

# 304.25MHz SMD One Port SAW Resonator

ASR304.25A01-SE



RoHS  
Compliant



5.0 x 5.0 x 1.5mm

**Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive - MSL = N/A: Not Applicable**

## FEATURES:

- Low insertion loss 2.5dB max
- 5.0 x 5.0 x 1.5mm package
- 50Ω impedance termination
- Suitable for RoHS compliant reflow

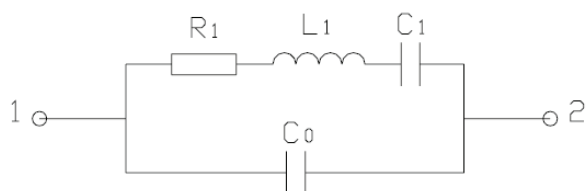
## APPLICATIONS:

- Wireless remote controller
- Mobile communication

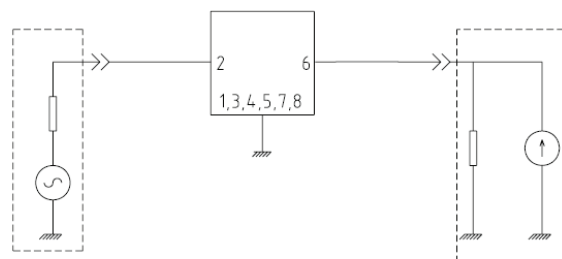
## STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency ( $f_0$ )	304.175	304.250	304.325	MHz	418MHz±75kHz
Insertion Loss	-----	1.5	2.5	dB	
Quality Factor	-----	11,000	-----		Unloaded Q
	-----	1,900	-----		50Ω loaded Q
Turnover Temperature	-----	25	-----	°C	
Freq. Temp. Coefficient	-----	0.032	-----	ppm/°C	
Frequency Aging	-----	-----	≤±10	ppm/yr	
DC Insulation Resistance	1.0	-----	-----	MΩ	
Motional Resistance R1	-----	13.6	21	Ω	
Motional Inductance L1	-----	95.2	-----	uH	
Motional Capacitance C1	-----	2.86	-----	fF	
Shunt Static Capacitance C0	2.40	2.70	3.00	pF	
Operation Temperature Range	-40	-----	+85	°C	
Storage Temperature Range	-45	-----	+85	°C	
DC Voltage between terminals	-----	-----	10	Vdc	
CW RF Power Dissipation	-----	-----	0	dBm	

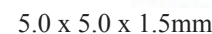
## EQUIVALENT LC MODEL



## TEST CIRCUIT



## ASR304.25A01-SE



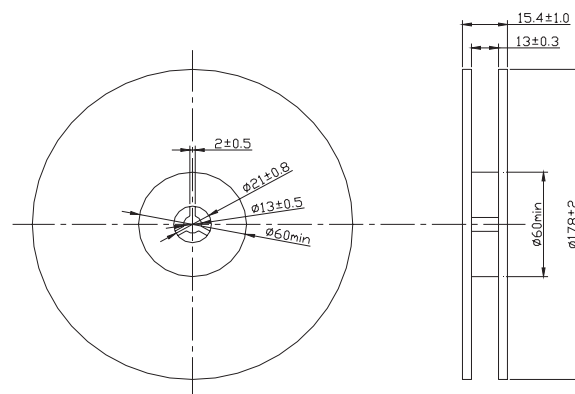
**RoHS**  
**Compliant**

Technical drawing of a square flange. The top view shows a square with side length  $5.0 \pm 0.2$ . The cross-section view shows a total thickness of  $1.0 \pm 0.1$ , with a central hole of diameter  $1.27 \pm 0.1$ . The flange has a maximum width of  $1.5 \text{ MAX}$  and a central hole diameter of  $2.08 \pm 0.15$ . The cross-section is divided into eight numbered regions (1-8) with specific hatching patterns. The bottom view shows a square with side length  $5.0 \pm 0.2$  and a central hole of diameter  $2.54 \pm 0.1$ . The cross-section view also shows a central hole of diameter  $0.6 \pm 0.1$  and a fillet radius of  $0.20 \text{ Rtyp.}$ .

Pin	Configuration
2	Input
6	Output
Other	Case Ground

The diagram illustrates the geometry of a tape with a rectangular hole. The cross-section shows a tape with thickness  $t_1$  and  $t_2$ . The top view shows a series of rectangular holes with width  $A$  and height  $B$ . The distance between the centers of two adjacent holes is  $P_1$ . The distance from the center of a hole to the nearest edge of the tape is  $P_2$ . The distance from the center of a hole to the nearest edge of the tape, measured along the tape's width, is  $P_0$ . The diameter of the hole is  $D_0$ . The diameter of the hole, measured along the tape's width, is  $D_1$ . The distance from the center of a hole to the nearest edge of the tape, measured along the tape's length, is  $E$ . The width of the tape is  $W$ . The tape running direction is indicated by an arrow.

W	F	E	P0	P1	P2	D0	D1	t1	t2	A	B
12.0	5.5	1.75	4.0	8.0	2.0	Φ1.5	Φ1.5	0.31	1.95	5.5	5.5
±0.3	±0.1	±0.1	±0.2	±0.1	±0.2	±0.1	±0.25	max.	max.	max.	max.



**Dimensions: mm**

Figure 1 is a graph showing a typical reflow profile. The Y-axis represents Temperature (°C) and the X-axis represents Time (seconds). The profile consists of three main phases: Pre-Heat, Reflow, and Cool. The temperature starts at 25°C, rises to 150°C during the Pre-Heat phase (60~120s), then rises to 260°C during the Reflow phase (60~90s). The temperature remains at 260°C for a dwell time of 30~40s. The temperature then decreases during the Cool phase. A note indicates 10s max. 1 time at +260°C±5°C.

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