

Approval Specification

TO:

Part No: DSF446.0B02-TD01

Customer's Part No:

Customer's Approval Certificate

Please return this copy as a certification of

Your approval

Checked & Approval by:

Date:

CETC DEQING HUAYING ELECTRONICS CO., LTD.

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| Approved by: |
| Checked by: |
| Issued by: |

SPECIFICATION

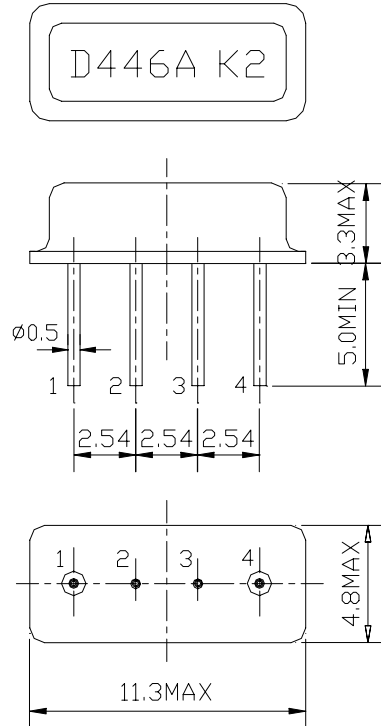
MODEL D446A

SURFACE ACOUSTIC WAVE FILTER

1. Package Dimension

(F-11)

Unit: mm



| Pin No. | Function |
|---------|----------|
| 1. | Input |
| 2. | Ground |
| 3. | Ground |
| 4. | Output |

2. Marking

| | | | |
|----------|------------|----------|-----------|
| <u>D</u> | <u>446</u> | <u>A</u> | <u>K2</u> |
| (1) | (2) | (3) | (4) |

- (1) D: Manufacture's logo
- (2) 446: Center frequency (MHz)
- (3) A: Series code
- (3) K2: Date code

| | |
|------------|---------------------|
| K | 2 |
| Month code | Last figure of year |

| | |
|------------|----------------------------|
| Month | 1 2 3 4 5 6 7 8 9 10 11 12 |
| Month code | A B C D E F G H I J K L |

EX: "K2" means November of 2002

3. Performance

3.1 Application

RF Filter for Telecommunications.

Center Frequency: 446.0 MHz.

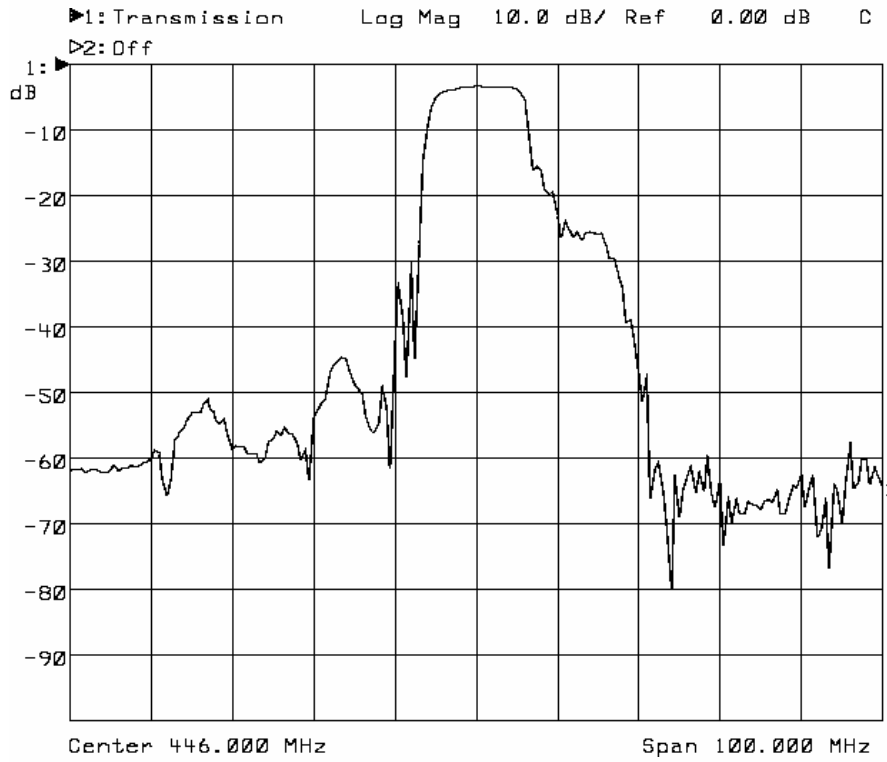
3.2 Maximum Rating

| | |
|-----------------------------|----------------|
| Operation Temperature Range | -10°C to +50°C |
| Storage Temperature Range | -40°C to +85°C |
| DC Permissive Voltage | 10V DC max. |
| Maximum Input Power | 0 dBm |

