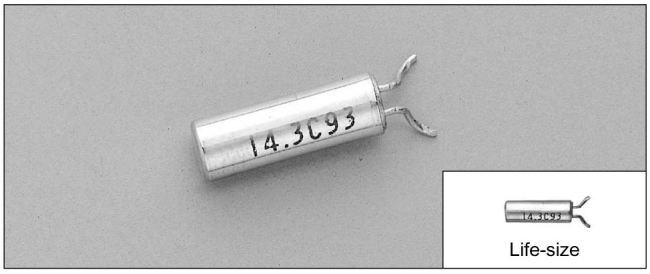
AT-CUT CRYSTAL UNITS (SMD • Cylinder Type)

CITIZEN

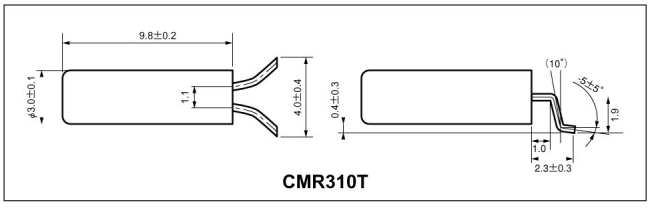
RoHS Compliant Optional **CMR310T • CMR309T** 1000pcs/reel

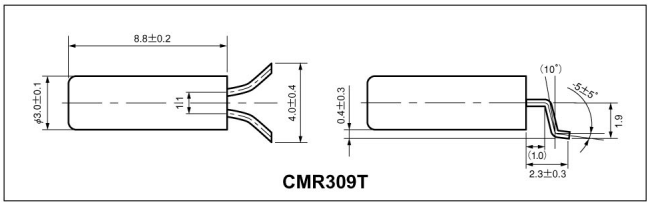


■FEATURES

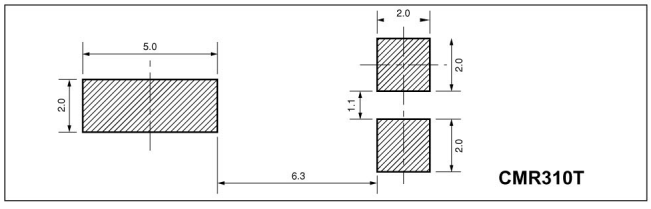
- High performance miniature crystal units with Citizen's ultra-precise processing technology.
- High-stability assured with tight vacuum sealing.
- Lead forming SMD type with embossed tape. Automatic mounting and reflowable Type.

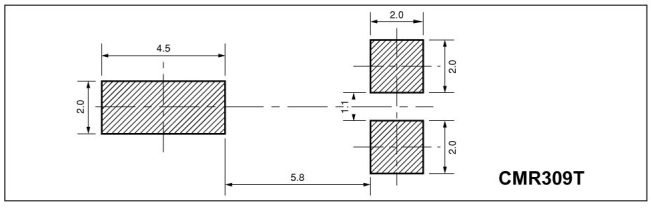
■DIMENSION [mm]





■SOLDER PAD LAYOUT [mm]





■STANDARD SPECIFICATIONS

Item \ Model		CMR310T	CMR309T	Conditions
Nominal Frequency	f_0	3.5MHz ～ 4.0MHz	4.001MHz ～ 30.0MHz（Fundamental） 30.001MHz ～ 70.0MHz（3rd Overtone）	Need to contact us for the available frequency
Frequency Tolerance	$\triangle f/f_0$	±30ppm		at 25˚C
Frequency Tolerance over Operating Temperature Range	$\triangle f/f_0$	±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	D_L	100 μW Max.		
Insulation Resistance	I_R	500MΩ Min.		DC100V±15V
Aging (first year)	$\triangle f/f_0$	±5ppm Max.		25˚C±3˚C

■MOTIONAL (SERIES) RESISTANCE (R_1)

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	3rd Overtone
R_1	200Ω Max.	150Ω Max.	100Ω Max.	50Ω Max.	50Ω Max.	100Ω Max.	80Ω Max.