



深圳市泰河电子有限公司

SHENZHEN TH ELECTRONICS CO;LTD

产品确认书

Product Confirmation

CUSTOMER: _____

Product :

声表面谐振器

Frequency:

R315M

Model:

SMD5035mm

DATE: _____

承认后请寄回一份

PLS SEND BACK ONE COPY TO US AFTER YOUR APPROVAL

承认结果 CONCLUSION	客户签名 SIGNATURE	客户承认章 STAMP	日期 DATE	备注 REMARK
合格 ACCEPT				
不合格 REJECT				

制表: 刘小姐 _____

审核: _____
(公章)

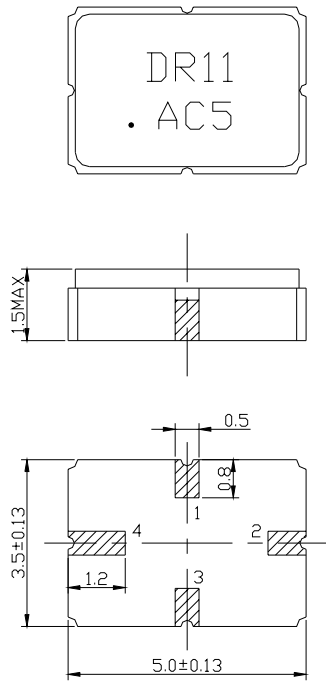
尊敬的客户: 请您抽出一点时间, 在7-10个工作日内将承认书回签, 若未回签, 以视默认. 谢谢合作!

TH R315M 声表面谐振器SMD5035mm

1.Package Dimension

(S53)

Unit: mm



Pin No.	Function
1	Input
3	Output
2,4	Case Ground

2. Marking

DR11
• AC5

- (1) Ink marking or laser marking
- (2) DR: Manufacture's logo
- (3) 11: Model code
- (4) • : Pin 1 Identifier
- (5) A: Tolerance code (+/-75KHz)
- (6) C5: Date code

C
Month code

5
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

e.g.: "C5" means March of 2005

TH R315M 声表面谐振器SMD5035mm

3. Performance

3.1 Application

One-port SAW Resonator for Wireless Remote Controller.

Center frequency: 315.000MHz

3.2 Maximum Rating

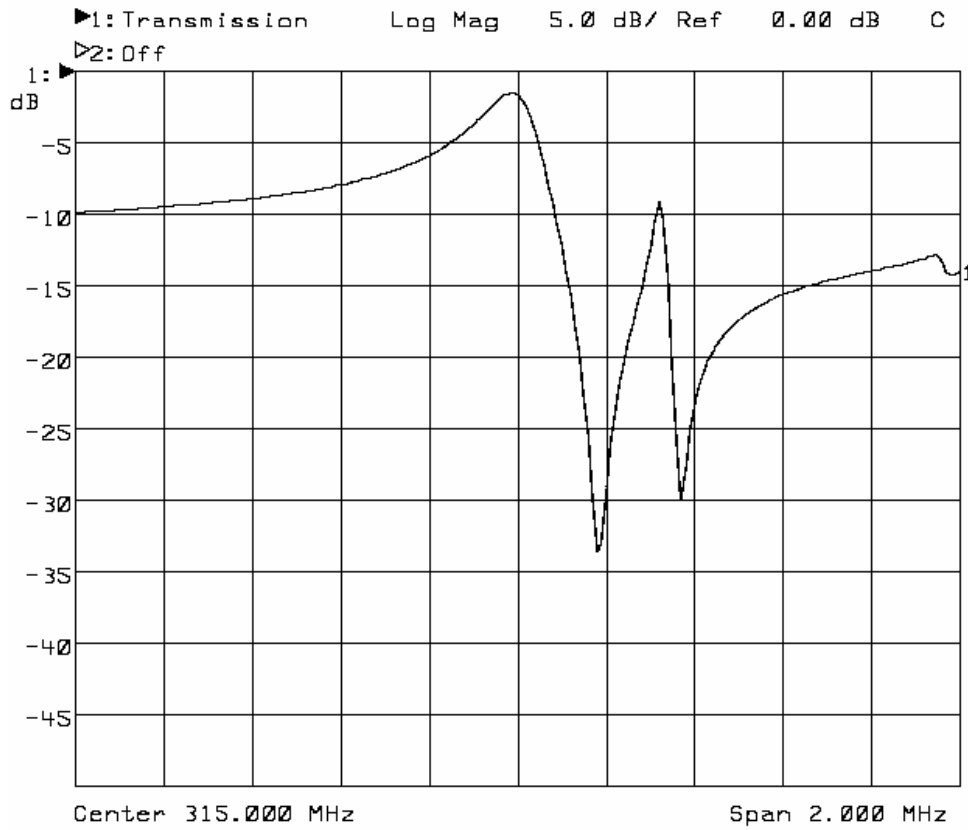
DC Voltage V_{DC}	10V
AC Voltage V_{PP}	10V (50Hz/60Hz)
Operation Temperature Range	-40°C to +85°C
Storage Temperature Range	-45°C to +85°C
RF Power Dissipation	0 dBm

