Shoulder 好达

SHOULDER ELECTRONICS LIMITED

CERAMIC FILTER Data Sheet

PRODUCT 产 品: CERAMIC FILTER

MODEL NO 型 号: LTU(W)C 455

PREPARED 编 制: Fengyu

CHECKED 审 核: York

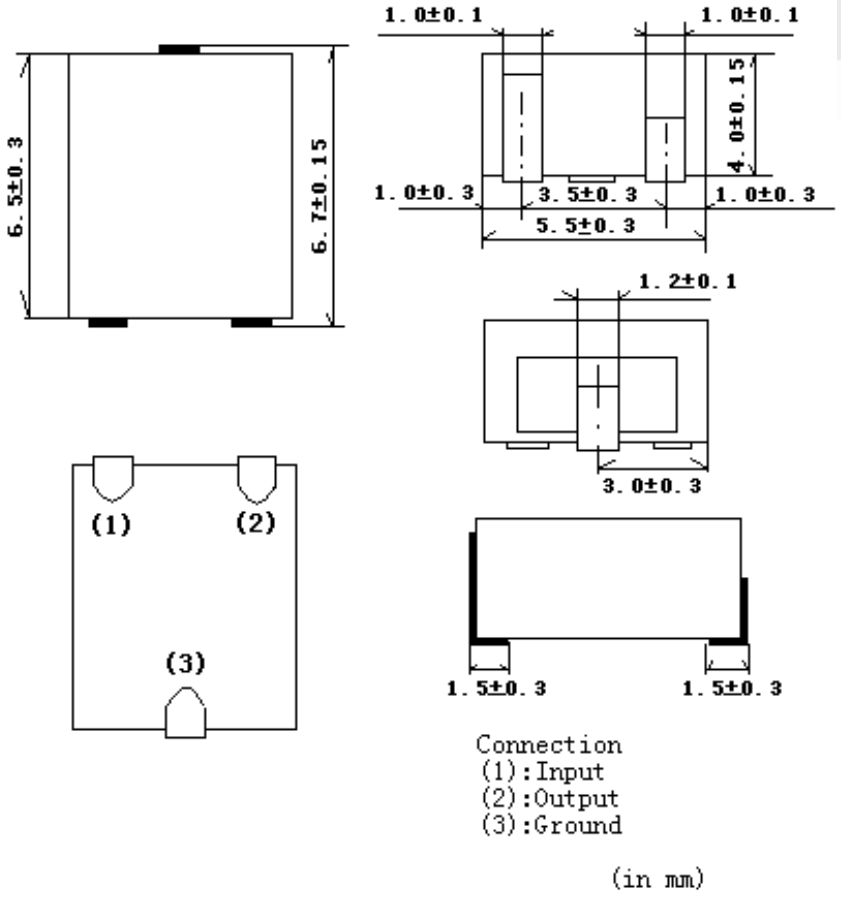
APPROVED 批 准: Lijiating

DATE 日 期: 2008-01-25

1. LTUC 455 SERIES

Part Number	Center Frequency	Insertion Loss min	Ripple max	6dB Bandwidth min	40dB Bandwidth max	Stop Band Att. fo±10 KHz min	I/O Impedance
	(KHz)	(dB)	(dB)	(KHz)	(KHz)	(dB)	(Ohm)
LTUC455D	455±1.5	4	2.0(fn±7.0 KHz)	±10.0	±20.0	27	1500
LTUC455E	455±1.5	6	2.0(fn±5.5 KHz)	±7.5	±15.5	27	1500
LTUC455F	455±1.5	6	2.0(fn±4.5 KHz)	±6.0	±12.5	27	1500
LTUC455G	455±1.5	6	2.0(fn±3.5 KHz)	±4.5	±10.0	25	1500

DIMENSION:



