

SMD Quartz Crystal Cylinder Type**309T/310T Series****MEC Crystals**

Cylindrical Type 309T(3 x 8.8mm) and 310T(3 x 9.8mm)

Features:

- High Stability.
- Small package.
- Excellent environmental capability.
- 3000pcs / Reel
- **RoHs Compliant (Pb Free)**

Applications:

- Communication equipment.
- AV equipment.
- O A equipment.
- Measuring instruments.

**Electrical Specifications:**

Cylindrical Size	310T (3x9.8mm)	309T (3x8.8mm)
Frequency Range	3.579MHz ~ 4.000 MHz	4.001MHz ~ 27.000MHz
Frequency Tolerance at 25°C	±15ppm, ±30ppm, ±50ppm	
Frequency Stability (-10°C ~ +60°C)	±30ppm, ±50ppm	
Operating Temperature Range	-40°C ~ +85°C	
Storage Temperature Range	-55°C ~ +125°C	
Load Capacitance (CL)	16.0pF (Typical) or specify	
Aging	±5.0 ppm / year max. at 25°C	
Insulation Resistance	500MΩ at DC 100V	
Shunt Capacitance	5.0pF max.	
Drive Level	10 ~ 50ΩW	
Equivalent Series Resistance	see chart.	

Equivalent Series Resistance (ESR) & Mode of Operation (Mode):

Frequency Range	E.S.R. (Ω) max.	Mode	Frequency Range	E.S.R. (Ω)	Mode
3.579 ~ 4.499MHz	150	Fundamental	10.000 ~ 11.999MHz	80	Fundamental
4.500 ~ 4.999MHz	130	Fundamental	12.000 ~ 13.999MHz	70	Fundamental
5.000 ~ 6.999MHz	120	Fundamental	14.000 ~ 15.999MHz	50	Fundamental
7.000 ~ 9.999MHz	100	Fundamental	16.000 ~ 27.000MHz	35	Fundamental

Part Numbering System:

309T 3.6864 F 18 3 5
 ① ② ③ ④ ⑤ ⑥

① Series

Code	Size
309T	Freq. > 4MHz (3 x 8.8mm)
310T	Freq. ≤ 4MHz (3 x 9.8mm)

② Frequency

Frequency
ex. 16.000

③ Mode of Vibration

Code	Cut-Mode
F	AT Fund

④ Load Capacitance CL

Code	Load Capacitance
16	16pF
18	18pF
20	20pF

⑤ Frequency Tolerance

Code	Tolerance
1	± 10 ppm
2	± 20 ppm
3	± 30 ppm

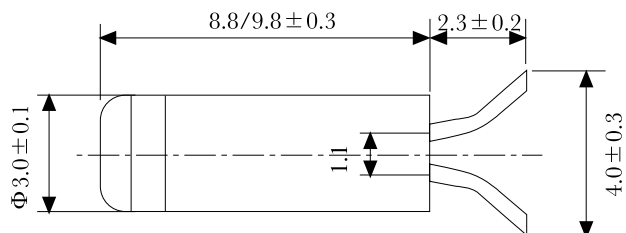
⑥ Frequency Stability

Code	Stability
3	± 30 ppm
4	± 40 ppm
5	± 50 ppm

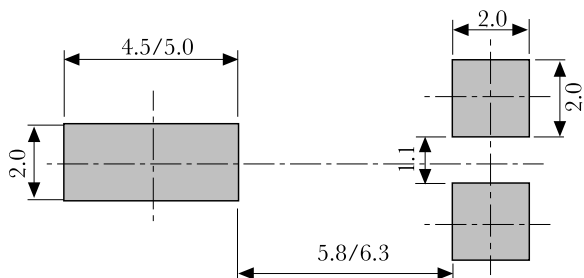
Remark: Specifications are subject to change without prior notice. Please confirm with our sales engineer.

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Dimensions (mm):



Recommended Soldering (mm):



Frequency vs. Temperature:

