### **SHOULDER**

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:	LTUC450F			
PREPARED 编 制:	LEO	CHECKED 审 核:	YORK	
APPROVED 批 准:	LIUMING	D A T E 日 期:	2012-6-29	

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

无锡市好达电子股份有限公司 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

### CERAMIC FILTER

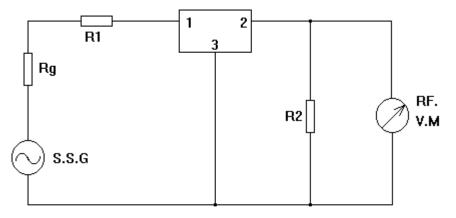
- 1. THIS SPECIFICATION SHALL COVER THE CHARACTERISTICS OF CERAMIC FILTER WITH 450KHz.
- 2. PART NUMBER LTUC450F

SPECIFICATION No.: QJ/A25•02•1206

- 3. ELECTRONICAL SPECIFICATIONS
  - A. CENTRE FREQUENCY (f  $_{\circ}$  ) : 455.0 KHz  $\pm$  1.0KHz.
  - B. BAND WIDTH AT 6 dB :  $\pm 6$  MIN.(TO 450KHz)
  - C. BAND WIDTH AT 40 dB :  $\pm 12.5$  KHz MAX.(TO 450KHz)
  - D. STOP BAND ATTENUATION : 28dB MIN.(AT  $f_\circ~\pm 100 \text{KHz})$
  - E. RIPPLE : 2.0 dB MAX.
  - F. INSERTION LOSS : 5.0 dB MAX (AT MINIMUM LOSS POINT)
  - G. TEMPRATURE COEFFICIENT
    - OF CENTER FRENQUENCY :  $\pm 50$  PPM/°C Max.(-20 TO +80 °C)
  - H. INPUT/OUTPUT IMPEDANCE :  $2.0 \text{K}\Omega$
  - NOTE : A) CENTER FREQUENCY SHALL BE DEFIED AS THE CENTRAL VALUE OF THE BAND WITH AT 6 dB
    - B) TEMPRATURE COEFFICIENT OF CENTER FREQUENCY SHALL BE DEFINED AS THE AVERAGE OF THE CENTRAL FREQUECY.

#### 4. MEASUREMENT

- A. ENVIRONMENTAL CONDITION MEASUREMENT SHALL BE CARRIED OUT AT THE REFERENCE TEMPERATURE OF  $25 \degree C \pm 2 \degree C$ . IT SHALL BE POSSIBLY DONE AT  $5 \degree C$  TO  $35 \degree C$  UNLESS IT IS
- QUESTIONABLE.
- B. MEASURING CIRCUIT



#### Rg+R1=R2=Input/Output Impedance

#S.S.G. (STANDARD SIGNAL GENERATION)

R.F.V.M. (RADIO FREQUENCY VOLTAGE METER)

 $Rg+R1=R2=2.0K \Omega$ 

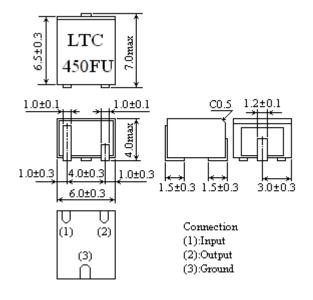
 $C \!\! < \!\! = \!\! 50 \ PF$ 

LTUC450F

## CERAMIC FILTER

LTUC450F

#### 5. DIMENSIONS(mm)



#### 6. ENVIRONMENTAL CHARACTERISTICS

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6-1 HIGH TEMPERATURE EXPOSURE
SUBJECT THE FILTER TO +80℃ FOR 96 HOURS. THEN RELEASE
THE FILTER INTO THE ROOM CONDITIONS FOR 2 HOURS PRIOR
TO THE MEASUREMENT. IT SHALL FULFILL THE SPECIFICATIONS IN TABLE 1.
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6-2 MOISTURE
KEEP THE FILTER AT 40<sup>°</sup>C AND 95% RH FOR 96 HOURS. THEN
RELEASE THE FILTER INTO THE ROOM CONDITIONS FOR
2 HOURS PRIOR TO THE MEASUREMENT. IT SHALL
FULFILL THE SPECIFICATIONS IN TABLE 1.
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6-3 LOW TEMPERATURE EXPOSURE
SUBJECT THE FILTER TO -20°C FOR 96 HOURS. THEN RELEASE
THE FILTER INTO THE ROOM CONDITIONS FOR 2 HOURS PRIOR
TO THE MEASUREMENT. IT SHALL FULFILL THE SPECIFICATIONS
IN TABLE 1.
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6-4 TEMPERATURE CYCLING

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SUBJECT THE FILTER TO A LOW TEMPERATURE OF -20°C FOR
30 MINUTES. FOLLOWSING BY A HIGH TEMPERATURE OF +85°C
FOR 30 MINUTES. THEN RELEASE THE FILTER INTO THE ROOM
CONDITIONS FOR 2 HOURS PRIOR TO THE MESUREMENT. IT
SHALL MEET THE SPECIFICATIONS IN TABLE 1.
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6-5 RESISTANCE TO SOLDER HEAT
DIP THE FILTER TERMINALS NO CLOSER THAN 1.5mm INTO
THE SOLDER BATH AT 260^{\circ}C \pm 5^{\circ}C FOR 5\pm 1 SEC. THEN
RELEASE THE FILTER INTO THE ROOM CONDITIONS FOR 2
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### CERAMIC FILTER

HOURS. THE FILTER SHALL MEET THE SPECIFICATIONS IN TABLE 1.
6-6 MECHANICAL SHOCK DROP THE FILTER RANDOMLY ONTO THE CONCRETE FLOOR FROM THE HEIGHT OF 30cm 3 TIMES. THE FILTER SHALL FULFILL THE SPECIFICATIONS IN TABLE 1.
6-7 VIBRATION SUBJECT THE FILTER TO THE VIBRATION FOR 1 HOUR EACH IN X,Y AND Z AXLES WITH THE AMPLITUDE OF 1.5 mm AT 10 TO 55 Hz. THE FILTER SHALL FULFILL THE SPECIFICATIONS IN TABLE 1.

- 6-8 LEAD FATIGUE
  - 6-8-1 PULLING TEST

WEIGHT ALONG WITH THE DIRECTION OF LEAD WITHOUT ANSHOCK 1.5 KG. THE FILTER SHALL SATISFY ALL THEINITIAL CHARACTERISTICS.

6-8-2 BENDING TEST

LEAD SHALL BE SUBJECT TO WITHSTAND AGAINST 90° BENDING IN THE DERECTION OF THICKNESS. THIS OPERATION SHALL BE DONE TOWARD BOTH DIRECTION. THE FILTER SHALL SHOW NO EVIDENCE OF DAMAGE AND SHALL SATISFY ALL THE INITIAL ELECTRICAL CHARACTERISTICS.

ITEM	SPECIFICATION	
CENTRE FREQUENCY(f 。)	450.0±1.5 KHz	
BAND WIDTH(6 dB)	±5.5KHz Min	
SELECTIVITY(40dB)	$\pm$ 13.0 KHz Max	
STOP BAND ATTENUATION	25dB Min	
RIPPLE	2.5 dB Max	
INSERTION LOSS	5.5dB Max	

TABLE 1