



- **Low Profile**
- **RoHS Compliant (Note 7 Exemption)**
- Tape & Reel Packaging

ECS-SR-A

SMD CERAMIC RESONATOR

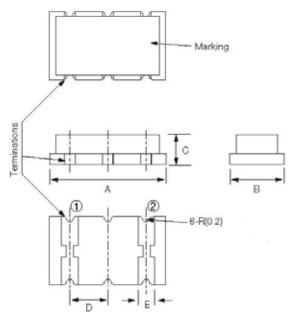
The ECS-SR-A Series SMD ceramic resonator is an excellent low cost frequency control solution when absolute frequency accuracy is not important.

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PART NUMBER * | FREQUENCY RANGE (MHz) | FREQUENCY ACCURACY @ 25°C (%) | FREQUENCY STABILITY -20 ~ +80°C (%) | AGING FOR TEN YEARS (%) | RESONANT RESISTANCE (Ω) MAX. | INSULATION RESISTANCE @ 10VDC |
|--------------------------|-----------------------------|-------------------------------------|-------------------------------------------|-------------------------------|------------------------------------|-------------------------------------|
| ECS-SR1-□.□ □-A | 2.00 ~ 8.00 | ± 0.5 | ± 0.3 | ± 0.3 | 40 | 100 M Ω Min. |
| ECS-SR2-□.□ □ - A | 8.10 ~ 13.00 | ± 0.5 | ± 0.3 | ± 0.3 | 30 | 100 M Ω Min. |
| ECS-SR3-□.□ □ - A | 13.10 ~ 20.00 | ± 0.5 | ± 0.3 | ± 0.3 | 30 | 100 M Ω Min. |
| ECS-SR4-□.□ □ - A | 20.10 ~ 30.00 | ± 0.5 | ± 0.3 | ± 0.3 | 55 | 100 M Ω Min. |

Complete part number to include frequency i.e. ECS-SR1-4.00-A-TR

PACKAGE DIMENSIONS (mm)



| Figure 1) ECS-SR-A | Series - Top, | Side, Bottom | &d Views |
|--------------------|---------------|--------------|----------|

| PIN CONNECTIONS | | | |
|-----------------|--------|--|--|
| #1 | In/Out | | |
| #2 | Out/In | | |

| PIN CONNECTIONS | | | |
|-----------------|--------|--|--|
| #1 | In/Out | | |
| #2 | Out/In | | |

| → ^ | → |
|----------------|----------------|
| | c |
| | |

Figure 2) Land Pattern

| PACKAGE TYPE | DIMENSIONS (mm) | | | | | |
|--------------|-----------------|-----|-----|-----|-----|--|
| PACKAGE TIFE | Α | В | С | D | ш | |
| ECS-SR1 | 7.5 | 3.3 | 1.8 | 2.5 | 1.5 | |
| ECS-SR2 | 8.3 | 3.5 | 1.8 | 2.5 | 1.0 | |
| ECS-SR3 | 6.0 | 3.5 | 1.8 | 1.9 | 1.2 | |
| ECS-SR4 | 6.0 | 5.0 | 1.8 | 1.9 | 1.2 | |

| PACKAGE TYPE | DIMENSIONS (mm) | | | |
|--------------|-----------------|-----|-----|--|
| FACRAGE TIFE | Α | В | С | |
| ECS-SR1 | 5.0 | 1.7 | 4.0 | |
| ECS-SR2 | 5.0 | 1.2 | 4.7 | |
| ECS-SR3 | 3.8 | 1.2 | 4.2 | |
| ECS-SR4 | 3.8 | 1.2 | 5.5 | |

PART NUMBERING GUIDE: "Example" ECS-SR1-4.00-A-TR

ECS Series SR1 = 2 ~ 8 MHz SR2 = 8.1 ~ 13 MHz SR3 = 13.1 ~ 20 MHz SR4 = 20.1 ~ 30 MHz

4.00 = 4.00 MHz

Frequency

Version A = SR-A Series

Packaging -TR = Tape & Reel



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Mike Huennekens Director of Marketing and OEM Sales E-mail: mikeh@ecsxtal.com Phone: 1-800-237-1041

CERAMIC RESONATOR/FILTER

Application Information Request

Attention: All Customers

From: Mike Huennekens, Director of Marketing and OEM Sales

Subject: Ceramic Resonator Application Information Request

Disallowed:

Date:

Approved:

ECS is requesting that you complete the section below that will allow us to determine if the specific application is suitable for the ceramic resonator/filters that you have requested.

Ceramic Resonators/Filters, both surface mount and through-hole type, are a much different frequency control solution than that of a crystal based device. Not only are there "matching" issues to specific integrated circuits and processors with ceramic based piezoelectric components but for multiple reasons ceramics are not the most advantageous nor robust frequency control solution for certain applications.

In addition, ECS does not approve the use of its ceramic products in Automotive, Military, Avionics, Life Sustaining or Life Support systems or any other related medical application.

If the customer chooses to use this product in one or more of the noted applications without the written consent of ECS, Inc., ECS, Inc. shall be held harmless, and given release of liability and indemnification from claims of any nature.

Please complete the following and submit this form as soon as possible.

| To be completed by ECS Inc., International | | | | |
|--------------------------------------------|----------------------------------------------------------------------------------------|-------|----------------------------------------------------------------|-------------------------------|
| Signature | e Date | | | |
| Title | | | | |
| Print You | ır Name | | | |
| Company | / Name | | ** If this item will be used by a a form be completed and sign | |
| | that the above information is true a sed in the restricted applications not | | the best of my knowledge and acknowledge that ECS | will be held harmless if this |
| | Application Details You Must Be Specific or this may be returned for more information. | | | |
| | End Customer | | | |
| | Has this part been ordered previously for this application? | Yes 🗌 | No 🗌 | |
| | Has this part already been approved for this application? | Yes 🗌 | No 🗌 | |
| | Estimated Annual Usage | | | |
| | ECS Part Number | | | |

Please direct any further inquires to Brad Slatten at brads@ecsxtal.com or Carla Williams at carlaw@ecsxtal.com. We thank you for your understanding and patience in this process.

Approved By: