# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





# THIS SPECIFICATION APPLIES TO THE ELECTROMAGNETIC BUZZER

#### SPECIFICATION

Test condition: TEMP=+25±2 ℃ Related humidity=65±5% Air pressure: 860 ~ 1060mbar

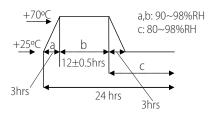
item	unit	specification	condition
rated voltage	Vo-p	12.0	
operating volt	Vo-p	10.0 ~ 14.0	
mean current	mA	Max. 40	At rated voltage direct current
sound output	dBA	85	At 10cm(A-weight free air), at rated voltage direct
			current
rated frequency	Hz	$2300 \pm 300$	
operating temp	°C	-20 ~ +60	
storage temp	°C	-30 ~ +70	
dimension	mm	φ16.0 x H14.0	See attached drawing
weight	gram	4.6	
material		PPO (Black)	
terminal		Pin type (Plating Sn)	See attached drawing
environmental		RoHS	
protection regulation			

# **ENVIRONMENT TEST**

item	test condition	evaluation standard
 high temp. test	After being placed in a chamber at +70°C for 96 hours.	After the test the part will meet specifications without any degradation in appearance and
 low temp. test After being placed in a chamber at -30°C for 96 hours.		performance except SPL, after 4 hours at +25°C. The SPL will be in ±10dBA compared with initial
thermal shock	The part will be subjected to 10 cycles. One cycle shall consist of: 70°C -30°C -30°C -30 min 60 min	one.

temp./humidity cycle

The part will be subjected to 10 cycles. One cycle shall be 24 hours and consist of:





#### **RELIABILITY TEST**

item	test conditions	evaluation standard
operating life test	ORDINARY TEMPERATURE	After the test the part will meet specifications
	TThe part will be subjected to 96 hours of	without any degradation in appearance and
	continuous operation at room temperature	performance except SPL, after 4 hours at +25°C.
	(+25±10℃) , 6V applied.	The SPL would be in $\pm 10$ dBA compared with
	HIGH TEMPERATURE	initial one.
	The part will be subjected to 72 hours of	
	continuous operation at +60°C with 6V applied.	
	LOW TEMPERATURE	_
	The part will be subjected to 72 hours of	
	continuous operation at -20°C with 6V applied.	
	HIGH AND LOW VOLTAGE	_
	Applying 10.0 voltage and 14.0 voltage,	
	available time 24 hours each.	

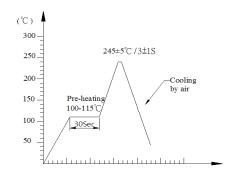
#### TEST CONDITION

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

#### **MECHANICAL CHARACTERISTICS**

item	test conditions	evaluation standard
solderability	Lead terminal are immersed in rosin for 5	90% min. lead terminals will be wet with solder
	seconds and then immersed in solder bath of	No interference in operation.
	+250±5°C for 3±0.5 seconds.	
soldering heat resistance	Lead terminal are immersed in soldering bath of	-
	$+250\pm5$ °C for 2 $\pm$ 0.5 seconds.	
terminal mechanical	Apply the terminal with 1KG tension for	No damage and cutting off.
strength	1 minute.	
vibration	The part will be subjected to a vibration cycle of	After the test the part will meet specifications
	10Hz to 55Hz to 10Hz in a period of 1 minute.	without any damage in appearance and
	Total peak amplitude will be 1.52mm(9.3G). The	performance except SPL.
	vibration test will consist of 2 hours per axis in	The SPL would be in $\pm$ 80dBA compared with
	each three axes(X,Y,Z). Total 6 hours.	initial one.
drop test	The part only will be dropped from a height of	-
	75cm onto a 40mm thick wooden board 3 times	
	in 3 axes(X,Y,Z). Total of 9 times.	