3.3 Electronic Characteristics

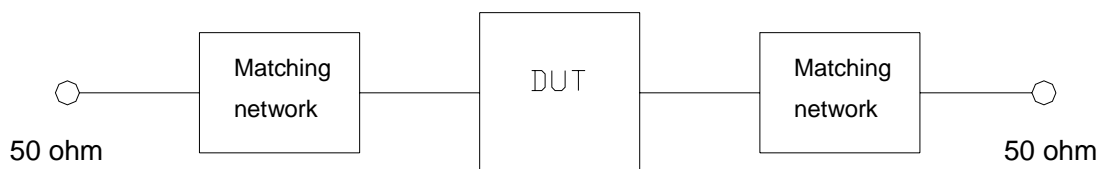
Item	Units	Minimum	Typical	Maximum
Center Frequency (f_0)	MHz	314.925	315.000	315.075
Insertion Loss	dB	—	1.7	2.4
Quality Factor	Unloaded Q	—	12,200	—
	50 Ω Loaded Q	—	1,500	—
Temperature	Turnover Temperature	°C	25	—
Stability	Turnover Frequency	KHz	f_0	—
	Freq. Temp. Coefficient	ppm/°C ²	0.032	—
Frequency Aging	ppm/yr	—	<+10	—
DC Insulation Resistance	M Ω	1.0	—	—
RF Equivalent	Motional Resistance R_1	Ω	14	25
	Motional Inductance L_1	μ H	86	—
RLC Model	Motional Capacitance C_1	fF	2.95	—
	Shunt Static Capacitance C_0	pF	2.4	2.7

TH R315M 声表面谐振器SMD5035mm

3.4 Frequency Characteristics



3.5 Test Circuit



4 Reliability

- 4.1 Mechanical Shock: The components shall remain within the electrical specifications after three one-half sine shock pulses(3000g's for 0.3 ms) in each direction(for six total) along each of the three mutually perpendicular axes for a total of 18 shocks.
- 4.2 Vibration Fatigue: The components shall remain within the electrical specifications after loaded vibration at 20~55Hz, amplitude 1.5mm, X,Y,Z, direction, for 2 hours.
- 4.3 Leak Test
 - 4.3.1 Gross Leak Test: Submerge samples into at +85°C water for at least 1 minute. Carefully observe the samples. No bubbles should be seen.
 - 4.3.2 Fine Leak Test: Expose samples for testing to 60 PSIG Helium gas for 2 hours. Then transfer the same samples to another chamber and draw a vacuum. Measure the leak rate. Failure is defined if the leak rate exceeds 5×10^{-8} atm cc/sec Helium.
- 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 $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 960 hours, then kept at room temperature for 2 hours.
- 4.6 Temperature Cycle: The components shall remain within the electrical specification after 32 cycles of high and low temperature testing (one cycle: 80°C for 30 minutes \rightarrow 25°C for 20 seconds \rightarrow -40°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 70°C , and 90~95% RH for 240 hours, then kept at room temperature and normal humidity for 4 hours.
- 4.8 Solder-heat Resistance: The components shall remain within the electrical specifications after dipped in the solder at $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 10 to 11 seconds, then kept at room temperature for 10 minutes.
- 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 $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ 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.

