SAINCO ELECTRONICS CO., LID.

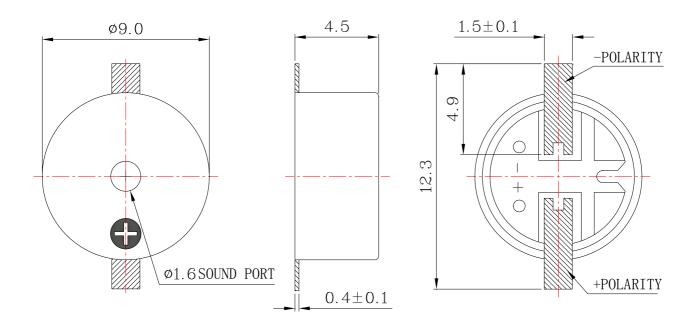
A. SCOPE

This specification applies magnetic buzzer, SMT-9045A-03627J

B. SPECIFICATION

No.	ltem	Unit	Specification	Condition
1	Oscillation Frequency	Hz	2700	Vp-p=1/2duty , square wave
2	Operating Voltage	Vр-р	2.5~4.5	
3	Rated Voltage	Vр-р	3.6	
4	Current Consumption	mA	MAX. 100	at Rated Voltage
5	Sound Pressure Level	dB	MIN. 90	at 10cm at Rated Voltage
6	Coil Resistance	Ω	16±3	
7	Operating Temperature	°C	-20 ~ +70	
8	Storage Temperature	°C	-30 ~ +80	
9	Dimension	mm	Ф9.0 x H4.5	See appearance drawing
10	Weight (MAX)	gram	0.8	
11	Housing Material		PPS(Black)	
12	Leading Pin		Plated Brass(Au)	See appearance drawing
13	Environmental Protection Regulation		RoHS	

C. APPEARANCE DRAWING



Tol:±0.5 Unit: mm SANCO ELECTRONICS CO., LTD. TEL: +86-574-83851068 FAX: +86-574-83851068 EMAIL: Sales@sancoelectronics.com

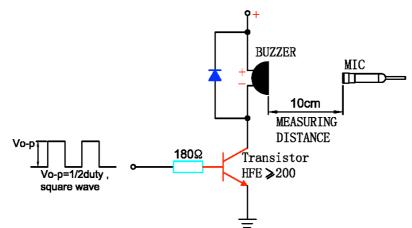
D.TESTING METHOD

Standard Measurement conditions

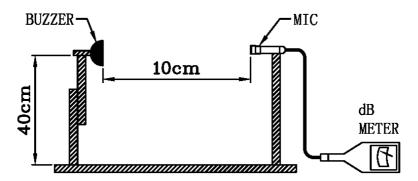
Temperature:25±2°C Humidity:45-65%

Acoustic Characteristics:

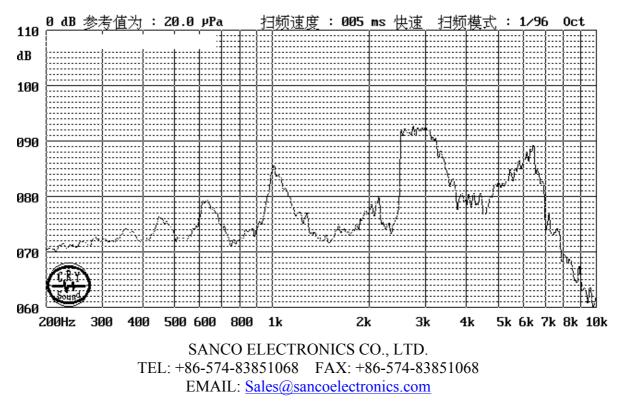
The oscillation frequency, current consumption and sound pressure are measured by the measuring instruments shown below



In the measuring test, buzzer is placed as follows:

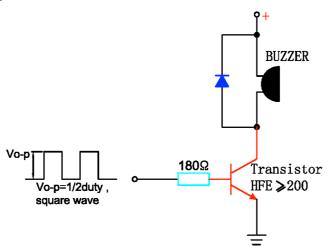


E. Typical Frequency Response Curve



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F. Recommend Driving Circuit



The base current Ib should high enough so that it saturates the collector current of the transistor with the CB load.

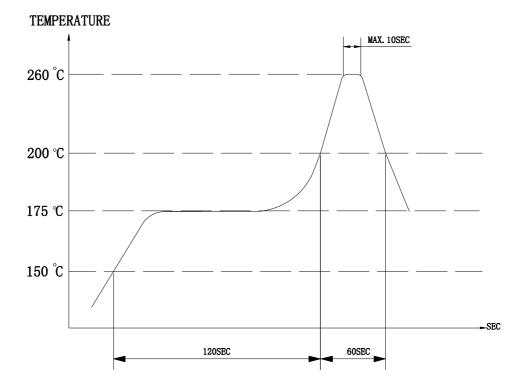
G. Soldering Condition

(1)Recommendable reflow soldering condition is as follows

(Reflow soldering is twice)

Note: It is requested that reflow soldering should be executed

after heat of product goes down to normal.



Heat resistant line

(Used when heat resistant reliability test is performed)

(2)Manual soldering

Manual soldering temperature 350° C within 5 sec.

