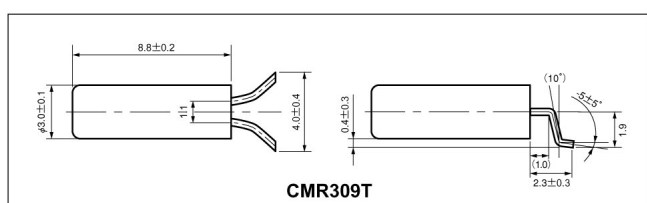
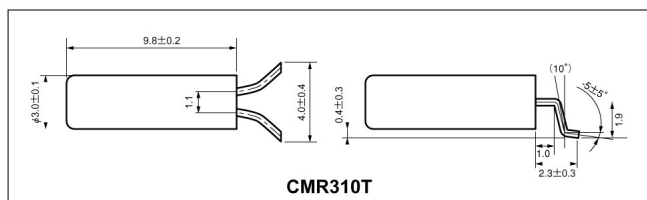
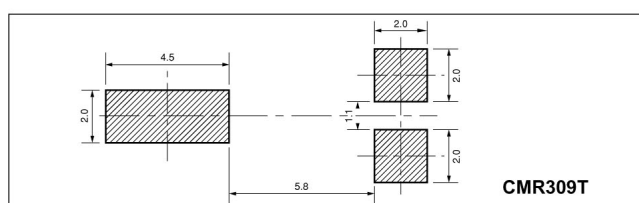
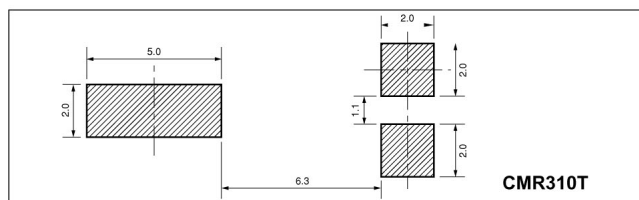


AT-CUT CRYSTAL UNITS (SMD • Cylinder Type)RoHS Compliant Optional **CMR310T • CMR309T**

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]**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	$\Delta f/f_0$	$\pm 30\text{ppm}$		at 25°C
Frequency Tolerance over Operating Temperature Range	$\Delta f/f_0$	$\pm 50\text{ppm}$		-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	500M Ω Min.		DC100V $\pm 15\text{V}$
Aging (first year)	$\Delta f/f_0$	$\pm 5\text{ppm}$ Max.		25°C $\pm 3^\circ\text{C}$

MOTIONAL (SERIES) RESISTANCE (R_1)

Frequency Range	$3.5\text{MHz} \leq f_0 < 4.0\text{MHz}$	$4.0\text{MHz} \leq f_0 < 6.0\text{MHz}$	$6.0\text{MHz} \leq f_0 < 10\text{MHz}$	$10\text{MHz} \leq f_0 < 27\text{MHz}$	$27\text{MHz} \leq f_0 < 36\text{MHz}$	$36\text{MHz} \leq f_0 \leq 70\text{MHz}$
Mode	Fundamental	Fundamental	Fundamental	Fundamental	Fundamental	3rd Overtone
R_1	200 Ω Max.	150 Ω Max.	100 Ω Max.	50 Ω Max.	50 Ω Max.	80 Ω Max.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Citizen:

