

规格书编号

SPEC NO :

产品规格书

SPECIFICATION

CUSTOMER 客户: _____
PRODUCT 产品: _____ CERAMIC FILTER
MODEL NO 型号: _____ LTS3.8MEB
PREPARED 编制: _____ LEO CHECKED 审核: _____ YORK
APPROVED 批准: _____ LIUMING DATE 日期: _____ 2009-7-25

客户确认 CUSTOMER RECEIVED:		
审核 CHECKED	批准 APPROVED	日期 DATE

无锡市好达电子有限公司
Shoulder Electronics Limited

更改历史记录 History Record

更改日期 Date	规格书编号 Spec No	产品型号 Part No	客户产品型号 Customer No	更改内容描述 Modify Content	备注 Remark

1. SCOPE

This specification shall cover the characteristics of the ceramic filter with the type LTS3.8MEBZAA0F-B0.

2. PART NO.

PART NUMBER	PREVIOUS PART NUMBER
LTS3.8MEBZAA0F-B0	LTS3.8MEB
CUSTOMER PART NO	SPECIFICATION NO

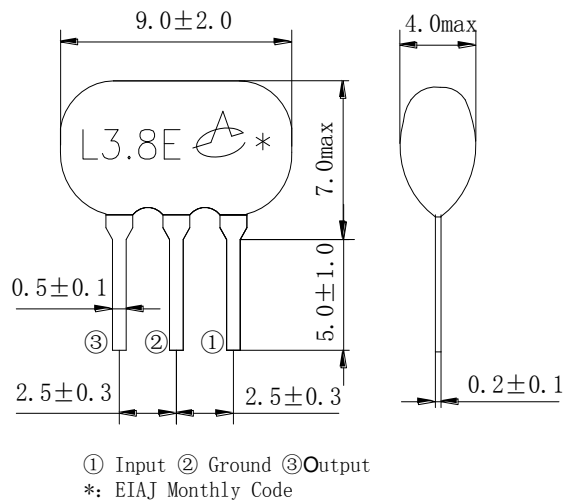
3. OUTLINE DIMENSIONS AND MARK

3.1 Appearance: No visible damage and dirt.

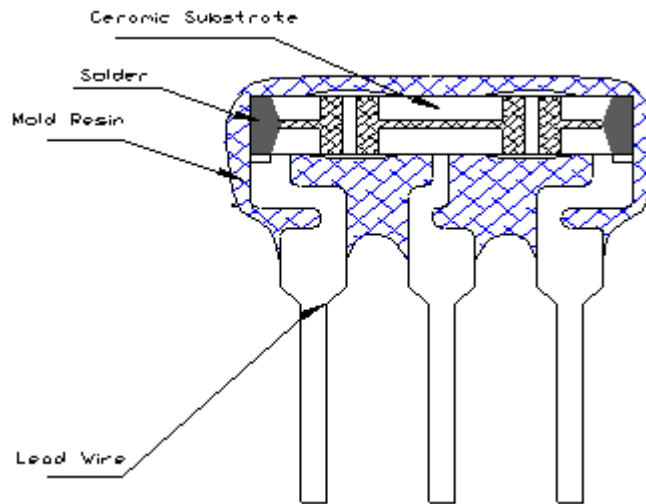
3.2 Construction: Leads are soldered on electrode and body is molded by resin.

