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: | LTUC450D | | | |
| PREPARED 编 制: | LEO | CHECKED 审 核: | YORK | |
| APPROVED 批 准: | LIUMING | D A T E 日 期: | 2013-6-20 | |

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

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 |
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CERAMIC FILTER

1.

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THIS SPECIFICATION SHALL COVER THE CHARACTERISTICS OF CERAMIC FILTER WITH 450KHz.

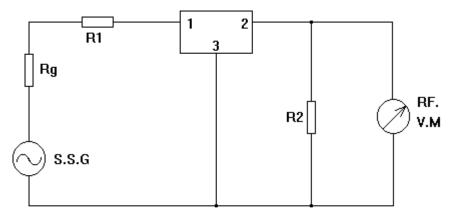
2. PART NUMBER LTUC450D

SPECIFICATION No.: QJ/A25•14•0512

- 3. ELECTRONICAL SPECIFICATIONS
 - A. CENTRE FREQUENCY (f $_{\circ}$) : 450.0 KHz \pm 1.0KHz.
 - B. BAND WIDTH AT 6 dB : \pm 10.0 MIN.(TO 450KHz)
 - C. BAND WIDTH AT 40 dB : ± 20.0 KHz MAX.(TO 450KHz)
 - D. STOP BAND ATTENUATION : 28dB MIN.(AT f_ \pm 100KHz)
 - E. RIPPLE : 2.0 dB MAX.
 - F. INSERTION LOSS : 5.0 dB MAX (AT MINIMUM LOSS POINT)
 - G. TEMPRATURE COEFFICIENT
 - OF CENTER FRENQUENCY : ± 50 PPM/°C Max.(-20 TO +80 °C)
 - H. INPUT/OUTPUT IMPEDANCE : $1.5 \mathrm{K}\,\Omega$
 - 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)

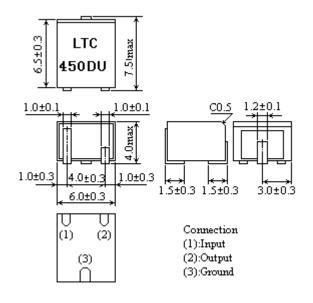
 $Rg+R1=R2=1.5 K \Omega$

C<=50 PF

LTUC450D

CERAMIC FILTER

5. DIMENSIONS(mm)



6. ENVIRONMENTAL CHARACTERISTICS

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6-1 HIGH TEMPERATURE EXPOSURE
SUBJECT THE FILTER TO +80°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.
6-2 MOISTURE
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6-2 MOISTURE

KEEP THE FILTER AT 40°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.

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.

6-4 TEMPERATURE CYCLING

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.

6-5 RESISTANCE TO SOLDER HEAT DIP THE FILTER TERMINALS NO CLOSER THAN 1.5mm INTO THE SOLDER BATH AT 260 °C \pm 10 °C FOR 10 \pm 1 SEC. THEN

LTUC450D

CERAMIC FILTER

RIPPLE

INSERTION LOSS

| | RELEASE THE FILTER INTO THE RO HOURS. THE FILTER SHALL MEET T | | | | |
|--|--|------------------|--|--|--|
| 6-6 | | | | | |
| 00 | 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 | 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 | 6-8 LEAD FATIGUE | | | | |
| | 6-8-1 PULLING TEST | | | | |
| | WEIGHT ALONG WITH THE DIRECTION OF LEAD WITHOUT AN | | | | |
| | SHOCK 1.5 KG. THE FILTER SHALL SATISFY ALL THE | | | | |
| | INITIAL CHARACTERISTICS. | | | | |
| | 6-8-2 BENDING TEST | | | | |
| | LEAD SHALL BE SUBJECT TO WITHSTAND AGAINST 90 $^\circ$ | | | | |
| | 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. | | | | |
| | | | | | |
| - | TABLE 1 | | | | |
| | ITEM | SPECIFICATION | | | |
| | CENTRE FREQUENCY(f_{\circ}) | 450.0±1.0 KHz | | | |
| | BAND WIDTH(6 dB) | ± 10 KHz Min | | | |
| | SELECTIVITY(40dB) | ± 20 KHz Max | | | |
| | STOP BAND ATTENUATION | 28dB Min | | | |
| | | | | | |

2.0 dB Max

5.0dB Max