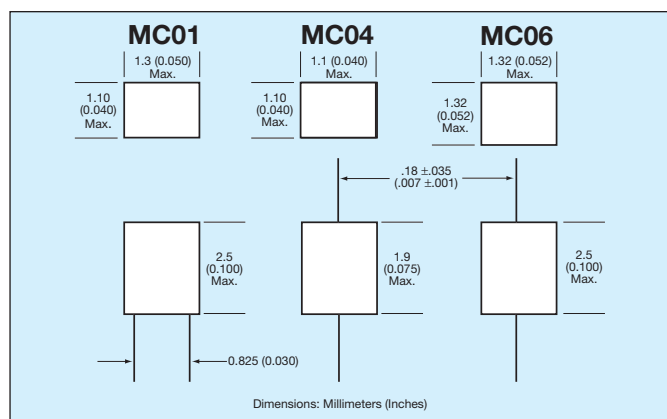


# Axial Leads/Mini-Ceramic Capacitor® **AVX**

## GENERAL DESCRIPTION

AVX's new mini-ceramic capacitor (MC04) is only 0.040" thick by 0.040" wide by 0.075" long, smaller size than AVX's MINITAN (TMH Series) "X" case size, 0.040" by 0.050" by long 0.075". This allows the lower value ceramic multilayer capacitors to fit into the same designs as the AVX tantalum capacitor's "X" size. It uses the same solder coated pure nickel lead wire suitable for either soldering or welding.



## HOW TO ORDER

| MC04                  | 6                                                    | D                             | 104                                                                                                                                                                                                                                   | K                                                                               | A                   | A                         |
|-----------------------|------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------|---------------------------|
| <b>Component Size</b> | <b>Voltage Rating</b>                                | <b>Dielectric</b>             | <b>Capacitance</b>                                                                                                                                                                                                                    | <b>Capacitance Tolerance</b>                                                    | <b>Failure Rate</b> | <b>Packaging Standard</b> |
| MC01<br>MC04<br>MC06  | 6 = 6.3V<br>Y = 16V<br>Z = 10V<br>5 = 50V<br>3 = 25V | C = X7R<br>D = X5R<br>A = NP0 | First two digits are the significant figures of capacitance. Third digit indicates the additional number of zeros. For example, order 100,000 pF as 104. (For values below 10pF use "R" in place of decimal point, e.g., 1R4 = 1.4pF) | X7R & X5R:<br>K = ±10%<br>M = ±20%<br>NP0:<br>D = ±0.5pF<br>J = ±5%<br>K = ±10% | A = Not Applicable  | 25 pieces per bag         |

## SIZE AND CAPACITANCE SPECIFICATIONS

Dimensions: Millimeters (Inches)

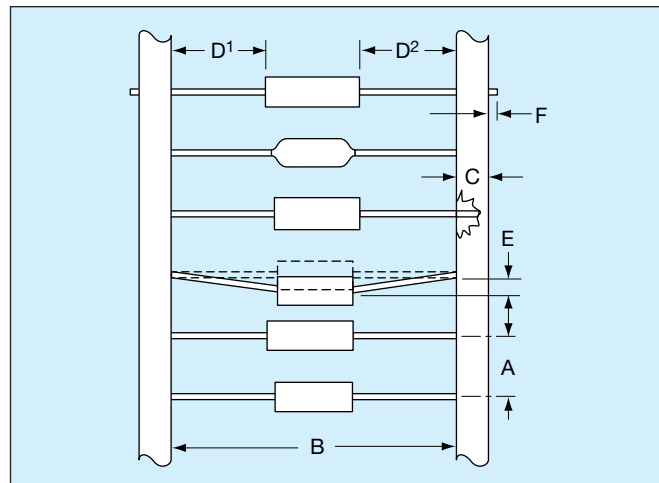
| AVX Style     | MC01                        | MC04       | MC06         |
|---------------|-----------------------------|------------|--------------|
| Max Length    | 2.5 (.100)                  | 1.9 (.075) | 2.5 (.100)   |
| Max Width     | 1.3 (.050)                  | 1.1 (.040) | 1.32 (.052)  |
| Max Thickness | 1.1 (.040)                  | 1.1 (.040) | 1.32 (.052)  |
| Lead Diameter | .178 ± .025 (.007 ± .001)   |            |              |
| Lead Spacing  | 0.825 ± 0.127 (.025 ± .005) | N/A        | N/A          |
| Type          | Radial                      | Axial      | Axial        |
| Cap. in pF    | Typical AVX Part Nos.       | WVDC       | WVDC         |
|               |                             | 16 6.3     | 50 25 16 6.3 |
|               |                             | 16 6.3     | 16 6.3       |
|               |                             | NP0        |              |
| 6.8           | MC***A6R8DAA                |            |              |
| 10            | MC***A100JAA                |            |              |
| 18            | MC***A180KAA                |            |              |
|               |                             | X7R        |              |
| 330           | MC***C331KAA                |            |              |
| 560           | MC***C561KAA                |            |              |
| 1000          | MC***C102KAA                |            |              |
| 1500          | MC***C152KAA                |            |              |
| 2200          | MC***C222KAA                |            |              |
| 2700          | MC***C272KAA                |            |              |
| 3300          | MC***C332KAA                |            |              |
| 4700          | MC***C472KAA                |            |              |
| 6800          | MC***C682KAA                |            |              |
| 10,000        | MC***C103KAA                |            |              |
| 15,000        | MC***C153KAA                |            |              |
| 22,000        | MC***C223KAA                |            |              |
|               |                             | X5R        |              |
| 33,000        | MC***D333KAA                |            |              |
| 47,000        | MC***D473KAA                |            |              |
| 68,000        | MC***D683KAA                |            |              |
| 100,000       | MC***D104KAA                |            |              |
| 150,000       | MC***D154KAA                |            |              |
| 220,000       | MC***D224KAA                |            |              |
| 330,000       | MC***D334KAA                |            |              |
| 470,000       | MC***D474KAA                |            |              |
| 1,000,000     | MC***D105KAA                |            |              |
| 2,200,000     | MC***D225KAA                |            |              |