3.3 The products conform to the RoHS directive and national environment protection law.

3.4 Dimensions and mark



3.5 Structure @1



Component	Material
Lead Wire	Solder plating copper or iron wire
Mold Resin	epoxy resin
Solder	High-melting solder
Ceramic Substrate	Lead titanate-zirconate

4. ELECTRICAL SPECIFICATIONS

4.1 RATING

Items	Requirement
Withstanding Voltage (V)	50 (DC, 1min)
Insulation Resistance Ri, (MΩ) min.	100 (10V, 1min)
Operating temperature	-25°C ~ 85°C
Storage temperature	-40°C ~ 85°C

4.2 ELECTRICAL SPECIFICATIONS

Items	Content
Nominal Center Frequency fn (MHz)	3.800
3dB Band Width (kHz) min	fn ± 70
20dB Band Width (kHz) max	800
Insertion Loss (dB) max	6.0

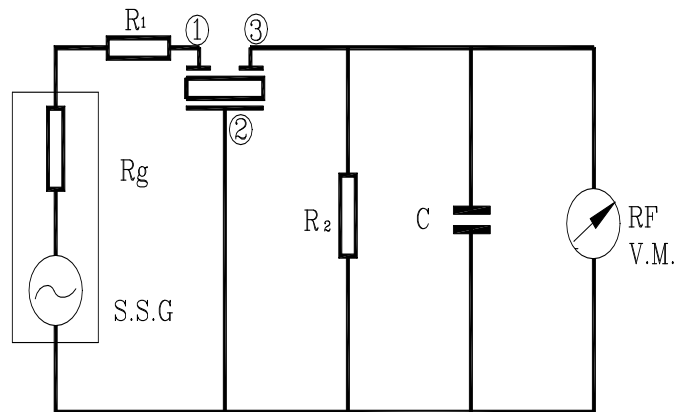
Spurious Attenuation(dB) min	25 (0-fn)
	15 (fn-7.0MHz)
Input/Output Impedance(Ω)	1000
Temp. Coefficient of Frequency ppm/°C max	± 100 (Center Frequency drift, -20°C~70°C)

5. TEST

5.1 Test Conditions

Parts shall be tested under the condition (Temp.: 20±15°C, Humidity : 65±20% R.H.) unless the standard condition(Temp.: 25±2°C, Humidity : 65±5% R.H.) is regulated to measure.

5.2 Test Circuit



$$R_g + R_1 = R_2 = 1000 \Omega \text{ (Input/Output Impedance)}$$

$C = 10 \text{ pF}$ (Including stray capacitance and input capacitance of RF voltmeter)

6. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

No.	Item	Condition of Test	Performance Requirement
6.1	Humidity	Subject the filter at $40 \pm 2^\circ\text{C}$ and 90%-95% R.H. for 96h, Filter shall be measured after being placed in natural conditions for 1h.	It shall fulfill Table 1.
6.2	High Temperature Exposure	Subject the filter to $85 \pm 2^\circ\text{C}$ for 96h, Filter shall be measured after being placed in natural conditions for 1h.	It shall fulfill Table 1.
6.3	Low Temperature Exposure	Subject the filter to $-25 \pm 2^\circ\text{C}$ for 96h, Filter shall be measured after being placed in natural conditions for 1h.	It shall fulfill Table 1.

6.4	Temperature Cycling	After temperature cycling of blow table was performed 5 times, Filter shall be measured after being placed in natural conditions for 1h.		It shall fulfill Table 1.
		Temperature	Time	
		-25±3℃	30±3 min	
		85±3℃	30±3 min	
6.5	Vibration	Subject the filter to vibration for 2h.Each in x y and z axis with the amplitude of 1.5mm, The frequency shall be varied uniformly between the limits of 10Hz-55Hz-10Hz and then filter shall be measured.		It shall fulfill Table 1.
6.6	Mechanical Shock	Filter shall be measured after 3 times random dropping from the height of 1m on concrete floor.		No visible damage and it shall fulfill Table 1.
6.7	Resistance to Soldering Heat	<p>1)Lead terminals are immersed up to 2 mm from filter's body in soldering bath of 260±5℃ for 10±1s and then filter shall be measured after being placed in natural conditions for 1h.</p> <p>2) Lead terminals is directly contacted with the tip of soldering iron of 350±5℃ for 5.0±0.5s and then filter shall be measured after being placed in natural conditions for 1h.</p>		It shall fulfill Table 1.