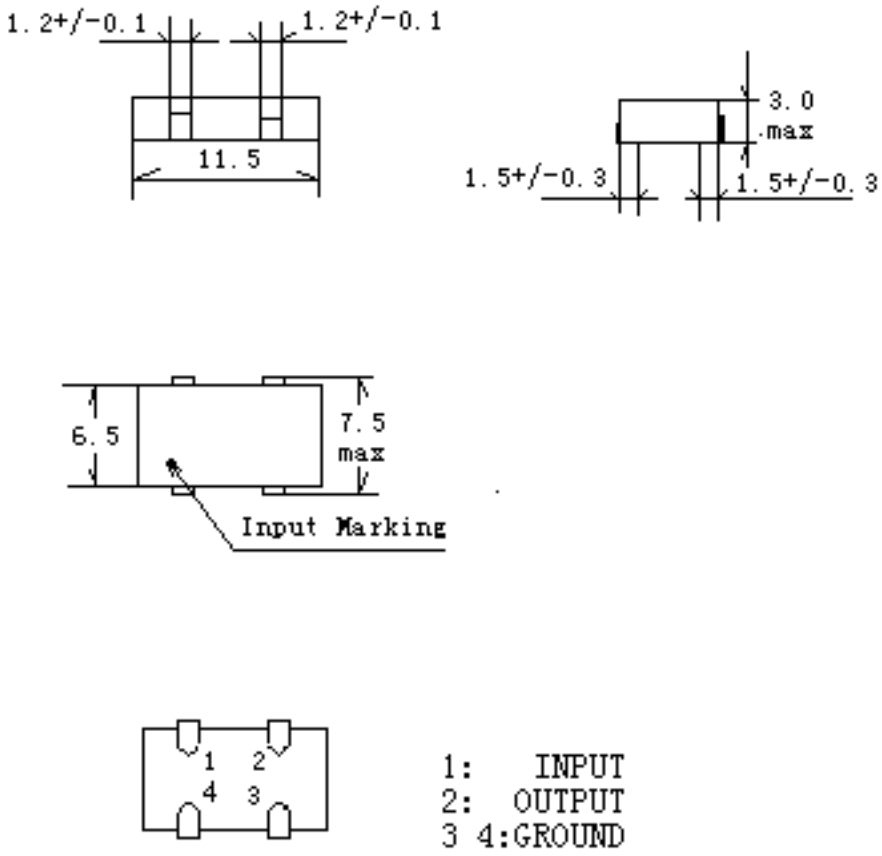
Connection
(1):Input
(2):Output
(3):Ground

(in mm)

2. LTWC 455 SERIES

Part Number	Center Frequency	Insertion Loss min	Ripple max	6dB Bandwidth min	40dB Bandwidth max	Stop Band Att. fo±10 KHz min	I/O Impedance
	(KHz)	(dB)	(dB)	(KHz)	(KHz)	(dB)	(Ohm)
LTWC455D	455±1.5	4	2.0(fn±7.0 KHz)	±10.0	±20.0	50	1500
LTWC455E	455±1.5	4	2.0(fn±5.5 KHz)	±7.5	±15.5	50	1500
LTWC455F	455±1.5	6	2.0(fn±4.5 KHz)	±6.0	±12.5	47	1500
LTWC455G	455±1.5	6	2.0(fn±3.5 KHz)	±4.5	±10.0	47	1500

DIMENSION:



3. PART NUMBERING : LTUC455D

4. ELECTRONICAL SPECIFICATIONS

A. CENTRE FREQUENCY (f。) : 455KHz±1.5KHz. MAX.
B. BAND WIDTH AT 6 dB : ±10.0 KHz MIN.(TO 455KHz)
C. BAND WIDTH AT 40 dB : ±20.0 KHz MAX.(TO 455KHz)
D. STOP BAND ATTENUATION : 27 dB MIN.(AT f。±100KHz)
E. RIPPLE : 2.0 dB MAX.
F. INSERTION LOSS : 6.0 dB MAX (AT THE SMALLEST LOSS)
G. TEMPRATURE COEFFICIENT
OF CENTER FRENQUENCY : ±50PPM/℃ Max.(-20 TO +80℃)
H. INPUT/OUTPUT IMPEDANCE : 1.5KΩ

NOTE : A) CENTER FREQUENCY SHALL BE DEFIED AS THE CENTRAL VALUE OF THE BAND WITH AT 6 dB

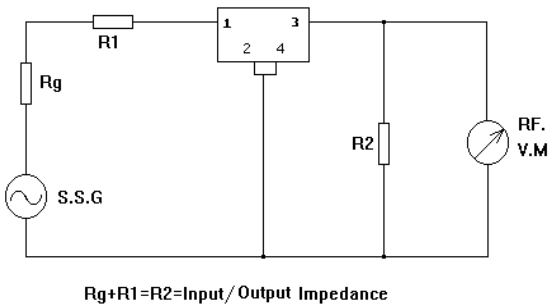
B) TEMPERATURE COEFFICIENT OF CENTER FREQUENCY SHALL BE DEFINED AS THE AVERAGE OF THE CENTRAL FREQUECY.

