

# 深圳康比电子有限公司

# KANGBI TECHNOLOGY INDUSTRY CO.,LTD.

# 产品规格书

# SAMPLE APPROVAL SHEET

F11-DIP
R433.92M

Customer's Approval Certificate
Please return this copy as a certification of
Y our approval

Checked & Approval by:

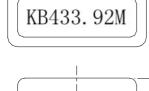
Date:

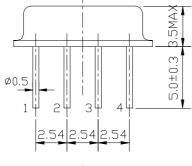
# 1. Package Dimension

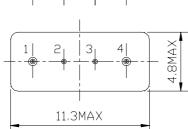
(F-11)



mm







Pin No. Function

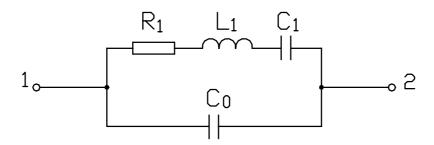
- 1. Input
- 2. G round
- 3. G round
- 4. O utput

# 2. Marking

## R433.92M

- 1. Color: Black or Blue
- 2. D: Manufacture's logo
- 3. R1: One-port SAW Resonator
- 4. 433.92: Center Frequency (MHz)

# 3. Equivalent LC Model



### 4. Performance

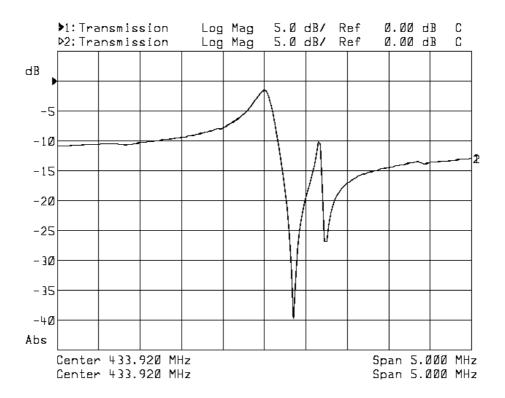
# 4.1 Maximum Rating

DC Voltage V <sub>DC</sub>	10V		
AC Voltage V <sub>PP</sub>	10V (50Hz/60Hz)		
Operation Temperature	-40 ℃ to +85℃		
Storage Temperature	-45 ℃ to +85℃		
RF Power Dissipation	0dBm		

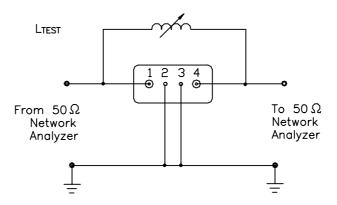
### 4.2 Electronic Characteristics

Item		Units	Minimum	Typical	Maximum
Center Frequency		MHz	433.845	433.92 433	3.995
Insertion Loss		dB		1.3	2.5
Quality Factor	Unloaded Q			11,000	_
	50 Ω Loaded Q	_	_	2,000	_
Tem perature	Turnover Temperature	$^{\circ}$		25	
Stability	Turnover Frequency	KHz	_	fo	_
	Freq. Temp. Coefficient	ppm/°C²	_	0.032	_
Frequency Aging		ppm/yr	_	< <u>±10</u>	_
DC Insulation Resistance		ΜΩ	1.0	_	_
RF Equivalent RLC Model	Motional Resistance R <sub>1</sub>	Ω	_	18	26
	Motional Inductance L <sub>1</sub>	μН		86	_
	Motional Capacitance C <sub>1</sub>	fF	_	1.56	_
	Shunt Static Capacitance Co	pF	1.7	2.0	2.3

#### 4.3 Frequency Characteristics



#### 4.4 Test Circuit



Note: Reference temperature shall be  $25\pm2^{\circ}$ C. However, the measurement may be carried out at  $5^{\circ}$ C to  $35^{\circ}$ C unless there is a dispute.

## 5. Reliability

- 5.1 Mechanical Shock: The components shall remain within the electrical specifications after 1000 shocks, acceleration 392 m/s<sup>2</sup>, duration 6 milliseconds.
- 5.2 Vibration Fatigue: The components shall remain within the electrical specifications after loaded vibration at 20 Hz, amplitude 1.5 mm, for 2 hours.
- 5.3 Terminal Strength: The components shall remain within the electrical specifications after pulled 2 kgs weight for 10 seconds towards an axis of each terminal.
- 5.4 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 48 hours, then kept at room temperature for 2 hours.
- 5.5 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 48 hours, then kept at room temperature for 2 hours.
- 5.6 Temperature Cycle: The components shall remain within the electrical specifications after 5 cycles of high and low temperature testing (one cycle:  $80^{\circ}$ C for 30 minutes  $\rightarrow$  25°C for 5 minutes  $\rightarrow$  -25°C for 30 minutes )than kept at room temperature for 2 hours.
- 5.7 Solder-heat Resistance: The components shall remain within the electrical specifications after dipped in the solder at 260°C for  $10\pm1$  seconds, then kept at room temperature for 2 hours. (Terminal must be dipped leaving 1.5 mm from the case).
- 5.8 Solder Ability: Solder ability 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  $5\pm 1$  seconds.

#### 6. Remarks

#### 6.1 Static voltage

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

#### 6.2 Ultrasonic cleaning

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

ultrasonic cleaning.

#### 6.3 Soldering

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