(to be continued)

6. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

No.	Item	Condition of Test	Performance Requirements
6.8	Solderability	Lead terminals are immersed up to 2mm from filter's body in soldering bath of 250±5℃ for 3±0.5s.	More than 95% of the terminal surface of the filter shall be covered with fresh solder.
6.9	Terminal Strength		
6.9.1	Terminal Pulling	Force of 5N is applied to each lead in axial direction for 10s±1s.	No visible damage and it shall fulfill Table 1.
6.9.2	Terminal Bending	When force of 5N is applied to each lead in axial direction, the lead shall folded up 90 ° from the axial direction and folded back to the axial	

		direction. The speed of folding shall be each 3s.	
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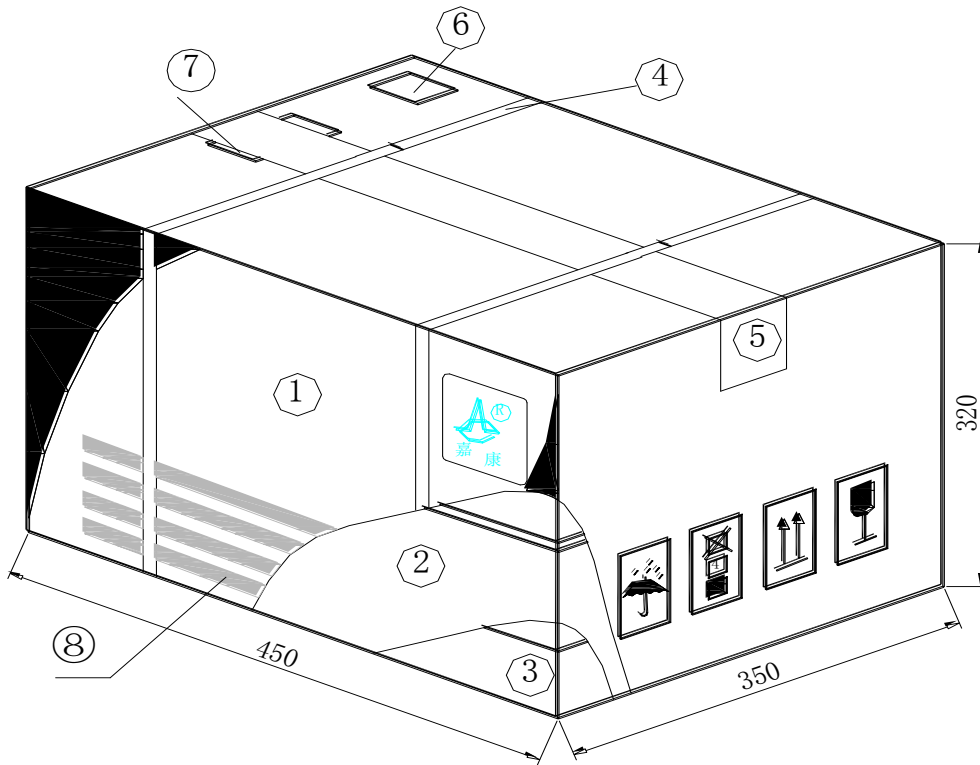
Table 1

Item	Characteristics after test
Insertion Loss drift max	$\pm 2\text{dB}$.
3dB Band Width drift max.	$\pm 25\text{kHz}$
20dB Band Width drift max.	$\pm 40\text{kHz}$
Note : The limits in the above table are referenced to the initial measurements.	

7. PACKAGE

To protect the products in storage and transportation, it is necessary to pack them (outer and inner package). On paper pack, the following requirements are requested.

7.1 Dimensions and Mark



NO.	Name	Quantity
①	Package	1
②	Box	2
③	Inner Box	40
④	Belt	2.9 m
⑤	Adhesive tape	1.2 m
⑥	Label	1
⑦	Certificate of approval	1
⑧	Company name ,Address etc.	

