


PART NUMBER: CSS-J4D20

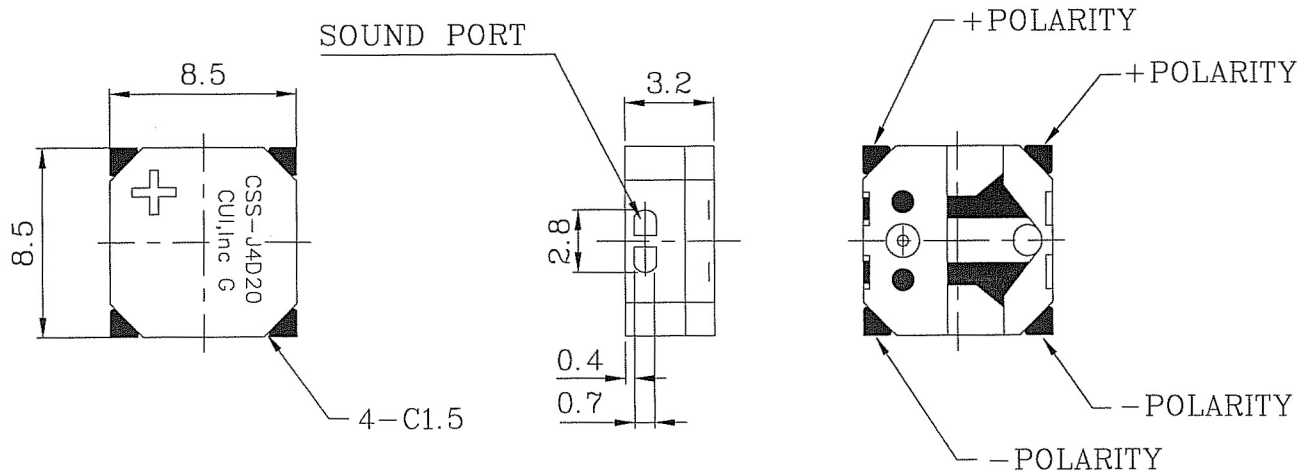
DESCRIPTION: magnetic buzzer

SPECIFICATIONS

rated voltage	3.6 Vo-p	
operating voltage	3.0 ~ 5.0 Vo-p	
current consumption	80 mA max.	applying rated voltage, 3100 Hz square wave, 1/2 duty
coil resistance	20.0 Ω ±3	
sound pressure level	90 db min. (97 typ.)	at 5 cm (A-weight), applying rated voltage, 3100 Hz square wave, 1/2 duty
operating temperature	-40 ~ +70° C	
storage temperature	-40 ~ +85° C	
dimensions	L8.5 x W8.5 x H3.2 mm	
weight	0.7 g	
material	L.C.P. (white)	
terminal	SMD type (Au Plating)	
RoHS	yes	