TH R315M 声表面谐振器SMD5035mm

6 Packing

6.1 Dimensions

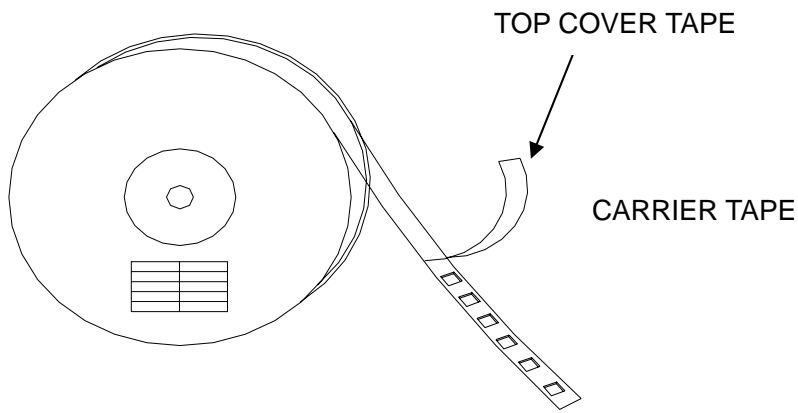
- (1) Carrier Tape: Figure 1
- (2) Reel: Figure 2
- (3) The product shall be packed properly not to be damaged during transportation and storage.

6.2 Reeling Quantity

1,000 pcs/reel

6.3 Taping Structure

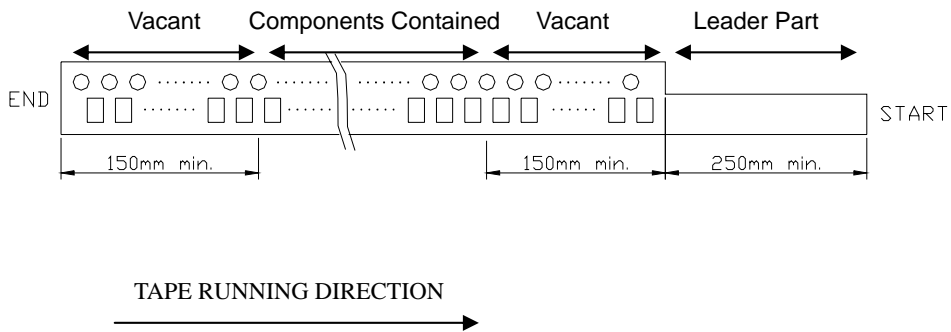
- (1) The tape shall be wound around the reel in the direction shown below.



- (2) Label

Device Name	
Type	
Quantity	
Lot No.	

- (3) Leader part and vacant position specifications.



