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SPECIFICATION FOR APPROVAL

SMD Electro-Magnetic Transducer

Part Number	OWMB-505020S-40-12D
Note	This item is in compliance with the following requirements : 1. RoHS directive 2. REACH
Customer P/N	


Ole Wolff	Signature / Date	Prepared	Checked	Approved

Customer	Signature / Date	Confirmation		

REVISION NOTES:

Date	Rev.	Description of Revision
01.03.2019	00	Initial Release
24.09.2021	01	Update drawing.
13.10.2021	02	Coding: change year and month to year and week.

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1. SCOPE

THIS SPECIFICATION IS APPLIED TO OLE WOLFF SMD ELECTRO-MAGNETIC TRANSDUCER UNIT OF MODEL: OWMB-505020S-40-12D

2. GENERAL REQUIREMENTS

OPERATING TEMPERATURE RANGE: -40°C ~ +105°C

STORAGE TEMPERATURE RANGE: -40°C ~ +120°C

3. MECHANICAL LAYOUT & DIMENSIONS

DIMENSIONS: SHOWN IN FIGURE 3.

WEIGHT: 0.12g

4. ELECTRICAL CHARACTERISTICS


NO.	ITEM	SPECIFICATION
1	RATED VOLTAGE	3Vo-p
2	OPERATING VOLTAGE	2~5Vo-p
3	RESONANT FREQUENCY	4000Hz
4	COIL RESISTANCE	12 ± 2 Ω
5	*RATED CURRENT	≤100mA
6	* SOUND OUTPUT AT 10cm	≥80dB
7	HOUSING MATERIAL	LCP

*Applying rated voltage (Resonant frequency, 1/2 duty, Square wave)

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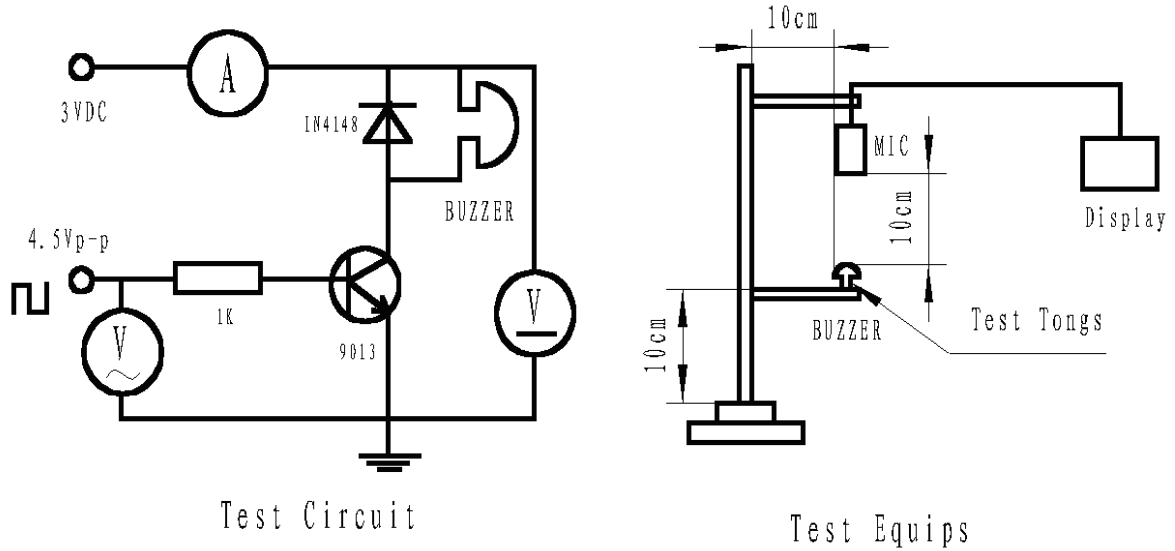
5. RELIABILITY TEST

