PERFORMANCE SPECIFICATION SHEET

CAPACITOR, INTERDIGITATED CHIP, FIXED, CERAMIC DIELECTRIC (GENERAL PURPOSE), HIGH RELIABILITY AND STANDARD RELIABILITY, SIZE 0508

This specification sheet is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-PRF-32535.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>inches</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>W ± .008</td>
<td>.080</td>
<td>.020</td>
</tr>
<tr>
<td>L ± .008</td>
<td>.050</td>
<td>.013</td>
</tr>
<tr>
<td>T Max.</td>
<td>.037</td>
<td>.094</td>
</tr>
<tr>
<td>BW ± .004</td>
<td>.012</td>
<td>.030</td>
</tr>
<tr>
<td>BL ± .006</td>
<td>.010</td>
<td>.012</td>
</tr>
<tr>
<td>P ± .002</td>
<td>.020</td>
<td>.050</td>
</tr>
</tbody>
</table>

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Dimensions and tolerances are for terminated chips.

FIGURE 1. Size 0508 interdigitated capacitors.
REQUIREMENTS:

Dimensions and configuration: See figure 1.

Capacitance value: See table I.

Capacitance tolerance: M = ±20 percent.

Voltage-temperature limit or temperature characteristic (VTL/TC): X7R as specified in MIL-PRF-32535.

Rated voltage (Vdc): V = 4 and W = 6.3.

Operating temperature range: -55°C to +125°C.

Termination finish: Z as specified in MIL-PRF-32535.

Electrode: B as specified in MIL-PRF-32535.

Product level designator: Standard reliability – M and high reliability - T.

Board flex: In accordance with MIL-PRF-32535, except the capacitor shall be soldered to the test board along the terminal sides. The end tabs shall not be soldered.

Shear stress: In accordance with MIL-PRF-32535, except the force shall be applied to the shorter end of the capacitor. The capacitor shall be soldered to the test board along the terminal sides. The end tabs shall not be soldered.

Destructive physical analysis: In accordance with MIL-PRF-32535. The termination porosity and accumulation of glass frit at the chip/termination surface shall not be rejectable.

Marking: Package marking only in accordance with MIL-PRF-32535.

### TABLE I. Size 0508 interdigitated capacitor characteristics.

<table>
<thead>
<tr>
<th>Part or Identifying Number (PIN)</th>
<th>Capacitance (pF)</th>
<th>Capacitance tolerance</th>
<th>VTL/TC</th>
<th>Rated voltage (Vdc)</th>
<th>Electrode material</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3253513E2 - 104MZ - B</td>
<td>100,000</td>
<td>M</td>
<td>X7R</td>
<td>6.3</td>
<td>B</td>
</tr>
<tr>
<td>M3253513E2 - 224MZ - B</td>
<td>220,000</td>
<td>M</td>
<td>X7R</td>
<td>6.3</td>
<td>B</td>
</tr>
<tr>
<td>M3253513E2 - 334MZ - B</td>
<td>330,000</td>
<td>M</td>
<td>X7R</td>
<td>6.3</td>
<td>B</td>
</tr>
<tr>
<td>M3253513E2V474MZ - B</td>
<td>470,000</td>
<td>M</td>
<td>X7R</td>
<td>4</td>
<td>B</td>
</tr>
<tr>
<td>M3253513E2V684MZ - B</td>
<td>680,000</td>
<td>M</td>
<td>X7R</td>
<td>4</td>
<td>B</td>
</tr>
<tr>
<td>M3253513E2V105MZ - B</td>
<td>1,000,000</td>
<td>M</td>
<td>X7R</td>
<td>4</td>
<td>B</td>
</tr>
</tbody>
</table>

1/ The complete PIN shall include an additional symbol to indicate voltage (where applicable), and the product level.

2/ This is the maximum rated voltage available. All lower voltage ratings are also available.
Custodians: 
Army – CR  
Navy - EC  
Air Force – 85  
DLA - CC

Preparing activity:  
DLA - CC  
(Project 5910-2016-014)

Review activities:  
Army - MI  
Navy - AS, MC, OS, SH  
Air Force - 19, 99  
Other – MDA, NA

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at https://assist.dla.mil.