



- **Chip Type SMD Package**
 - **RoHS Compliant (Note 7 Exemption)**
 - **Built-in load capacitor**
 - Tape & Reel Packaging

ECS-HFR-B

SMD CERAMIC RESONATOR

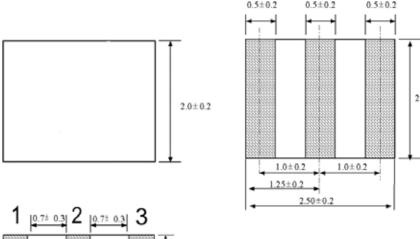
The ECS-HFR-B Series SMD ceramic resonator includes built in capacitors for reduced component count. The SMD Ceramic resonator is an excellent low cost frequency control solution when absolute frequency accuracy is not important.

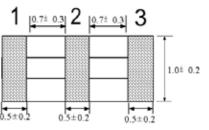
OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PART NUMBER * | FREQUENCY RANGE (MHz) | FREQUENCY ACCURACY @ 25°C (%) | FREQUENCY STABILITY -20 ~ +80°C (%) | AGING FOR TEN YEARS (%) | ESR (Ω) MAX. | BUILT-IN CAPACITANCE (C1 & C2) | IC |
|-----------------|-----------------------------|-------------------------------------|---|-------------------------------|--------------------|--------------------------------------|---------------|
| ECS-HFR-□□.□□-B | 20.00 ~ 30.00 | ± 0.5 | ± 0.4 | ± 0.3 | 70 | 8 pF | 1/6 TC74HCU04 |
| ECS-HFR-□□.□□-B | 30.10 ~ 50.00 | ± 0.5 | ± 0.3 | ± 0.3 | 60 | 8 pF | x2 |

Complete part number to include frequency i.e. ECS-HFR-20.00-B

PACKAGE DIMENSIONS (mm)





| 0.5 ± 0.2 | 0.5 ± 0.2 | 0.5 ± 0.2 | |
|----------------|---------------|---------------|---------|
| ├ | ├ | | |
| | | | 2.0±0.2 |
| 1.0: | 0.2 1.0 | ±0.2 | |
| ■ 1.25± | 0.2 | 1 | |
| | 2.50±0.2 | | |
| | | | |

| PIN CONNECTIONS | | | | |
|-----------------|--------|--|--|--|
| #1 | In/Out | | | |
| #2 | Ground | | | |
| #3 | Out/In | | | |

Figure 1) ECS-HFR-B Series - Top, Side and Bottom Views

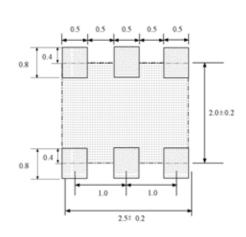


Figure 2) Land Pattern

PART NUMBERING GUIDE: "Example" ECS-HFR-20.00-B-TR

ECS -**Series** HFR = Chip Type

Frequency 20.00 = 20.00 MHz

Version B = Built In Caps

Packaging TR = Tape & Reel

Mouser Electronics

Authorized Distributor

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

ECS:

<u>ECS-HFR-20.00-B-TR</u> <u>ECS-HFR-24.00-B-TR</u> <u>ECS-HFR-25.00-B-TR</u> <u>ECS-HFR-27.00-B-TR</u> <u>ECS-HFR-48.00-B-TR</u> ECS-HFR-30.00-B-TR <u>ECS-HFR-40.00-B-TR</u> <u>ECS-HFR-50.00-B-TR</u>