[CMR309T-22.1184MABJTR](#) [CMR309T-19.6608MAAV-UT](#) [CMR309T-10.250MAAQTR](#) [CMR309T-19.743MAAQ-UT](#)
[CMR309T-11.0592MABJ-UT](#) [CMR309T-11.2896MAAY-UT](#) [CMR309T-15.000MABJ-UT](#) [CMR310T-4.000MDBI-B](#)
[CMR309T-16.670MAAQ-UT](#) [CMR309T-20.500MABC-UT](#) [CMR309T-30.000MABJ-UT](#) [CMR310T-4.000MABH-B](#)
[CMR309T-53.125MABJ-UT](#) [CMR310T-4.000MABITR](#) [CMR309T-4.332MABI-UT](#) [CMR309T-10.000MDDE-UT](#)
[CMR309T-7.680MABJ-UT](#) [CMR309T-20.480MABJ-UT](#) [CMR309T-4.9152MABJ-UT](#) [CMR309T-4.332MABITR](#)
[CMR309T-27.500MAAQTR](#) [CMR309T-6.144MABJ-UT](#) [CMR309T-4.096MABJ-UT](#) [CMR309T-14.31818MBBKTR](#)
[CMR309T-7.9872MAAQ-UT](#) [CMR309T-14.31818MAAI-UT](#) [CMR309T-18.000MABJ-UT](#) [CMR310T-4.000MAAI-UB](#)
[CMR309T-8.000MAAI-UT](#) [CMR309T-15.360MABJ-UT](#) [CMR309T-16.000312MABJ-UT](#) [CMR309T-22.1184MABJ-UT](#)
[CMR309T-27.000MBBVTR](#) [CMR309T-12.500MABJ-UT](#) [CMR309T-33.000MABJ-UT](#) [CMR309T-16.000MABITR](#)
[CMR310T-4.000MDBI-UB](#) [CMR309T-16.896MAAVTR](#) [CMR309T-27.000MABJ-UT](#) [CMR309T-28.63636MABJ-UT](#)
[CMR309T-16.384MABJ-UT](#) [CMR309T-9.8304MABJ-UT](#) [CMR309T-6.000MABJ-UT](#) [CMR310T-3.541MABE-UT](#)
[CMR310T-3.6864MABJ-UT](#) [CMR309T-29.4912MABJ-UT](#) [CMR309T-16.000MAAITR](#) [CMR309T-16.000MAAI-UT](#)
[CMR309T-24.000MABJ-UT](#) [CMR309T-66.666MABJ-UT](#) [CMR309T-6.000MABIUT](#) [CMR309T-32.768MABJ-UT](#)
[CMR309T-60.000MABJ-UT](#) [CMR309T-14.7456MABJ-UT](#) [CMR310T-4.00MABJTR-UT](#) [CMR309T-40.000MABJ-UT](#)
[CMR309T-49.152MABJ-UT](#) [CMR309T-12.000MABJ-UT](#) [CMR309T-36.000MABJ-UT](#) [CMR309T-12.288MABJ-UT](#)
[CMR309T-16.666MABJ-UT](#) [CMR309T-13.500MAAQ-UT](#) [CMR309T-10.000MABJ-UT](#) [CMR309T-12.713285MAAQ-UT](#)
[CMR309T-8.192MABJ-UT](#) [CMR309T-14.2484MAAE-UT](#) [CMR310T-3.86918MBBITR](#) [CMR309T-13.500MABJ-UT](#)
[CMR309T-16.000MAAETR](#) [CMR310T-3.579545MDBI-UT](#) [CMR310T-4.000MDBV-UB](#) [CMR309T-18.432MABJ-UT](#)
[CMR310T-4.000MAAI-B](#) [CMR309T-7.987200MAAQTR](#) [CMR310T-3.579545MABITR](#) [CMR309T-11.2896MABJ-UT](#)
[CMR310T-4.000MDAI-UB](#) [CMR309T-4.096MAKJ-UT](#) [CMR309T-13.500MAAI-UT](#) [CMR310T-4.000MABIUT](#)
[CMR309T-8.000MABJTR](#) [CMR309T-12.500MAAV-UT](#) [CMR309T-7.3728MABJ-UT](#) [CMR309T-14.31818MABJ-UT](#)
[CMR309T-19.9057MAAV-UT](#) [CMR310T-4.000MABHTR](#) [CMR309T-16.9344MAAQ-UT](#) [CMR309T-4.9152MABETR](#)
[CMR309T-24.576MABJ-UT](#) [CMR309T-20.000MABJ-UT](#) [CMR309T-50.000MABJ-UT](#) [CMR309T-14.31818MBBKUT](#)
[CMR309T-5.5296MABJTR](#) [CMR309T-12.288MAAQ-UT](#) [CMR309T-24.00014MABQTR](#) [CMR309T-32.000MABJ-UT](#)
[CMR309T-6.330MDAQ-UT](#) [CMR310T-4.000MBBI-B](#) [CMR309T-10.240MABJ-UT](#) [CMR309T-7.200MABYTR](#)