深圳市帝国科技有限公司

SHENZHEN DIGUO TECHONLOGY CO.,LTD

规格书

Specification

CUSTOMER 客户: _____

Name 名称： 声表面谐振器

Model 型号: R315M

Package 封装: TO-39-DIP

审核结果 Audit results	客戶簽名 SIGNATURE	日期 DATE	備注 REMARK
合格 ACCEPT			
不合格 REJECT			

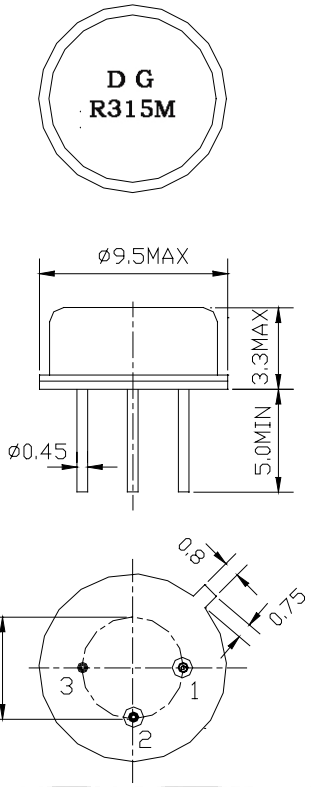
工程：刘玖武 _____ 审核：_____

(公章)

1. Package Dimension

(TO-39/3A)

Unit: mm



Pin No. Function

1. Input
2. Output
3. Ground

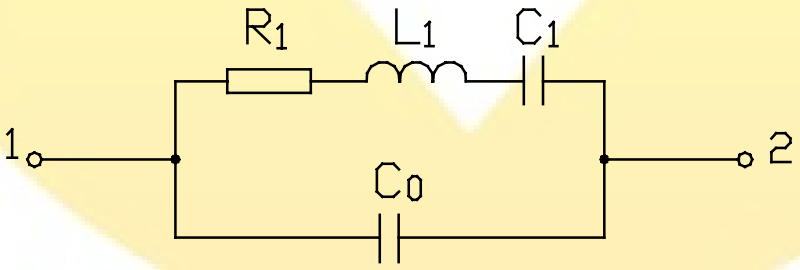
2. Marking

D G

R315.00

1. Color: Black or Blue
2. DR: Manufacture's logo
3. 1: One-port SAW Resonator
4. 315.00: Center Frequency (MHz)

3. Equivalent LC Model



4. Performance

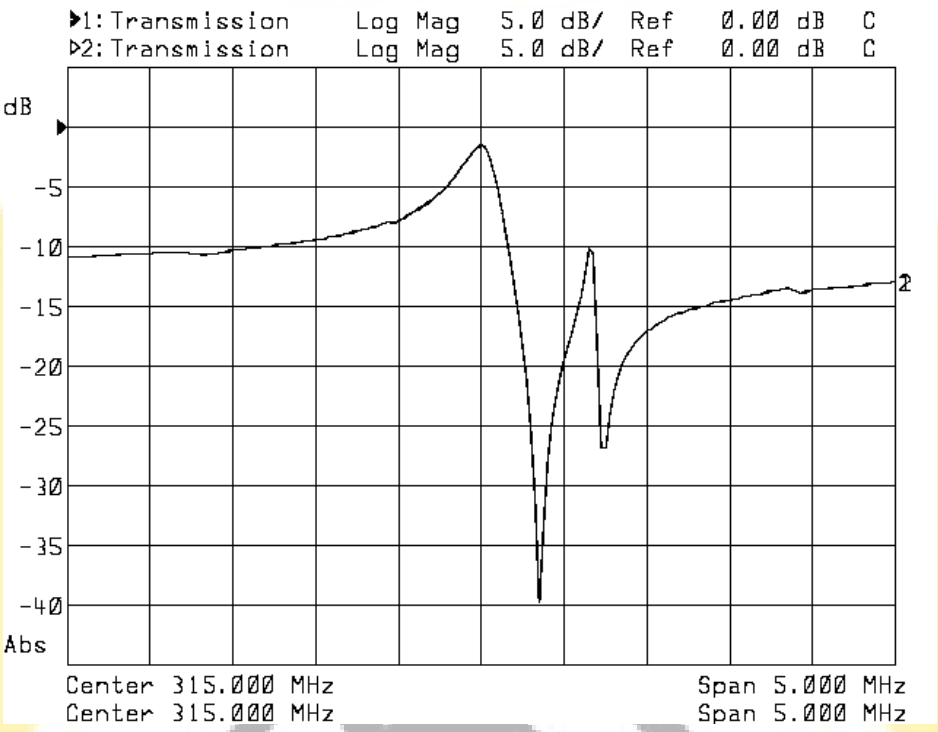
4.1 Maximum Rating

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

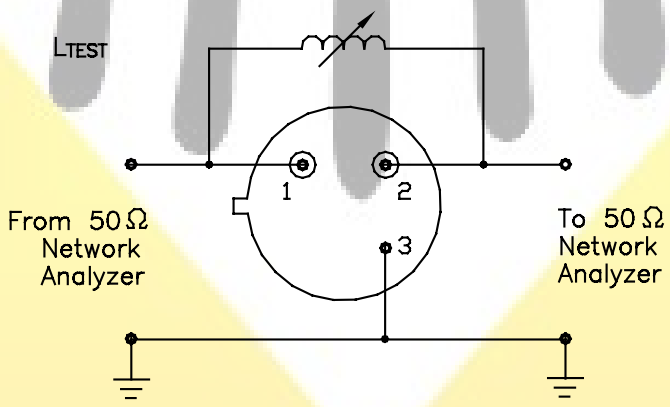
4.2 Electronic Characteristics

Item		Units	Minimum	Typical	Maximum
Center Frequency		MHz	314.925	315	315.075
Insertion Loss		dB	—	1.3	2.5
Quality Factor	Unloaded Q	—	—	12,000	—
	50Ω Loaded Q	—	—	1,900	—
Temperature Stability	Turnover Temperature	℃	10	25	40
	Turnover Frequency	KHz	—	fo	—
	Freq. Temp. Coefficient	ppm/℃^{2}	—	0.037	—
Frequency Aging		ppm/yr	—	<±10	—
DC Insulation Resistance		MΩ	1.0	—	—
RF Equivalent RLC Model	Motional Resistance R_1	Ω	—	23	29
	Motional Inductance L_1	μH	—	115.2	—
	Motional Capacitance C_1	fF	—	2.2	—
	Shunt Static Capacitance C_O	pF	2.1	2.4	2.7

4.3 Frequency Characteristics



4.4 Test Circuit



Note: Reference temperature shall be 25±2℃. However, the measurement may be carried out at 5℃ to 35℃ 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^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℃±2℃ 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℃±2℃ 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℃ for 30 minutes → 25℃ for 5 minutes→-25℃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℃ for 10±1 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℃±5℃ for 5±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.