- After Test All specifications must be satisfied after the test.				
5.1 High temperature Test Temperature: +120±2°C Duration: 120HRS				
5.2 Low temperature Test Temperature: -40±2°C Duration: 120HRS				
5.3 Humidity Test Temperature: +40±2°C Humidity: 90~95%RH Duration: 120HRS				
5.4 Temperature cycling Test Temperature: -40±2°C room temp. +120±2°C room temp. Duration: 30min 15min 30min 15min Cycle: 5 cycles				
5.5 Vibration Test Input power: 10Hz(a period is 1 minute) Amplitude: 1.52mm(9.3g) Duration: 2 hours per plane in each three mutually perpendicular planes for a total time of 6 hours.				
5.6 Shock Test Sounder shall be measured after being applied shock (980m/s ²) for each three mutually perpendicular directions to each of 3 times by half sine wave.				
5.7 Drop Test Dropped naturally from 700mm height onto the surface of 10mm thick wooden board. 2 directions-upper and side of the part are to be applied.				
5.8 Lead pull The part shall be pulled/push with a force of 15N for 10±1 seconds behind the part.				
				
After the test part shall meet specifications without any degradation in appearance and performance.				
Warranty: For a period of one year from date of manufacture under normal operations.				

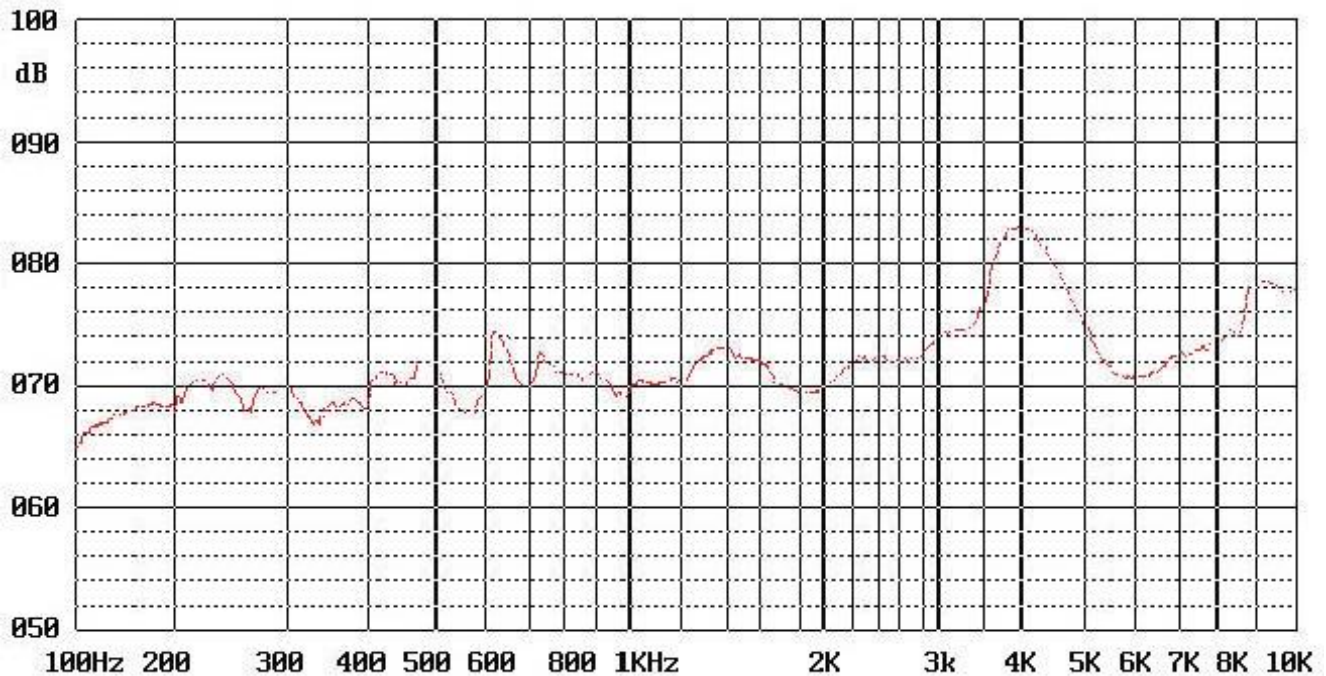
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6. TEST METHOD (Figure 1)



