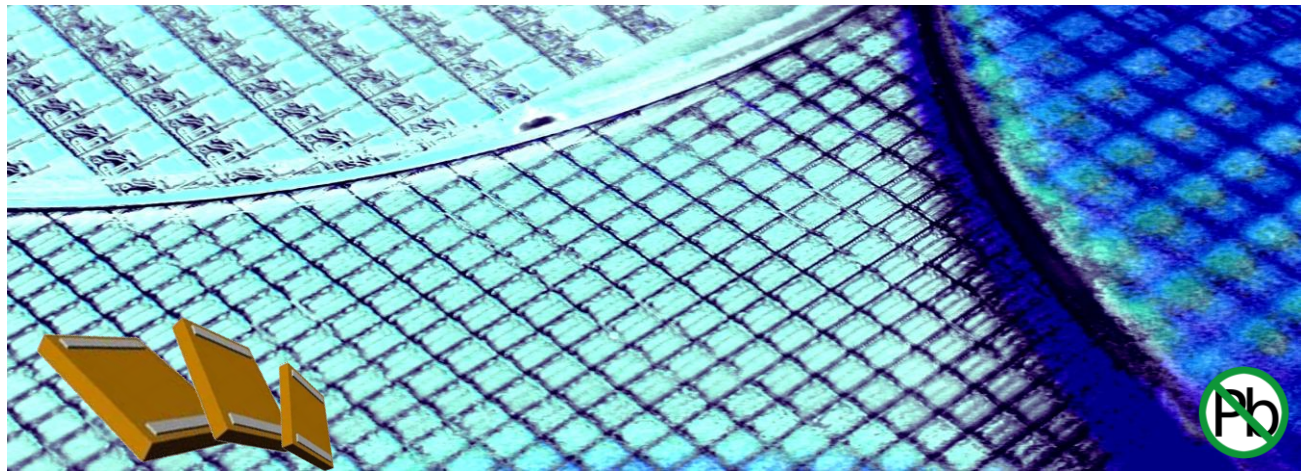


HSSC424.xxx - 0402 High Stability Silicon Capacitor

Rev 3.2



Key features

- Ultra high stability :
 - ◆ Temperature $\leq \pm 0.5\%$ (-55 °C to +150 °C)
 - ◆ Voltage $< 0.1\%$ /V
 - ◆ Negligible aging $< 0.001\%$ /1000hours
- Unique high capacitance in EIA/0402 package size, up to 100 nF
- High reliability (FIT < 0.017 parts / billion hours)
- Low leakage current down to 100 pA
- Low ESL and Low ESR
- Suitable with lead free reflow-soldering *Please refer to our assembly Application Note for further recommendations

Key applications

- All demanding applications, such as medical, aerospace, automotive industry
- High stability applications
- Decoupling / Filtering / Charge pump (i.e.: Pacemakers / defibrillators)
- Devices with battery operations
- Replacement of X7R and NP0
- Downsizing

Thanks to the unique IPDiA Silicon capacitor technology, most of the problems encountered in demanding application can be solved.

High Stability Silicon Capacitors are dedicated to applications where **Reliability** is the main parameter thanks to our end of production Burn-in.

HSSC avoid the need to oversize the capacitor value for sensitive capacitive circuitry and offers a **higher DC voltage stability**.

This technology provides industry leading performances relative to the **capacitor stability** over the full **operating voltage & temperature range**.

The very high and stable insulation resistance of silicon capacitors can enhance up to 30 % the **battery lifetime** in mobile applications.

The IPDiA technology features a capacitor integration capability (up to 250nF/mm²) which allows a **smaller case size** than existing solutions to answer high volume constraints. This technology also offers **high reliability**, up to 10 times better than alternative capacitor technologies, such as Tantalum or MLCC, and eliminates cracking phenomena.

This Silicon based technology is RoHS compliant and compatible with lead free reflow soldering process.