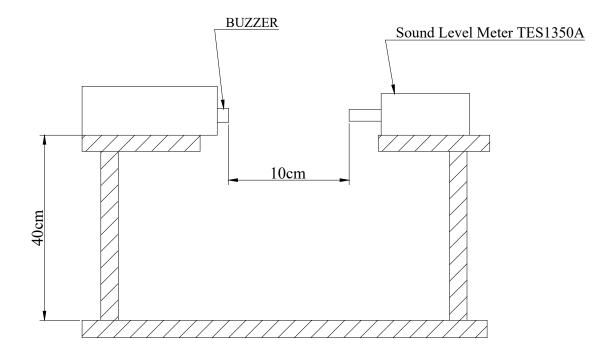
### RECOMMENDED WAVE SOLDERING TEMPERATURE CURVE



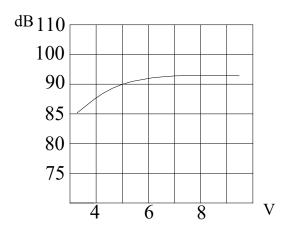


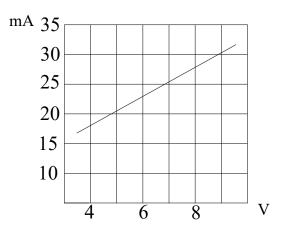
MODEL: WST-1612S PRODUCT: Electromagnetic Buzzer EDITION: A/2016

# **INSPECTION FIXTURE**



#### **FREQUENCY RESPONSE**



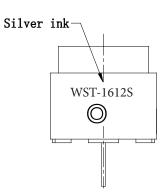


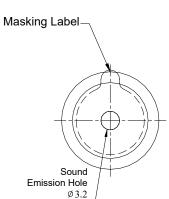


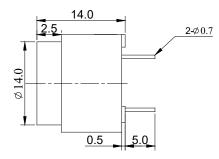
MODEL: WST-1612S PRODUCT: Electromagnetic Buzzer EDITION: A/2016

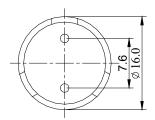
# DIMENSIONS

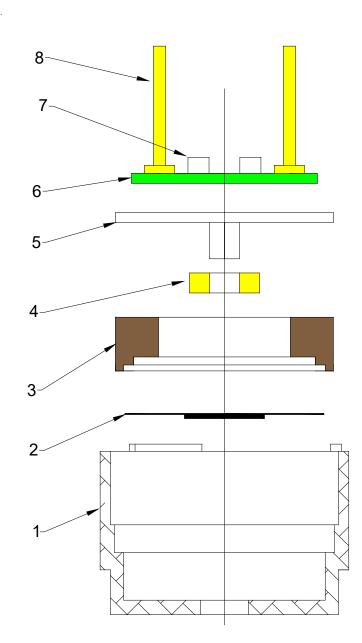
Tolerance:±0.5 (unit: mm)











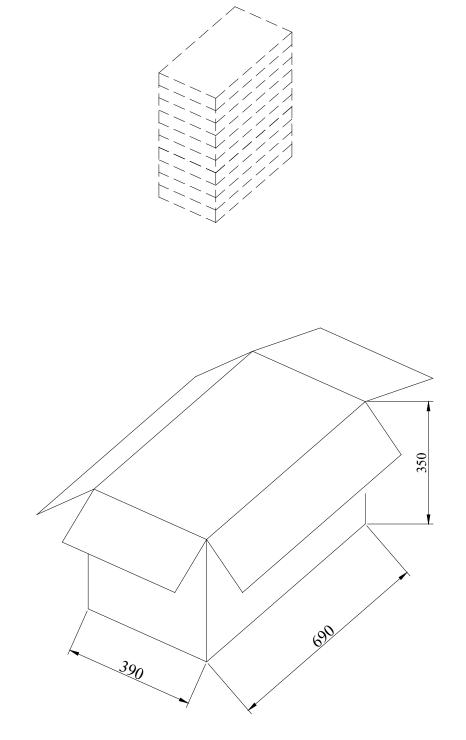
no	item	material	quantity
1	CASE	PPO	1
2	Diaphragm	Ferrum	1
3	Magnet ring	Poly+ferrite	1
4	Coil	Copper	1
5	Core	Ferrum	1
6	PCB	Epoxy glass fiber cloth + copper	1
7	Transistor	Epoxy + copper	2
8	PIN	Copper	2



MODEL: WST-1612S PRODUCT: Electromagnetic Buzzer EDITION: A/2016

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# PACKING



packing box	LxWxH (mm)	pieces
Tray	320 x 170 x 28	50
Inner Cartons	340 x 190 x 310	500
Outer Carton	690 x 390 x 350	2000

Soberton Inc.