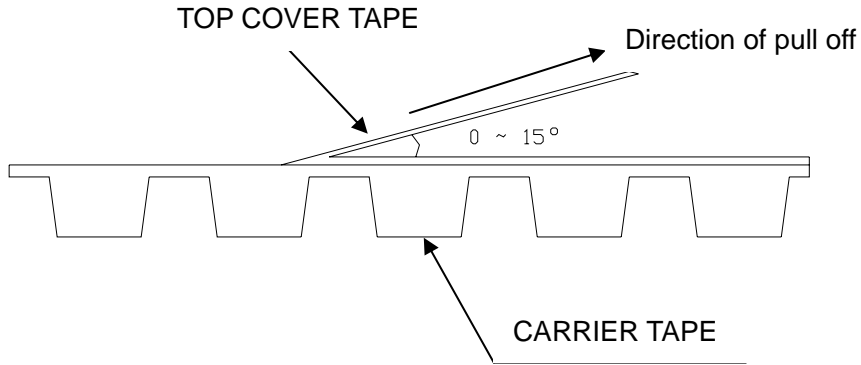
TH R315M 声表面谐振器SMD5035mm

7 Tape Specifications

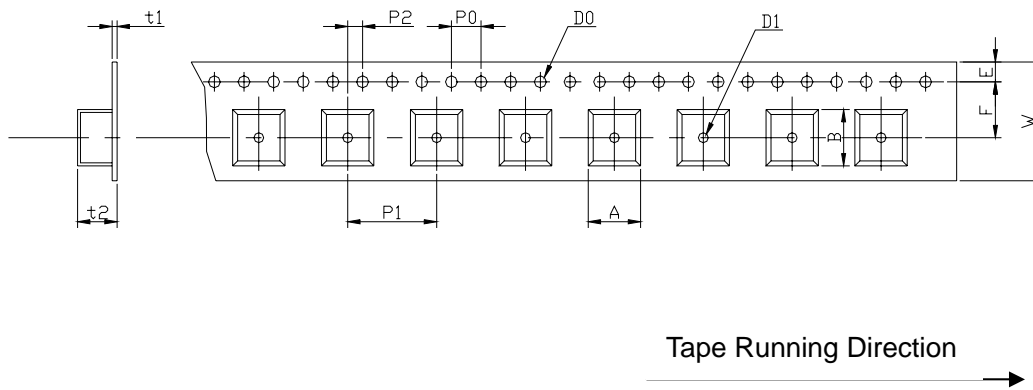
7.1 Tensile Strength of Carrier Tape: 4.4N/mm width

7.2 Top Cover Tape Adhesion (See the below figure)

- (1) pull off angle: 0~15°
- (2) speed: 300mm/min.
- (3) force: 20~70g



[Figure 1] Carrier Tape Dimensions



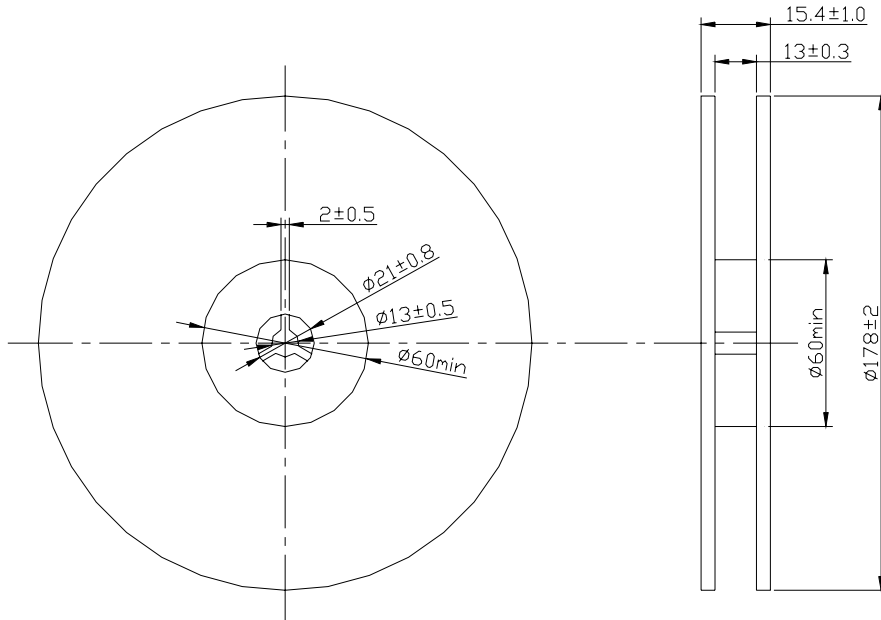
[Unit: mm]

W	F	E	P0	P1	P2	D0	D1	t1	t2	A	B
12.0	5.5	1.75	4.0	8.0	2.0	Φ 1.5	Φ 1.5	0.31	1.95	3.8	5.3
±0.3	±0.1	±0.1	±0.2	±0.1	±0.2	±0.1	±0.25	max.	max.	max.	max.

TH R315M 声表面谐振器SMD5035mm

[Figure 2] Reel Dimensions

[Unit: mm]



[Figure 3] Part Direction

