

CMR310T/CMR309T

(1,000pcs/reel)



■ FEATURES:

- The units are high-performance, miniature crystal units manufactured with Citizen's ultrahigh-precision processing technology.
- Ideal for low cost SMD applications.
- Provided in Tape and Reel.

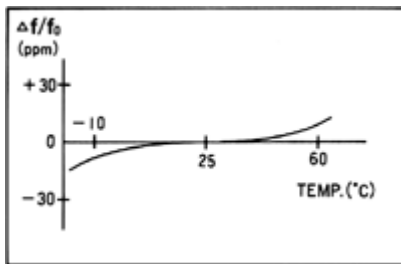
■ APPLICATIONS:

- Can be used for a wide range of applications including use in AV equipment, OA equipment, communication equipment and measuring instruments.

■ STANDARD SPECIFICATIONS

Item		CMR310T	CMR309T	Conditions
Nominal frequency	f ₀	3.5MHz to 4.000MHz	4.001MHz to 32MHz (fund) 30MHz to 70MHz (3rd OT)	Please contact us for changes in frequency.
Frequency tolerance	delta f/f ₀	±30ppm or ±50ppm		At 25°C
Frequency vs. Temperature Characteristics	delta f/f ₀	±50ppm (±30ppm)		-10°C to +60°C
Operating temperature range	T _{opr}	-40°C to + 85°C		
Storage temperature range	T _{stg}	-55°C to +125°C		
Equivalent series resistance	R ₁	See drawing		At 25°C
Load capacitance	C _L	16.0pF TYP.		Please specify
Shunt capacitance	C ₀	5.0pF MAX.		
Drive level	DL	50 μW to 100μW		
Insulation resistance	IR	500M ohm MIN.		DC100V ± 15V
Aging (First year)	delta f/f ₀	± 5ppm MAX.		25°C ± 3°C
Sealing		1 x 10-2 μ Pa·m3 /s MAX.		
Shock resistance	±5ppm MAX. Drop test of 3 times on a hard board from 75cm height or shock test of 3000G x 0.3ms x 1/2sin wave x 3 directions			Conditions will vary depending on the frequency.

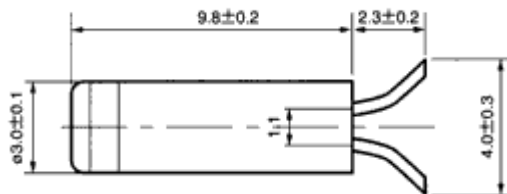
■ FREQUENCY vs TEMPERATURE CURVE



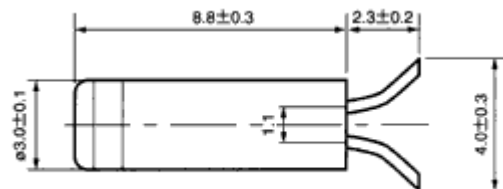
■ EQUIVALENT SERIES RESISTANCE (ESR, R1)(Ohm MAX.)

Frequency	Equivalent series resistance	Mode
3.5MHz $\leq f_0 < 4$ MHz	200	Fundamental
4MHz $\leq f_0 < 6$ MHz	150	
6MHz $\leq f_0 < 10$ MHz	100	
10MHz $\leq f_0 < 32$ MHz	50	
30MHz $< f_0 < 36$ MHz	100	3rd OT
36MHz $\leq f_0 < 70$ MHz	80	

■ DIMENSIONS: (UNIT=mm)

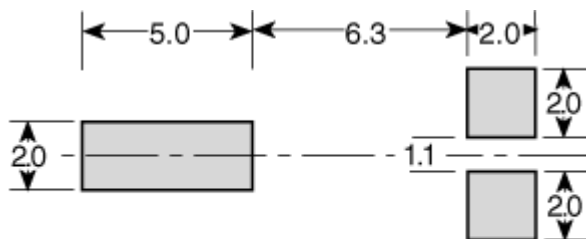


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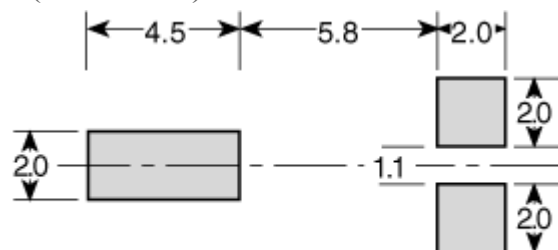


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■ RECOMENDED SOLDERING PATTERN: (UNIT=mm)



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