7. FREQUENCY RESPONSE (Figure 2)

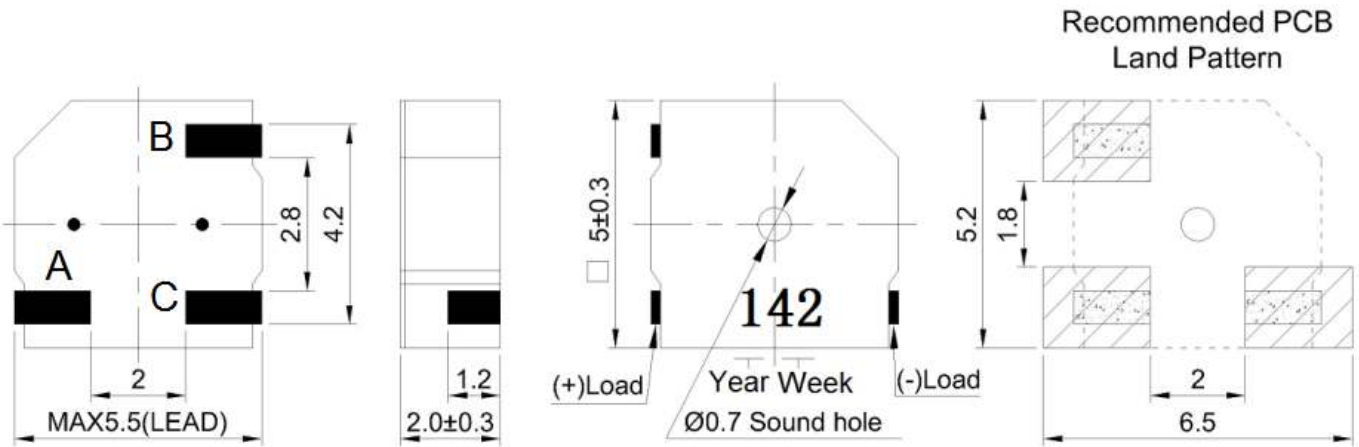


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8. DIMENSIONS (Figure 3)

Unit: mm Tolerance: $\pm 0.5\text{mm}$ Except Specified

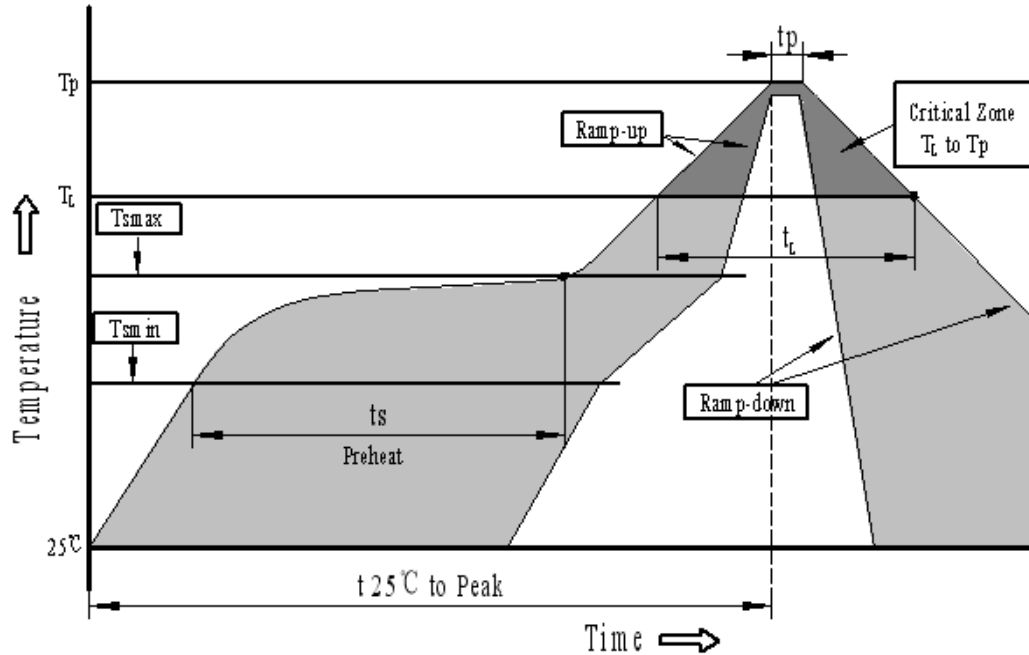


Coplanarity: Respect to A plane as stand, B&C have the tolerance 0~0.1mm.

