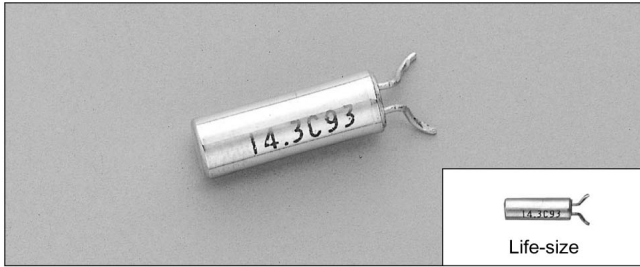


AT-CUT CRYSTAL UNITS (SMD • Cylinder Type)

RoHS Compliant Optional **CMR310T • CMR309T**

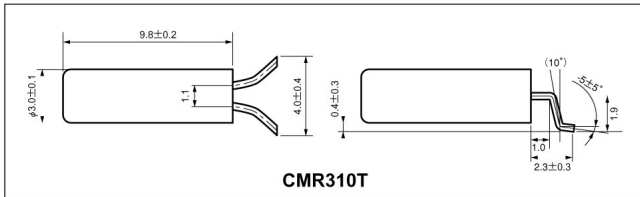
1000pcs/reel



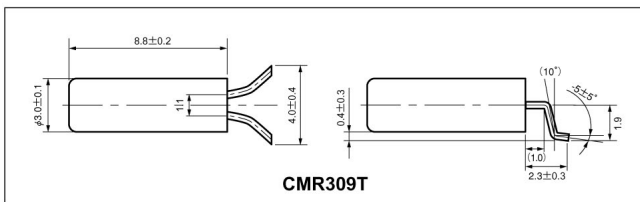
FEATURES

- High performance miniature crystal units with Citizen's ultra-precise processing technology.
- High-stability assured with tight vacuum sealing.
- Lead forming SMD type with embossed tape. Automatic mounting and reflowable Type.

DIMENSION [mm]

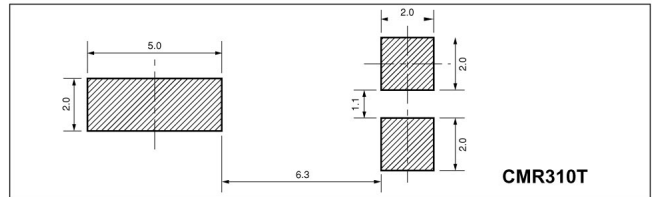


CMR310T

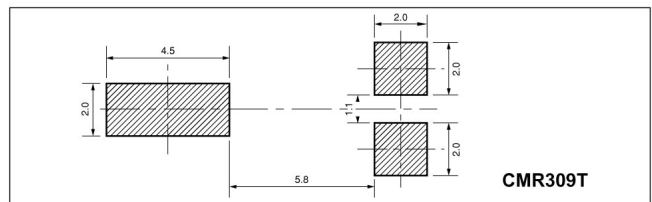


CMR309T

SOLDER PAD LAYOUT [mm]



CMR310T



CMR309T

STANDARD SPECIFICATIONS

Item	Model	CMR310T	CMR309T	Conditions
Nominal Frequency	f ₀	3.5MHz ~ 4.0MHz	4.001MHz ~ 30.0MHz (Fundamental)	Need to contact us for the available frequency
			30.001MHz ~ 70.0MHz (3rd Overtone)	
Frequency Tolerance	Δf/f ₀	±30ppm		at 25°C
Frequency Tolerance over Operating Temperature Range	Δf/f ₀	±50ppm		-10°C ~ +60°C
Operating Temperature Range	T _{OPR}	-40°C ~ +85°C		
Storage Temperature Range	T _{STR}	-55°C ~ +125°C		
Motional (series) resistance	R ₁	Refer to the following table		at 25°C
Load capacitance	C _L	18.0pF		Need to specify your requirement
Shunt capacitance	C ₀	5.0pF Max.		
Level of drive	DL	100 μW Max.		
Insulation Resistance	I _R	500MΩ Min.		DC100V±15V
Aging (first year)	Δf/f ₀	±5ppm Max.		25°C ±3°C

MOTIONAL (SERIES) RESISTANCE (R₁)

Frequency Range	3.5MHz ≤ f ₀ < 4.0MHz	4.0MHz ≤ f ₀ < 6.0MHz	6.0MHz ≤ f ₀ < 10MHz	10MHz ≤ f ₀ < 27MHz	27MHz ≤ f ₀ < 36MHz	36MHz ≤ f ₀ ≤ 70MHz
Mode	Fundamental	Fundamental	Fundamental	Fundamental	Fundamental	3rd Overtone
R ₁	200Ω Max.	150Ω Max.	100Ω Max.	50Ω Max.	50Ω Max.	100Ω Max.
						80Ω Max.