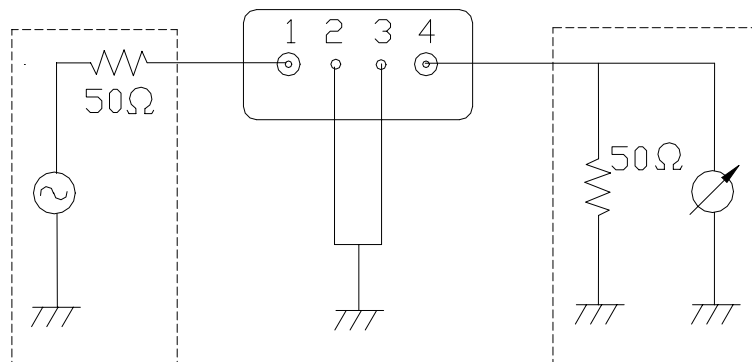
3.3 Electronic Characteristics

| Item | Frequency (MHz) | Specification |
|-------------------------|--|--------------------------|
| Center Frequency (fo) | 446.0 | |
| Passband Width | $fo \pm 2.0$ | |
| Insertion Loss | Passband | 4.5 dB max. |
| Ripple Deviation | Passband | 2.0 dB max. |
| Stop Band Suppression | $fo - 100 \sim fo - 40.8$ $fo + 40.8 \sim fo + 100$ | 50 dB min. 50 dB min. |
| Terminating Impedance | | 50 Ω / 0pF |

3.4 Frequency Characteristics



3.5 Test Circuit



4. Reliability

4.1 Mechanical Shock: The components shall remain within the electrical specifications after 1000 shocks, acceleration 392 m/s^2 , duration 6 milliseconds.

4.2 Vibration Fatigue: The components shall remain within the electrical specifications after loaded vibration at $10 \sim 120 \text{ Hz}$, amplitude 1.5 mm, X,Y,Z, direction, for 2 hours.

4.3 Terminal Strength: The components shall remain within the electrical specifications after pulled 2 kgs weight for 10 seconds towards an axis of each terminal.

4.4 High Temperature Storage: The components shall remain within the electrical specifications after being kept at the $85^\circ\text{C} \pm 2^\circ\text{C}$ for 960 hours, then kept at room temperature for 2 hours.

4.5 Low Temperature Storage: The components shall remain within the electrical specifications after being kept at the $-25^\circ\text{C} \pm 2^\circ\text{C}$ for 960 hours, then kept at room temperature for 2 hours.

4.6 Temperature Cycle: The components shall remain within the electrical specifications after 5 cycles of high and low temperature testing (one cycle: 80°C for 30 minutes \rightarrow 25°C for 5 minutes \rightarrow -25°C for 30 minutes) than kept at room temperature for 2 hours.

4.7 Humidity Test: The components shall remain within the electrical specifications after being kept at the condition of ambient temperature $40 \pm 2^\circ\text{C}$, and $90 \sim 95\% \text{ RH}$ for 960 ± 5 hours, then kept at room temperature and normal humidity for 1.5 hours.

4.8 Solder-heat Resistance: The components shall remain within the electrical specifications after dipped in the solder at $350^\circ\text{C} \pm 5^\circ\text{C}$ for 5 ± 1 seconds, then kept at room temperature for 10 mins. (Terminal must be dipped leaving 1.5 mm from the case).

4.9 Solderability: Solderability of terminal shall be kept at more than 80% after dipped in the solder flux at $230^\circ\text{C} \pm 5^\circ\text{C}$ for 5 ± 1 seconds.

4.10 Storage: The components shall meet the electrical and mechanical specifications after 5 years storage, if stored within the temperature range of $-20^\circ\text{C} \sim +60^\circ\text{C}$ and in the humidity of 20 to 60% r.h.

5. Remarks

5.1 Static voltage

Static voltage between signal load & ground may cause deterioration & destruction of the component. Please avoid static voltage.

5.2 Ultrasonic cleaning

Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning.

5.3 Soldering

Only leads of component may be soldered. Please avoid soldering another part of component.