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9. Recommended Temp. Profile for Reflow Oven (Figure 4)

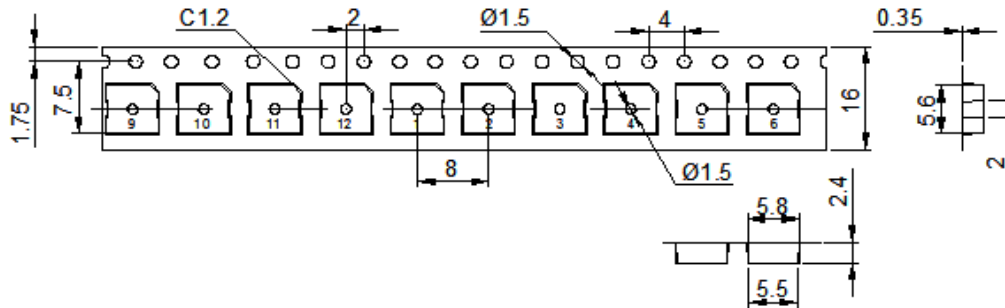


Profile Feature	Pb-Free Assembly
Average ramp-up rate(T_L to T_p)	3°C/second max.
Preheat	
-Temperature Min.(T_{smin})	150°C
-Temperature Min.(T_{smax})	200°C
-Temperature Min.(t_s)	60~180 seconds
T_{smax} to T_L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
- Temperature(T_L)	217°C
-Time(T_L)	60~150 seconds
Peak temperature(T_p)	250°C+0/-5°C
Time within 5°C of actual Peak temperature (t_p)	6 seconds max.
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

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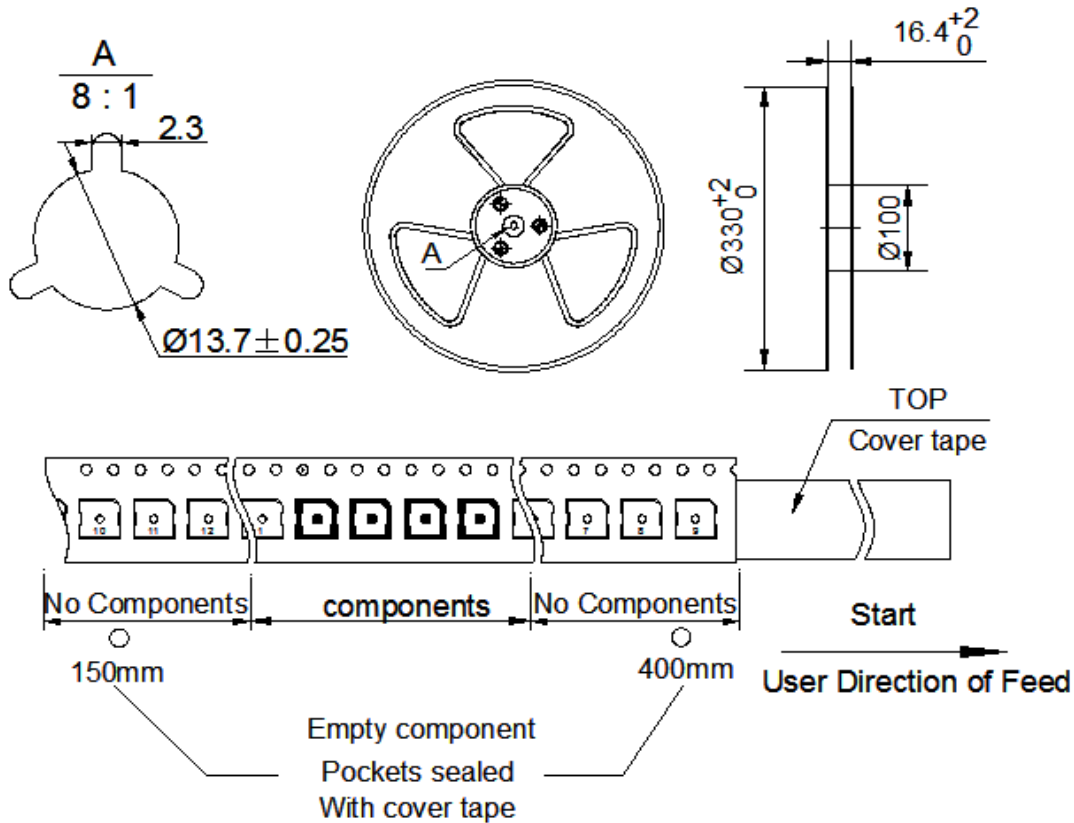
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10. PACKAGE INFORMATION (Figure 5)



