<table>
<thead>
<tr>
<th>Part Number: Generic</th>
<th>Part Name: Coaxial Resonators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing Number: Generic</td>
<td>Operation: In Process / Final</td>
</tr>
<tr>
<td>Page: 1 of 4</td>
<td>Written By: Myra Cope</td>
</tr>
<tr>
<td>Doc #: TT-PC-0193 Rev. 10</td>
<td>Last Update: 01/31/22</td>
</tr>
</tbody>
</table>

Applicable customer specifications take precedence over this procedure (reference customer drawing).

1) Chips, Voids, and Burrs:

Inspect for chips, voids, and burrs per:

- **SM (2mm) & MP (3 mm):**
  - 0.5mm any direction, 0.5mm deep
- **LP (4mm) & LS (4mm):**
  - 1mm any direction, 0.5mm deep
- **SP (6mm):**
  - 1.5mm any direction, 0.5mm deep
- **EP (8mm):**
  - 1.5mm any direction, 0.5mm deep
- **HP (12mm):**
  - 2mm any direction, 1mm deep

- **Method:** Visual inspection under a 4x. Verify with Inspection Card (ref TT-PC-0718) and/or under a10x magnification
- **Sampling Size:** 1.0 AQL using TT-PC-0245. C=0 Sampling Plan

2) Cracks:

Inspect the resonator for internal cracking. Note photo for typical failure modes.

- **Method:** Visual inspection under a 4x. Verify with Inspection Card (ref TT-PC-0718) and/or under a10x magnification
- **Sampling Size:** 1.0 AQL using TT-PC-0245. C=0 Sampling Plan

3) Silver Peeling / Flashing:

Inspect the resonators for silver which may detach from the body of the resonator.

- **Method:** Visual inspection under a 4x. Verify with Inspection Card (ref TT-PC-0718) and/or under a10x magnification
- **Sampling Size:** 1.0 AQL using TT-PC-0245. C=0 Sampling Plan

4) Tab Pull Test:

Perform pull test per TT-PC-0196 Coax Pull test.

- **Method:** Pliers as referenced
- **Sample Size:** 1.0 AQL using TT-PC-0245. C=0 Sampling Plan
<table>
<thead>
<tr>
<th>Inspection Method Sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part Number:</strong> Generic</td>
</tr>
<tr>
<td><strong>Drawing Number:</strong> Generic</td>
</tr>
<tr>
<td><strong>Page:</strong> 2 of 4</td>
</tr>
<tr>
<td><strong>Doc #: TT-PC-0193 Rev. 10</strong></td>
</tr>
</tbody>
</table>

Applicable customer specifications take precedence over this procedure (reference customer drawing).

5) **Tab Protrusion:**
Tab must be seated properly and not protruding from opposite end. The dimension cannot be greater than 0.005”.

- **Method:** Visual inspection under a 4x. Verify with 0.005” shim and/or under a 10x magnification
- **Sampling Size:** 1.0 AQL using TT-PC-0245. C=0 Sampling Plan

6) **Tab Position:**

**Tab Rotation:**
Measuring from the center of the tab to the outside of the tab. Tab cannot rotate more than ± 0.015”

**Bent Tabs:**
Measuring from the center of the tab to the outside of the tab. Tab cannot bend more than ± 0.015”

- **Method:** Using Test Fixture
- **Sample Size:** 30 pcs every 30 min.

7) **Coplanarity:**
Inspect resonator and tab for coplanarity. The maximum allowed in either direction is 0.005”.

- **Method:** Use a 0.005” shim
- **Sampling Size:** 1.0 AQL using TT-PC-0245. C=0 Sampling Plan

8) **Electrical Test:**
Perform test per TT-PC-0212, Testing Ceramic Coaxial Resonators, for Frequency and Q using the Trans-Tech Test Program.

- **Method:** Network or Spectrum Analyzer as referenced
- **Sampling Size:** 1.0 AQL using TT-PC-0245. C=0 Sampling Plan
Applicable customer specifications take precedence over this procedure (reference customer drawing).

### 9) Tarnish and Corrosion:
Resonators and leads shall be visually inspected for discoloration or tarnishing effects as a failure mode.

- **Method:** Visual inspection under a 4x. Verify with Inspection Card (ref TT-PC-0718) and/or 10x magnification
- **Sampling Size:** 1.0 AQL using TT-PC-0245. C=0 Sampling Plan

### 10) Silver Chips/Resonator One Ends:
On Edge and/or Face reject if Larger than:

- **SM (2mm) & MP (3 mm):** 0.5mm any direction
- **LP (4mm) & LS (4mm):** 1 mm any direction
- **SP (6mm):** 1.5mm any direction
- **EP (8mm):** 1.5mm any direction
- **HP (12mm):** 2mm any direction

- **Method:** Visual inspection under a 4x. Verify with Inspection Card (ref TT-PC-0718) and/or 10x magnification
- **Sampling Size:** 1.0 AQL using TT-PC-0245. C=0 Sampling Plan

### 11) Solder on OD of Resonator:
Reject if Solder is Larger than:
- **SM & MP:** 1.0mm any direction,
- **LP & LS:** 1.5 mm any direction
- **SP, EP & HP:** 2 mm any direction

No Solder allowed on bottom of resonator

- **Method:** Visual inspection under a 4x. Verify with Inspection Card (ref TT-PC-0718) and/or 10x magnification
- **Sampling Size:** 1.0 AQL using TT-PC-0245. C=0 Sampling Plan

### 12) Tab Burrs:
All tab burrs that are more than ½ the distance between ID to OD shall be rejected or remove

- **Method:** Visual inspection under a 4x. Verify with Inspection Card (ref TT-PC-0718) and/or 10x magnification
- **Sampling Size:** 1.0 AQL using TT-PC-0245. C=0 Sampling Plan
13) **Cleaning Criteria:**

*Note: TTI uses a No-Clean Solder when assembling.*

Flux residues from no-clean processes may be allowed.

**Parts need to be clean if:**
- Flux residue inhibits visual inspection
  *(Ref. IPC-A610 Section 10.4.4)*

- Flux residue inhibits access to test point
  *(Ref. IPC-A610 Section 10.4.4)*

**If parts have been cleaned:**
White residues resulting from no-clean flux are acceptable as long as they meet the criteria listed above.

- **Method:** Visual inspection under a 4x. Verify with Inspection Card (ref TT-PC-0718) and/or 10x magnification
- **Sampling Size:** 1.0 AQL using TT-PC-0245. C=0 Sampling Plan