APPEARANCE DRAWING

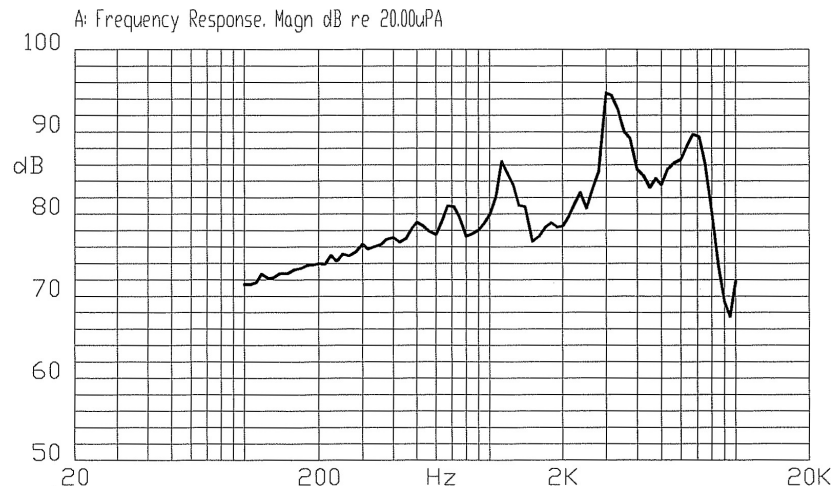
tolerance: ±0.5



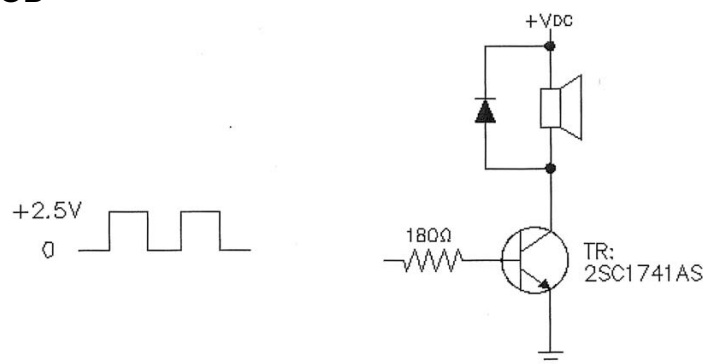
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TYPICAL FREQUENCY RESPONSE CURVE



MEASUREMENT METHOD



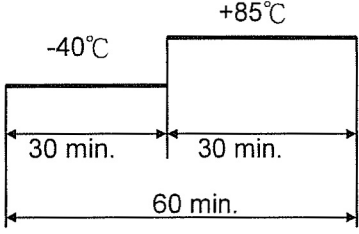
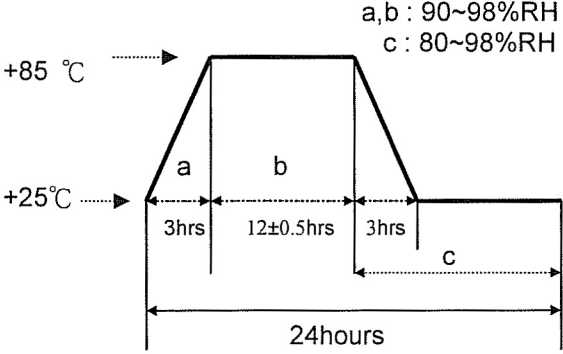
MECHANICAL CHARACTERISTICS

item	test condition	evaluation standard
solderability	Lead terminals are immersed in solder bath of $270 \pm 5^\circ\text{C}$ for 3 ± 1 seconds.	95% of the lead pad surfaces must be covered with fresh solder
soldering heat resistance	The buzzer follows the reflow temperature curve to test its reflow thermo stability.	No interference in operation.
terminal mechanical strength	Lead pads will be soldered onto the PCB, the force of 9.8N (1.0kg) is applied behind the part for 10 seconds.	No damage or cutting off.
vibration	The buzzer will be measured after applying a vibration amplitude of 1.5 mm with 10 to 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 2 hours.	After the test, the part will meet specifications without any damage to its appearance. The SPL should be within $\pm 10\text{dB}$ compared with the initial measurement.
drop test	The part will be dropped from a height of 75 cm onto a 40 mm thick wooden board 3 times in 3 axes (X, Y, Z) for a total of 9 drops.	

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ENVIRONMENT TEST

item	test condition	evaluation standard
high temp. test	After being placed in a chamber at +85°C for 96 hours.	After the test, the part will meet specifications without any damage to its appearance and performance. After 4 hours at 25°C, the SPL should be within ±10dB compared with the initial measurement.
low temp. test	After being placed in a chamber at -40°C for 96 hours.	
thermal shock	The part will be subjected to 10 cycles. One cycle will consist of: <div style="text-align: center;">  </div>	
temp. cycle test	The part will be subjected to 10 cycles. One cycle will last for 24 hours and consist of: <div style="text-align: center;">  </div>	