NOTE:

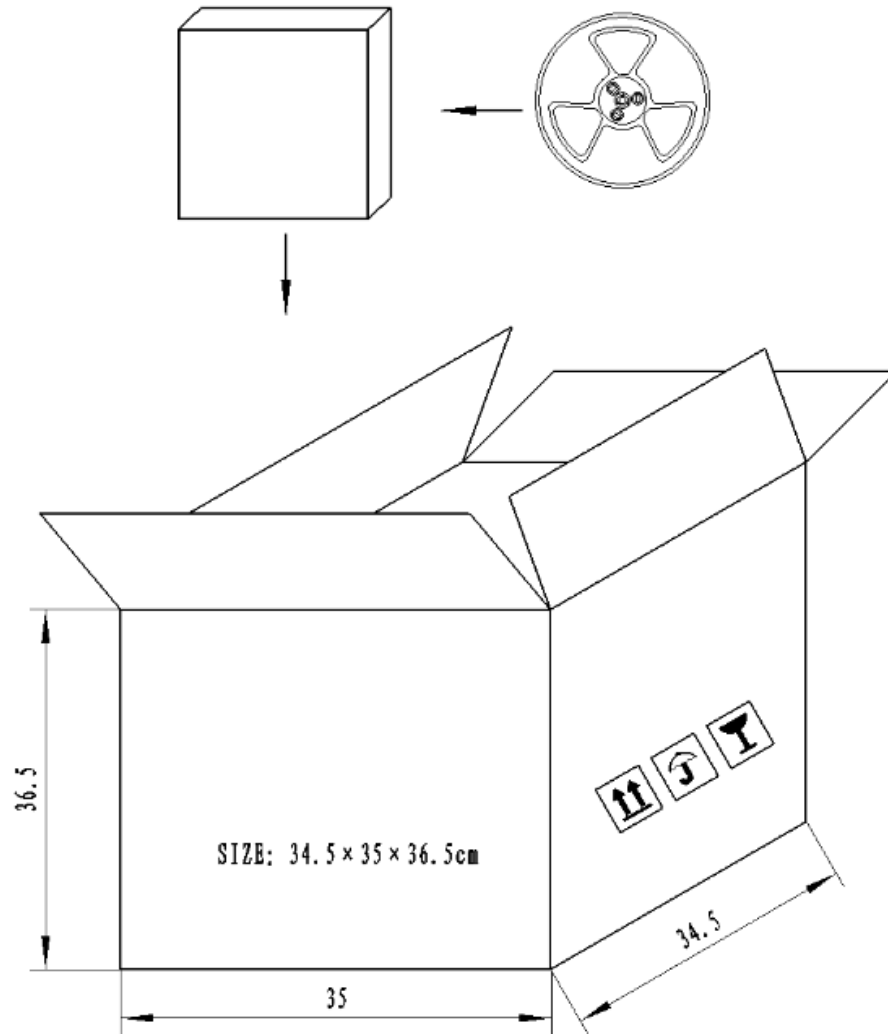
- 1.10 sprocket hole pitch cumulative tolerance +/-0.20mm.
- 2.All dimensions meet EIA-481-D requirements.
- 3.Thickness: 0.35+/-0.05mm.
- 4.Component loaded per 13" reel: 2500pcs.



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11. PACKAGE INFORMATION (Figure 6)



NOTES:

1. 2500 PCS per box
2. 10 boxes / carton 25000 PCS
3. 4 boxes / carton 10000 PCS

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