5. MEASUREMENT

A. ENVIRONMENTAL CONDITION

MEASUREMENT SHALL BE CARRIED OUT AT THE REFERENCE TEMPERATURE OF 25℃ ±2℃. IT SHALL BE POSSIBLY DONE AT 5℃TO 35℃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 KΩ
C<=50 PF

6. ENVIRONMENTAL CHARACTERISTICS

6-1 HIGH ATURE EXPOSURE
SUBJ FILTER TO +80℃ FOR 96 HOURS. THEN RELEASE THE
F ILT) THE ROOM CONDITIONS FOR 1 TO 2 HOURS

PRIOR TO THE MEASUREMENT. IT SHALL FULFILL THE SPECIFICATIONS IN TABLE 1.

6-2 MOISTURE

KEEP THE FILTER AT 40℃ AND 95% RH FOR 96 HOURS.THEN RELEASE THE FILTER INTO THE ROOM CONDITIONS FOR 1 TO 2 HOURS PRIOR TO THE MEASUREMENT. IT SHALL FULFILL THE SPECIFICATIONS IN TABLE 1.

6-3 LOW TEMPERATURE EXPOSURE

SUBJECT THE FILTER TO -20℃ FOR 96 HOURS. THEN RELEASE THE FILTER INTO THE ROOM CONDITIONS FOR 1 TO 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 -55℃ FOR 30 MINUTES. FOLLOWSING BY A HIGH TEMPERATURE OF +85℃ FOR 30 MINUTES. THEN RELEASE THE FILTER INTO THE ROOM CONDITIONS FOR 1 TO 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 270℃ ±10℃ FOR 10±1 SEC. THEN RELEASE THE FILTER INTO THE ROOM CONDITIONS FOR 1 TO 2 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 AXES 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 AN SHOCK 3 KG. THE FILTER SHALL SATISFY ALL THE INITIAL 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 SHALLSATISFY

ALL THE INITIAL ELECTRICAL CHARACTERISTICS.

