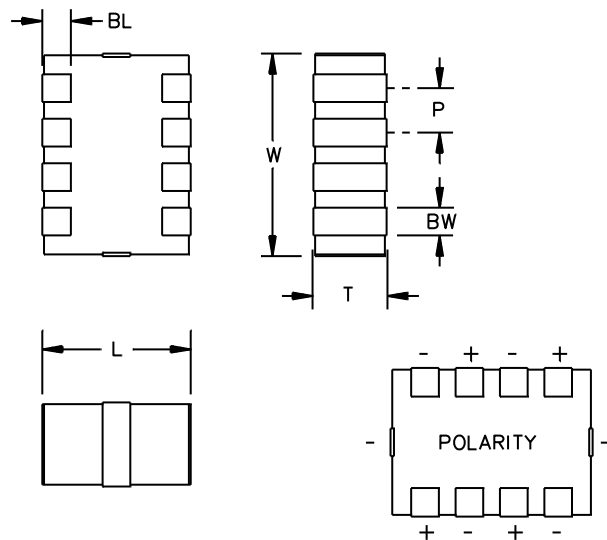


PERFORMANCE SPECIFICATION SHEET

CAPACITOR, INTERDIGITATED CHIP, FIXED, LOW PROFILE, 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](#).



Dimensions					
W	L	T	BW	BL	P
$\pm .008$	$\pm .008$	Max.	$\pm .004$	$\pm .006$	$\pm .002$
.080	.050	.022	.012	.010	.020

inches	mm
.002	0.05
.004	0.10
.006	0.15
.008	0.20
.010	0.25
.012	0.30
.022	0.56
.050	1.27
.080	2.03

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.



CAUTION: Due to their unique designs, the X7S temperature characteristic (see [table I](#)) capacitors specified herein take significant exceptions to the general requirements of [MIL-PRF-32535](#) for life and temperature humidity bias. Users are cautioned to evaluate these requirements for their particular application.

INTENDED USE: The capacitors specified herein are intended for use in integrated circuits or microcircuits.

REQUIREMENTS:

Dimensions and configuration: See [figure 1](#).

Capacitance value: See [table I](#).

Capacitance tolerance: $M = \pm 20$ percent.

Voltage-temperature limit or temperature characteristic (VTL/TC): X7R and X7S as specified in [MIL-PRF-32535](#).

Rated voltage (V_{dc}): $V = 4$.

Operating temperature range: -55°C to $+125^{\circ}\text{C}$.

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.

Life:

X7R temperature characteristic (see [table I](#)): In accordance with [MIL-PRF-32535](#).

X7S temperature characteristic (see [table I](#)): In accordance with [MIL-PRF-32535](#), except the test voltage shall be 1.5 times the rated voltage (see [table I](#)).

Temperature humidity bias:

X7R temperature characteristic (see [table I](#)): In accordance with [MIL-PRF-32535](#).

X7S temperature characteristic (see [table I](#)): In accordance with [MIL-PRF-32535](#), except the duration for qualification shall be 264 hours, minimum.

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.

Part or Identifying Number (PIN) <u>1/</u>	Capacitance (pF)	Capacitance tolerance	VTL/TC	Rated voltage (V _{dc})	Electrode material
M3253512E2V334MZ - B	330,000	M	X7R	4	B
M3253512E2V474MZ - B	470,000	M	X7R	4	B
M3253512E3V684MZ - B	680,000	M	X7S	4	B
M3253512E3V105MZ - B	1,000,000	M	X7S	4	B
M3253512E3V225MZ - B	2,200,000	M	X7S	4	B

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

Custodians:
 Army – CR
 Navy - EC
 Air Force – 85
 DLA - CC

Preparing activity:
 DLA - CC

(Project 5910-2016-013)

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>.