

The CSM-3X is the miniature low profile resistance weld type SMD quartz crystal. Reduces footprint of CSM-7X (HC-49USX SMD) by 50%.

# CSM-3X SMD CRYSTAL

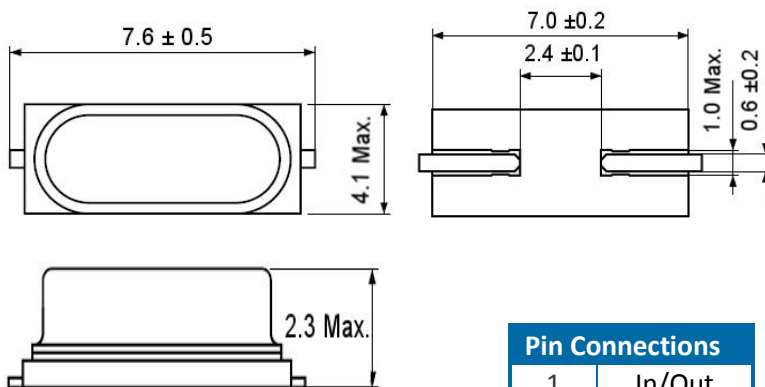
[Request a Sample](#)

## CSM-3X SMD CRYSTAL



- Cost Effective
- Low Profile
- Extended Temp. Range Option
- Pb Free/RoHS Compliant

## DIMENSIONS (mm)



### Pin Connections

|   |        |
|---|--------|
| 1 | In/Out |
| 2 | Out/In |

| Frequency (MHz) | ESR Ω Max. |
|-----------------|------------|
| 12.000 ~ 15.999 | 60         |
| 16.000 ~ 29.999 | 50         |
| 30.000 ~ 40.000 | 40         |

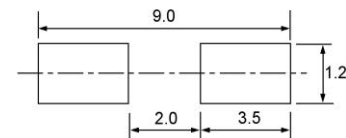


Figure 1) Top, Side, and Bottom

Figure 2) Suggested land

Crystal is symmetrical, pin 1 & 2 are interchangeable.

## PART NUMBERING GUIDE: Example ECS-200-20-3X-TR

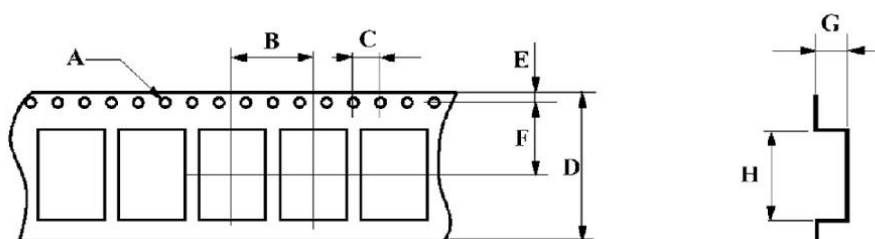
| ECS - FREQUENCY ABBREVIATION                             |                                   | LOAD CAPACITANCE         | PACKAGE        | AVAILABLE OPTIONS                                                           |                                                                                                                                |                                                                                                                                                    | PACKAGING                         |
|----------------------------------------------------------|-----------------------------------|--------------------------|----------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
|                                                          |                                   |                          |                | Tolerance                                                                   | Stability                                                                                                                      | Temp Range                                                                                                                                         |                                   |
| ECS                                                      | 200 = 20.000 MHz<br>See P/N Guide | 20 = 20 pF<br>S = Series | 3X =<br>CSM-3X | Blank = Std<br>A = ± 25 ppm<br>J = ± 20 ppm<br>R = ± 15 ppm<br>C = ± 10 ppm | Blank= Std<br>D= ±100 ppm<br>E = ± 50 ppm<br>G = ± 30 ppm<br>H = ± 25 ppm<br>T = ± 20 ppm †<br>W = ±15 ppm †<br>K = ± 10 ppm † | Blank= Std<br>L = -10 ~ +70°C<br>M = -20 ~ +70°C<br>Y = -30 ~ +85°C<br>N = -40 ~ +85°C<br>P = -40 ~ +105°C<br>S = -40 ~ +125°C<br>U = -55 ~ +125°C | TR =<br>Tape<br>& Reel<br>3K/Reel |
| * Specify available options in P/N.                      |                                   |                          |                |                                                                             |                                                                                                                                |                                                                                                                                                    |                                   |
| † Contact ECS for availability over extended temp range. |                                   |                          |                |                                                                             |                                                                                                                                |                                                                                                                                                    |                                   |
| Rev.2017                                                 |                                   |                          |                |                                                                             |                                                                                                                                |                                                                                                                                                    |                                   |

\* Specify available options in P/N.

† Contact ECS for availability over extended temp range.

Rev.2017

### POCKET TAPE DIMENSIONS (mm)



| TAPE SPECIFICATIONS (mm) |       |     |     |      |      |     |     |     |
|--------------------------|-------|-----|-----|------|------|-----|-----|-----|
| MODEL                    | A     | B   | C   | D    | E    | F   | G   | H   |
| CSM-3X                   | φ 1.5 | 8.0 | 4.0 | 16.0 | 2.50 | 7.5 | 2.5 | 9.4 |

### SOLDER PROFILE

Peak solder Temp +260°C Max 10 sec Max.

2 Cycles Max.

MSL 1, Lead Finish Sn/Cu Matte

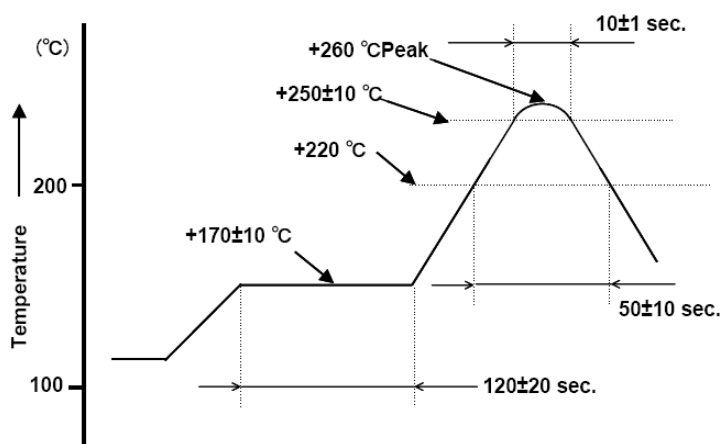


Figure 1) Suggested Reflow Profile