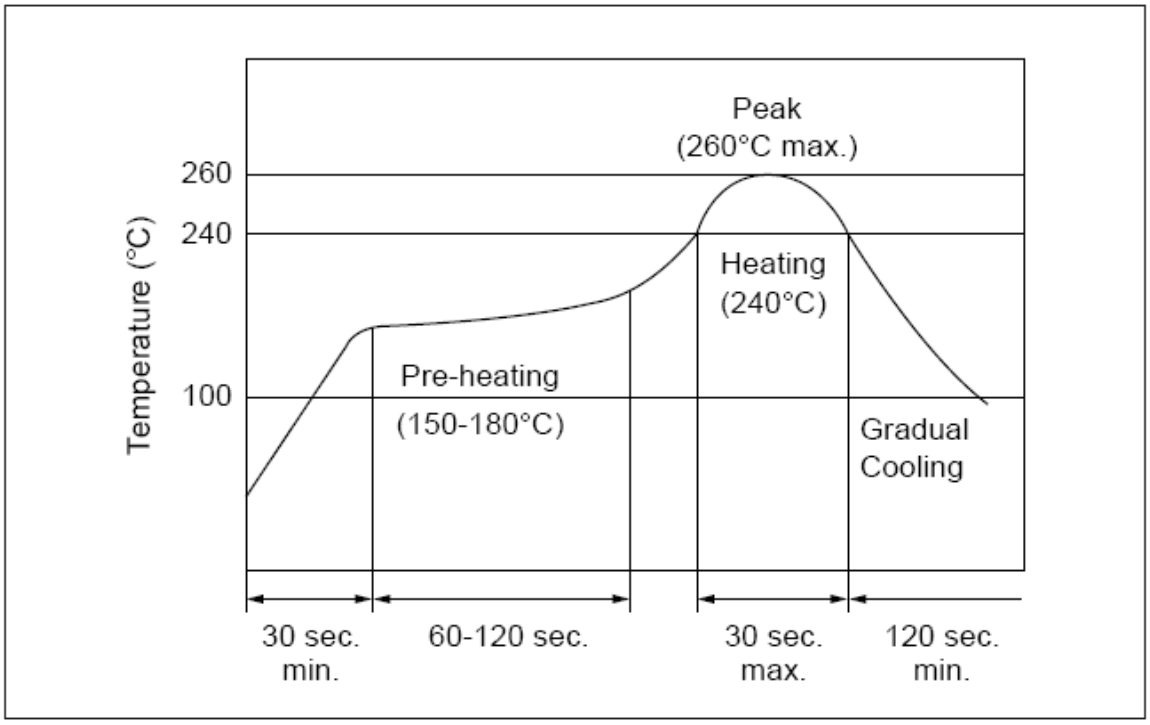
TABLE 1

ITEM	SPECIFICATION
CENTRE FREQUENCY(f。)	455±1.5 KHz Max
BAND WIDTH(6 dB)	±10.0 KHz Min
SELECTIVITY(40dB)	±20.0 KHz Max
STOP BAND ATTENUATION	27 dB Min
RIPPLE	2.0 dB Max
INSERTION LOSS	6.0 dB Max

7. STANDARD REFKOW SOLDERING CONDITIONS

7-1. REFLOW

FILTER IS SOLDERED TWICE WITHIN THE FOLLOWING TEMOERATURE CONDITIONS.

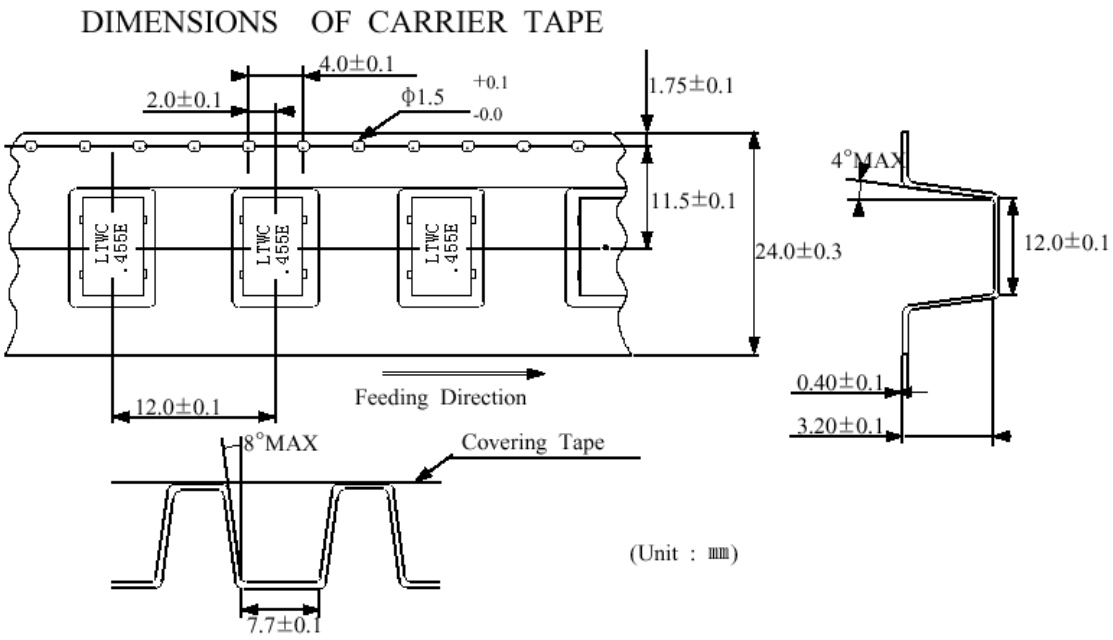


7-2. SOLDERING IRON

ELECTRODE IS DIRECTLY SOLDERED WITH THE TIP OF SOLDERING IRON AT +350±5 ℃

FOR 3.0±0.5 SECONDS.

8. DIMENSIONS OF CARRIER TAPE.



9. DIMENSIONS OF REEL