



## 產品規格書

### Market Requirement Document

CUSTOMER:

\_\_\_\_\_

PRODUCT :

声表面谐振器

MODEL:

F11-R330M

PARAMETER:

R330M

DATE:

\_\_\_\_\_

### 承認後請寄回一份

PLEASE RETURN ONE COPY TO US SO THAT WE GET YOUR APPROVAL

承認結果 CONCLUSION	客戶簽名 SIGNATURE	客戶承認章 STAMP	日期 DATE	備注 REMARK
合格 ACCEPT				
不合格 REJECT				

制表： 钟先生 \_\_\_\_\_

审核： \_\_\_\_\_

(公章)

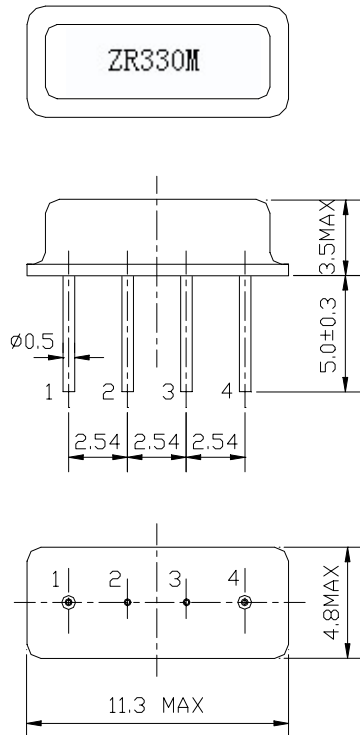
尊敬的客户：请您抽出一点时间，在7-10个工作日内将承认书回签，若未回签，以视默认。谢谢合作！

## 1. Package Dimension

( F-11 )

Unit:

mm



Pin No. Function

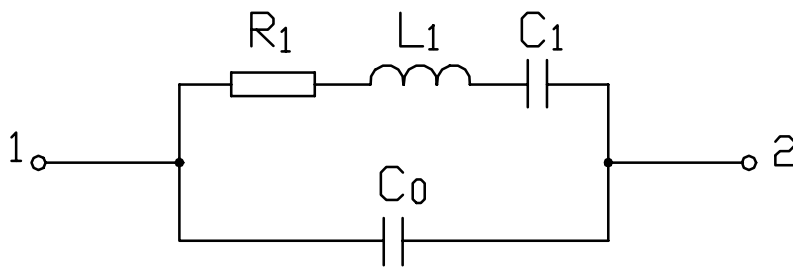
- 1. Input
- 2. Ground
- 3. Ground
- 4. Output

## 2. Marking

ZX 330.00

- 1. Color: Black or Blue
- 2. D: Manufacture's logo
- 3. R1: One-port SAW Resonator
- 4. 330.00: Center Frequency ( MHz)