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H. RELIABILITY TEST

1 High Temperature Test (Storage) After being placed in a chamber with 8052°C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: 010dB. 2 Low Temperature Test (Storage) After being Placed in a chamber with -3052°C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: 010dB. 3 Humidity Test After being Placed in a chamber with 90-95% R.H. at 4052°C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: 010dB. 4 Temperature Cycle Test The part shall be subjected to 5 cycles. One cycle shall be consist of : +70°C 4 Temperature Cycle Test Allowable variation of SPL after test: 010dB. 5 Drop Test Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm.	TEST CONDITION AND REQUIREMENT		
1 Test (Storage) being placed in normal condution for 2 hours. Allowable variation of SPL after test: $\partial 10dB$. 2 Low Temperature Test (Storage) After being Placed in a chamber with -30∂2°C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: $\partial 10dB$. 3 Humidity Test After being Placed in a chamber with 90-95% R.H. at 40∂2°C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: $\partial 10dB$. 4 Temperature Cycle Test The part shall be subjected to 5 cycles. One cycle shall be consist of : +70°C 4 Temperature Cycle Test The part shall be subjected to 5 cycles. One cycle shall be consist of : -20°C 5 Drop Test Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm .			
2 Low Temperature Test (Storage) After being Placed in a chamber with -3082°C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: 610dB. 3 Humidity Test After being Placed in a chamber with 90-95% R.H. at 4082°C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: 610dB. 4 Temperature Cycle Test The part shall be subjected to 5 cycles. One cycle shall be consist of : 4 Temperature Cycle Test -20°C 4 Temperature Cycle Test Allowable variation of SPL after test: 610dB. 5 Drop Test Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm .			
2 Low Temperature Test (Storage) being placed in normal condition for 2 hours. Allowable variation of SPL after test: ð10dB. 3 Humidity Test After being Placed in a chamber with 90-95% R.H. at 40ð2°C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: ð10dB. 4 Temperature Cycle Test The part shall be subjected to 5 cycles. One cycle shall be consist of : 4 Temperature Cycle Test +25°C 5 Drop Test Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm .			
2Test (Storage)being placed in normal condition for 2 hours. Allowable variation of SPL after test: $\delta 10$ dB.3Humidity TestAfter being Placed in a chamber with 90-95% R.H. at 40 $\delta 2^{\circ}$ C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: $\delta 10$ dB.4Temperature Cycle TestThe part shall be subjected to 5 cycles. One cycle shall be consist of : +70°C $+25^{\circ}$ C -20° C $0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.$			
3Allowable variation of SPL after test: 010dB.3Humidity TestAfter being Placed in a chamber with 90-95% R.H. at 4002°C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: 010dB.4Temperature Cycle TestThe part shall be subjected to 5 cycles. One cycle shall be consist of : $+25^{\circ}C$ $-20^{\circ}C$ $0.5 + 25^{\circ}$.4Temperature Cycle Test $+25^{\circ}C$ $-20^{\circ}C$ $0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0.5 + 0$			
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4 Temperature Cycle Test $-\frac{20^{\circ}C}{0.5hr}$ $-\frac{125^{\circ}C}{0.5}$			
4 Temperature Cycle Test $-20^{\circ}C$ $+25^{\circ}C$ $+25^{\circ}C$ $-20^{\circ}C$ 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0			
4 Temperature Cycle Test $-20^{\circ}C$ $+25^{\circ}C$ $+25^{\circ}C$ $-20^{\circ}C$ 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0			
4 Temperature Cycle Test -20°C -20°C 0.5hr 0.5 0.5 0.5hr 0.5 0.5 3hours Allowable variation of SPL after test: ð10dB. 5 Drop Test Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm .			
4 Temperature Cycle Test -20°C 0.5hr 0.5 0.5 0.5 0.5hr 0.5 0.5 0.5 3hours Allowable variation of SPL after test: ð10dB. 5 Drop Test Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm .			
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Test -20°C 0.5hr 0.5 0.5hr 0.5 3hours Allowable variation of SPL after test: ð10dB. Drop Test Drop Test			
5 Drop Test			
5 Drop Test			
5 Drop Test			
Allowable variation of SPL after test: ð10dB. Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm .			
5 Drop Test Drop on a hard wood board of 4cm thick, any directions ,6 times, at the height of 75cm .			
5 Drop Test at the height of 75cm.			
Allowable variation of SPL after test: ð10dB.			
After being applied vibration of amplitude of 1.5mm with 10 to 55 Hz band of vibration frequency to each of 3 perpendicular directions for			
6 Vibration Test 2 hours.			
Allowable variation of SPL after test: ð10dB.			
Lead terminals are immersed in rosin for 5 seconds and then			
Solderability immersed in solder bath of $+30085^{\circ}$ for 381 seconds	immersed in solder bath of +300ð5°C for 3ð1 seconds.		
7 Test 90% min. lead terminals shall be wet with solder			
(Except the edge of terminals).			
The force of 9 8N(1.0kg) is applied to each terminal in axial direction for			
8 Terminal Strength Pulling Test 10 seconds.			
No visible damage and cutting off.			

TEST CONDITION.

Standard Test Condition	:	a) Temperature : +5 ~ +35 $^\circ \mathrm{C}$	b) Humidity : 45-85%	c) Pressure : 860-1060mbar
一般测试条件	:	a) 温度 : +5~+35℃	b) 湿度 : 45-85%	c) 气压 : 860-1060mbar
Judgment Test Condition	:	a) Temperature : +25 \pm 2°C	b) Humidity : 60-70%	c) Pressure : 860-1060mbar
争议时测试条件	:	a) 温度 :+25±2℃	b) 湿度 : 60-70%	c) 气压:860-1060mbar

I. PACKING STANDARD

