APP. | SHEET | MATERIAL | DWG. NO. | |
| | | | UNIT | PP0 | | |
| | | | mm | FINISH | | |
| | | | | | NO. DATE ECN. NO. | |
| | | | | | 1 | |
| | | | | | 2 | |
| | | | | | 3 | |
| | | | | | 4 | |
| | | | | | 5 | |