## 3. Equivalent LC Model



## 4. Performance

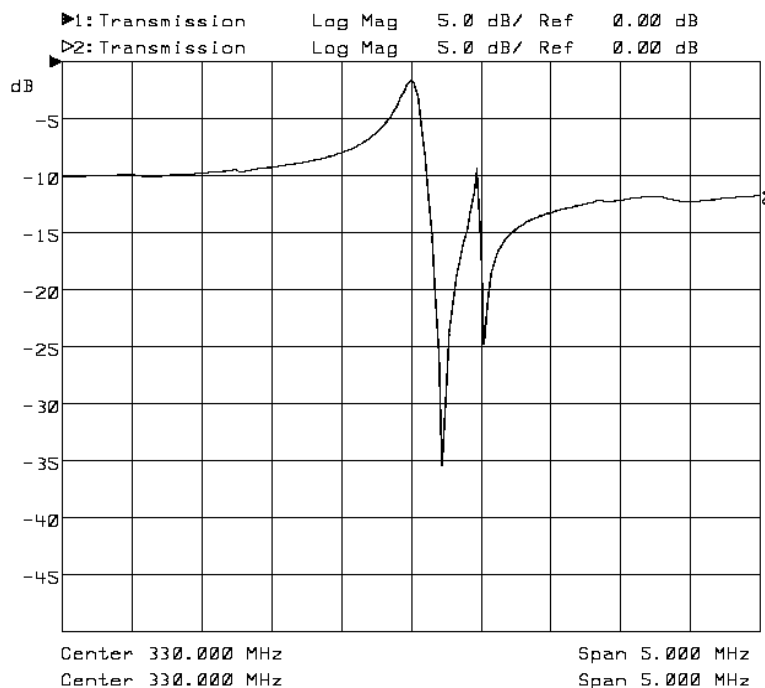
### 4.1 Maximum Rating

DC Voltage $V_{DC}$	10V
AC Voltage $V_{PP}$	10V (50Hz/60Hz)
Operation Temperature	-40 °C to +85°C
Storage Temperature	-45 °C to +85°C
RF Power Dissipation	0dBm

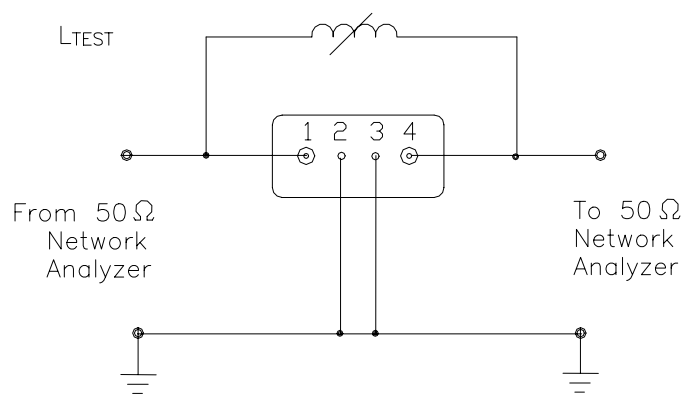
### 4.2 Electronic Characteristics

Item		Units	Minimum	Typical	Maximum
Center Frequency $f_0$		MHz	329.925	330.00	330.075
Insertion Loss		dB	—	1.3	2.5
Quality Factor	Unloaded Q	—	—	10,700	—
	50 $\Omega$ Loaded Q	—	—	2,000	—
Temperature	Turnover Temperature	°C	—	39	—
Stability	Turnover Frequency	KHz	—	$f_0+2.7$	—
	Freq. Temp. Coefficient	ppm/°C <sup>2</sup>	—	0.032	—
Frequency Aging		ppm/yr	—	$<\pm 10$	—
DC Insulation Resistance		M $\Omega$	1.0	—	—
RF Equivalent RLC Model	Motional Resistance $R_1$	$\Omega$	—	25	32
	Motional Inductance $L_1$	$\mu$ H	—	130.92	—
	Motional Capacitance $C_1$	fF	—	1.78	—
	Shunt Static Capacitance $C_0$	pF	1.9	2.2	2.5

### 4.3 Frequency Characteristics



### 4.4 Test Circuit



Note: Reference temperature shall be  $25 \pm 2^\circ\text{C}$ . However, the measurement may be carried out at  $5^\circ\text{C}$  to  $35^\circ\text{C}$  unless there is a dispute.

## 5. Reliability

5.1 Mechanical Shock: The components shall remain within the electrical specifications after 1000 shocks, acceleration  $392 \text{ m/s}^2$ , 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:  $80^\circ\text{C}$  for 30 minutes  $\rightarrow$   $25^\circ\text{C}$  for 5 minutes  $\rightarrow$   $-25^\circ\text{C}$  for 30 minutes ) then 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  $260^\circ\text{C}$  for  $10 \pm 1$  seconds, then kept at room temperature for 2 hours. (Terminal must be dipped leaving 1.5 mm from the case).

5.8 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  $5 \pm 1$  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.