RELIABILITY TEST

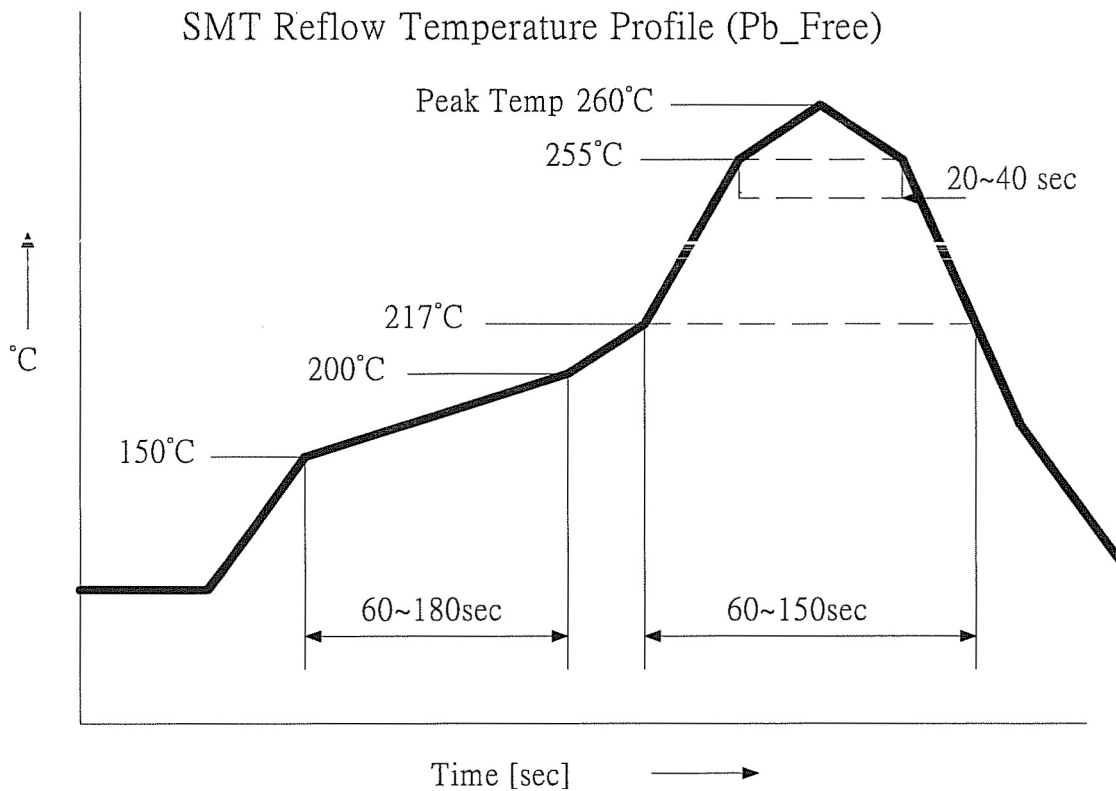
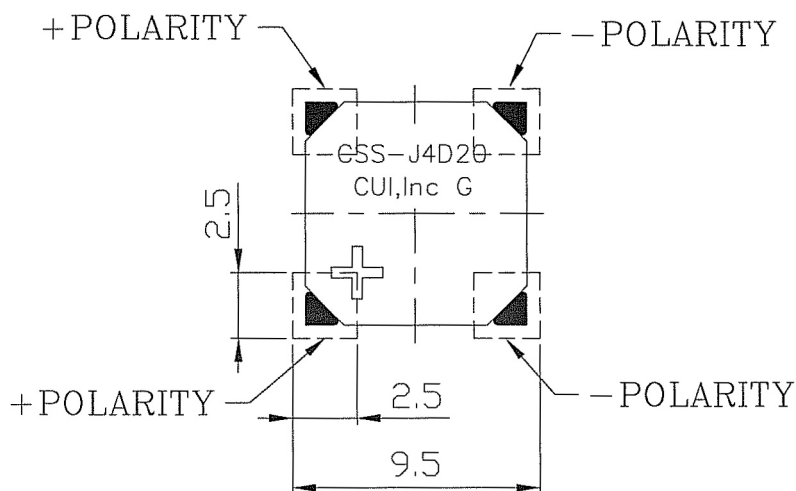
item	test condition	evaluation standard
operating (life test)	1. Continuous life test: The part will be subjected to 72 hours of continuous operation at +55°C with 3.6 V, 3100 Hz applied. 2. Intermittent life test: A duty cycle of 1 minute on, 1 minute off, a minimum of 10,000 times at room temp (+25 ±10°C) with 3.6 V, 3100 Hz applied.	After the test, the part will meet specifications without any damage to its appearance and performance. After 4 hours at 25°C, the SPL should be within ±10dB compared with the initial measurement.

TEST CONDITIONS

standard test condition	a) temperature: +5 ~ +35°C	b) humidity: 45 - 85%	c) pressure: 860-1060 mbar
judgement test condition	a) temperature: +25 ±2°C	b) humidity: 60 - 70%	c) pressure: 860-1060 mbar

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RECOMMENDED TEMPERATURE PROFILE FOR REFLOW OVEN

RECOMMENDED LAND PATTERN


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PACKAGING