## MARKING

Three digit Capacitance Code

## TAPE AND REEL

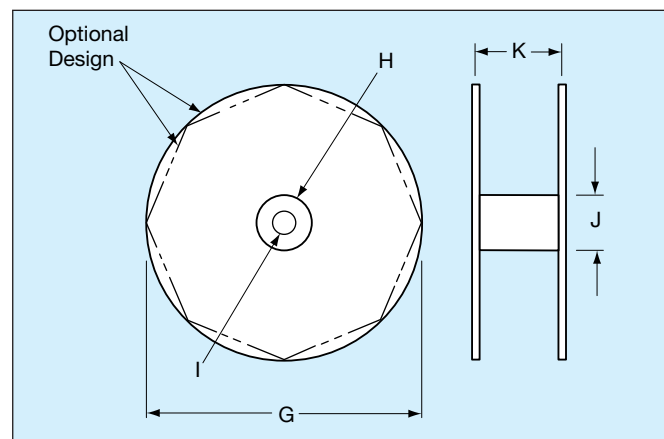
| CLASS I / RS-296                 |                                     |
|----------------------------------|-------------------------------------|
| A.                               | 5mm ± 0.5mm<br>(.200" ± 0.020")     |
| B*.                              | 52.4mm ± 1.5mm<br>(2.063" ± 0.059") |
| C.                               | 6.35mm ± 0.4mm<br>(0.250" ± 0.016") |
| D <sup>1</sup> -D <sup>2</sup> . | 1.4mm<br>(0.055" MAX.)              |
| E.                               | 1.2mm<br>(0.047" MAX.)              |
| F.                               | 1.6mm<br>(0.063" MAX.)              |
| G.                               | 356mm<br>(14.00")                   |
| H.                               | 76mm<br>(3.000")                    |
| I.                               | 25.4mm<br>(1.000")                  |
| J.                               | 84mm<br>(3.300")                    |
| K.                               | 70mm<br>(2.750")                    |



**Leader Tape:** 300mm min. (12")

**Splicing:** Tape Only

**Missing Parts:** 0.25% of component count max.-  
No consecutive missing parts



## REEL QUANTITIES (MAX.) ‡

|      |            |      |            |
|------|------------|------|------------|
| SA05 | 7,500 pcs. | MA10 | 5,000 pcs. |
| SA10 | 7,500 pcs. | MA20 | 5,000 pcs. |
| SA11 | 5,000 pcs. | MA30 | 3,000 pcs. |
| SA20 | 5,000 pcs. | MA40 | 3,000 pcs. |
| SA30 | 5,000 pcs. | MA50 | 950 pcs.   |
| SA40 | 5,000 pcs. | MA60 | 650 pcs.   |

‡ 1000 pc. reels available for distribution pack only in ±1% and ±2% tolerance.

\* Standard Tape Spacing Shown. Also available in 26.0mm + 1.5mm, - 0mm, (1.023 in. + .059 in. - 0 in.) for SpinGuards only. EIA Class I, II and III tape spacings are available for molded axials. Tape spacing for Class II is 63.5mm ± 1.5mm (2.50 in ± .059 in), and for Class III 73mm ± 1.5mm (2.87 in ± .059 in)

## ADDITIONAL PACKAGING AVAILABLE

### AMMO PACK

| Tape Spacing                                  | SA05, SA10<br>SA20 | SA11<br>SA30 | SA40        | BOX SIZES (Nominal) |                  |                   |
|-----------------------------------------------|--------------------|--------------|-------------|---------------------|------------------|-------------------|
|                                               |                    |              |             | L                   | W                | H                 |
| 52.4mm ± 1.5mm<br>(2.062" ± .059")            | 4,000 pcs.         | 2000         | 2,000 pcs.  | 255mm<br>(10.039")  | 73mm<br>(2.874") | 93mm<br>(3.661")  |
| 26.0mm + 1.5mm - 0mm<br>(1.023" + .059" - 0") | 4,000 pcs.*        | 2000         | 2,000 pcs.* | 255mm<br>(10.039")  | 48mm<br>(1.889") | 113mm<br>(4.448") |

\*SpinGuard only

## BULK PACK (MOLDED AXIALS ONLY)

|                              |                |
|------------------------------|----------------|
| MA10<br>MA20<br>MA30<br>MA40 | 100 pcs. (bag) |
| MA50<br>MA60                 | 50 pcs. (bag)  |