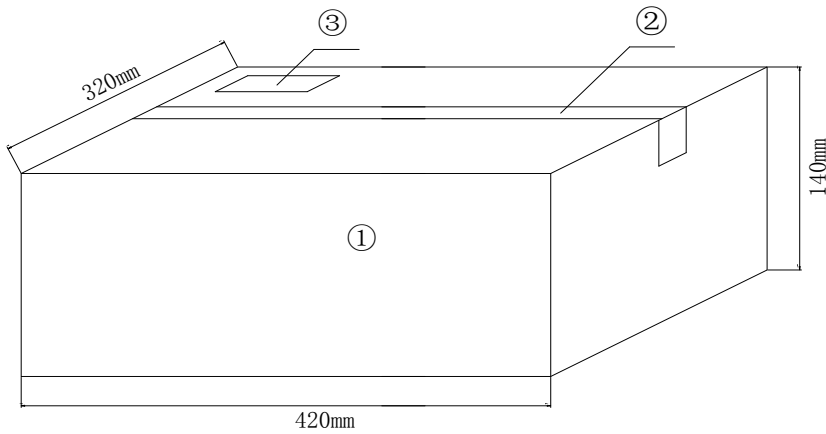
7.2 Section of Package

Package is made of corrugated paper with thickness of 0.8cm. Package has 2 boxes, each has 20 inner boxes.

7.3 Quantity of Package

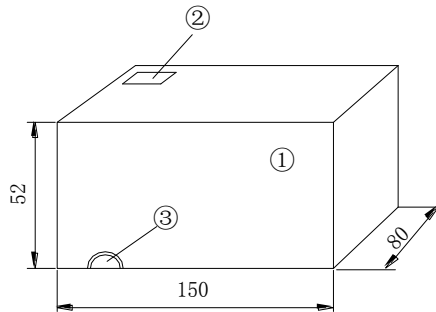
Per plastic bag 500 pieces
 Per inner box 3 plastic bag
 Per package 40 inner boxes
 (60000 pieces of piezoelectric ceramic part)

7.4 Inner Package



NO.	Name	Quantity
①	Inner package	1
②	Adhesive tape	1.2 m
③	Label	1

7.5 Inner Box Dimensions



NO	Name	Quantity
①	Inner Box	1
②	Label	1
③	QC Label	1

8. EIAJ Monthly Code

2005 / 2007 / 2009		2006 / 2008 / 2010	
MONTH	CODE	MONTH	CODE
JAN	A	JAN	N
FEB	B	FEB	P
MAR	C	MAR	Q
APR	D	APR	R
MAY	E	MAY	S
JUN	F	JUN	T
JUL	G	JUL	U

AUG	H	AUG	V
SEP	J	SEP	W
OCT	K	OCT	X
NOV	L	NOV	Y
DEC	M	DEC	Z

9. OTHER

9.1 Caution

9.1.1 Don't apply excess mechanical stress to the component and terminals at soldering. Do not use this product with bend.

9.1.2 Do not clean or wash the component for it is not hermetically sealed.

9.1.3 Do not use strong acidity flux, more than 0.2wt% chlorine content, in flow soldering.

9.1.4 Don't be close to fire.

9.1.5 All kinds of re-flow soldering must not be applied on the component.

9.1.6 This specification mentions the quality of the component as a single unit. Please insure the component is thoroughly evaluated in your application circuit

9.1.7 Expire date (Shelf life) of the products is one year after delivery under the conditions of a sealed and an unopened package. Please use the products within six months after delivery. If you store the products for a long time (more than one year), use carefully because the products may be degraded in the solderability or rusty. Please confirm solderability and characteristics for the products regularly.

9.1.8 Please contact us before using the product as automobile electronic component.

9.2 Notice

9.2.1 Please return one of this specification after your signature of acceptance.

9.2.2 When something gets doubtful with this specifications, we shall jointly work to get an agreement.