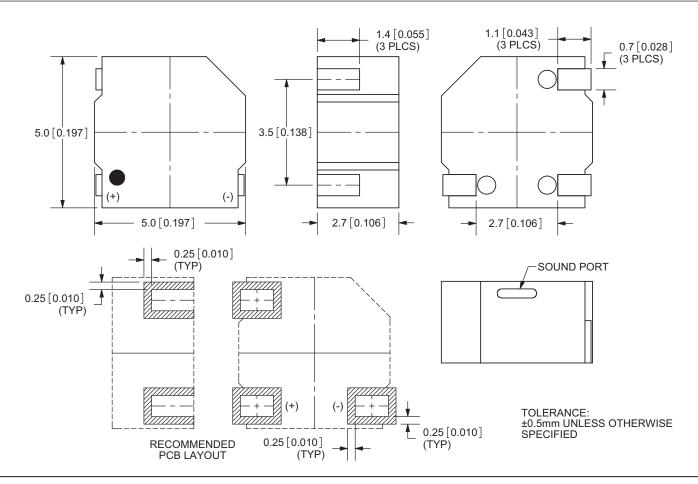


DESCRIPTION: MAGNETIC BUZZER

## **SPECIFICATIONS**

parameter	conditions/description	min	nom	max	units
rated voltage			3		V о-р
operating voltage		2		4	V о-р
current consumption	at rated voltage, 4,000 Hz square wave, ½ duty			110	mA
coil resistance		9	12	15	Ω
sound output	at 10 cm (A-weight free air), rated voltage, 4,000 Hz square wave, ½ duty	75			dBA
rated frequency			4,000		Hz
operating temperature		-30		70	°C
storage temperature		-40		80	°C
dimenstions	5 x 5 x 2.5 mm (L x W x H)				
weight				0.3	g
material	L.C.P. (black)				
terminal	SMD type (Sn plating)				
RoHS	yes				

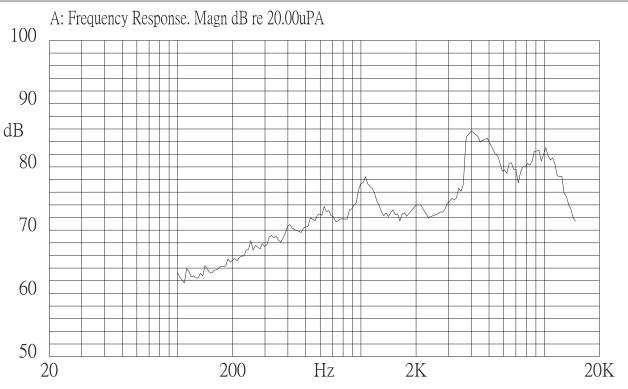
### APPEARANCE DRAWING



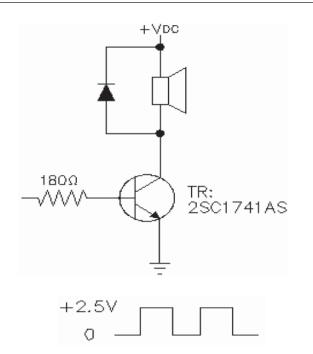


DESCRIPTION: MAGNETIC BUZZER

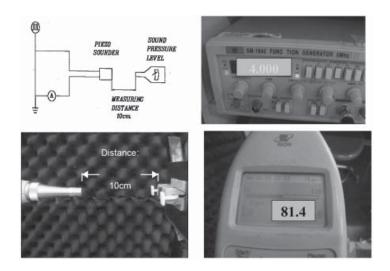
#### FREQUENCY RESPONSE CURVE



**MEASUREMENT METHOD** 



**INSPECTION FIXTURE** 





DESCRIPTION: MAGNETIC BUZZER

# **MECHANICAL CHARACTERISTICS**

item	test condition	evaluation standard 95% min. of the lead terminals will be wet with solder. (except the edge of the terminal)	
soldering	Lead terminals are immersed in a solder bath of +260 $\pm$ 5°C for 3 $\pm$ 1 seconds.		
soldering heat resistance	The buzzer will follow the reflow temperature curve to test its reflow thermo stability.	No interference in operation.	
terminal mechanical strength	For 10 seconds, the force of 9.8 N (1.0 kg) is applied to each terminal in each axial direction.	No damage or cutting off	
vibration test	The buzzer should be measured after a vibration amplitude of 1.5 mm with 10 ~ 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 6 hours.	After any tests, the buzzer will meet specifications without any damage in appearance and the SPL should be within ±10 dBA of the initial measurements.	
drop test	The buzzer without packaging is subjected to 3 drops on each axis from the height of 75 cm onto a 40 mm thick wooden board.		

#### **ENVIRONMENT TEST**

item	test condition	evaluation standard
high temperature test	After being placed in a chamber at +80°C for 48 hours.	
low temperature test	After being placed in a chamber at -40°C for 48 hours.	
thermal shock test	The part will be subjected to 10 cycles. One cycle will consist of:	
	+80°C -40°C 30 min. 30 min. 60 min.	After any tests, the buzzer will meet specifications without any damage in appearance except SPL. After 4 hours at 25°C, SPL should be within ±10 dBA of the initial measurements.
temperature cycle test	The part will be subjected to 10 cycles. One cycle will consist of: +80°C a,b:90~98%RH c:80~98%RH +25°C 3hrs $12\pm0.5hrs$ 3hrs c	
	<a> 24hours </a>	



DESCRIPTION: MAGNETIC BUZZER

# **MECHANICAL CHARACTERISTICS**

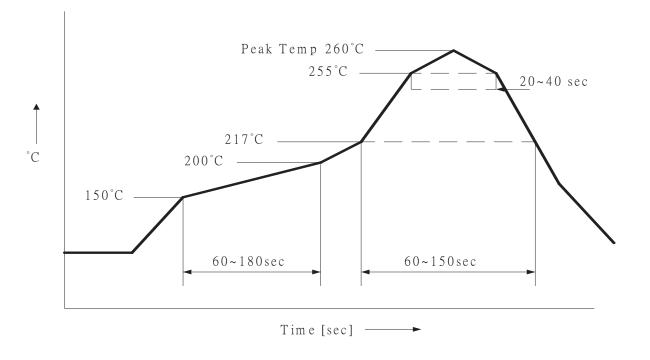
item	test condition	evaluation standard
operating (life test)	1. Ordinary temperature:	
	The part will be subjected to 100 hours at room temperature (25°C	After any tests, the buzzer will meet
	$\pm 10^{\circ}$ C) with 3 V, 4,000 Hz applied.	specifications without any damage in
	2. High temperature:	appearance except SPL. After 4 hours at 25°C, SPL should be within
	The part will be subjected to 50 hours of continuous operation at	$\pm 10$ dBA of the initial measurements
	55°C with 3 V, 4,000 Hz applied.	
	2. Low temperature:	
	The part will be subjected to 50 hours of continuous operation at -30°C with 3 V, 4,000 Hz applied.	

## **TEST CONDITIONS**

standard test conditions	a) Temperature: +5 ~ +35°C	b) Humidity: 45 ~ 85%	c) Pressure: 860 ~ 1060 mbar
judgement test conditions	a) Temperature: +25 ±2°C	b) Humidity: 60 ~ 70%	c) Pressure: 860 ~ 1060 mbar

## **RECOMMENDED TEMPERATURE PROFILE FOR REFLOW OVEN**

Note: 255°C is less than 20 sec., but only pass the lead free reflow once.





DESCRIPTION: MAGNETIC BUZZER

#### PACKAGING

