

# EIA Class 2 Temperature/ Frequency Stable Disc Ceramic Capacitors

**MALLORY**



- Provides Exceptional Stability Where Minimum Variation in Capacitance is Required
- Conformally Coated
- Radial Leads

## GENERAL SPECIFICATIONS

Temperature Range:  
-30°C to +85°C

Voltage Range:  
500 and 1,000 VDC

Capacitance Range:  
100 pF to 10,000 pF

Lead Length: 1 inch minimum

Insulation Resistance:  
10,000 megohms (min)

Power Factor @ 1000 Hz:  
1.5% Max

Breakdown Voltage:  
2.5 x rated  
(5 seconds Max)

**\*\*Please note: Y5U Will no longer be available once stock is depleted. (2/23/05)**

| Capacity<br>pF | Tol | Temp<br>Coef | Size<br>(Inches) |      |      |      | Size<br>(Millimeters) |     |     |    | Catalog<br>Number |
|----------------|-----|--------------|------------------|------|------|------|-----------------------|-----|-----|----|-------------------|
|                |     |              | D                | T    | S    | d    | D                     | T   | S   | d  |                   |
| 500 WVDC       |     |              |                  |      |      |      |                       |     |     |    |                   |
| 150            | 10% | Y5E          | .236             | .157 | .252 | .025 | 6.0                   | 4.0 | 6.4 | .6 | SM151K            |
| 220            | 10% | Y5E          | .236             | .157 | .252 | .025 | 6.0                   | 4.0 | 6.4 | .6 | SM221K            |
| 390            | 10% | Y5E          | .236             | .157 | .252 | .025 | 6.0                   | 4.0 | 6.4 | .6 | SM391K            |
| 470            | 10% | Y5E          | .236             | .157 | .252 | .025 | 6.0                   | 4.0 | 6.4 | .6 | SM471K            |
| 560            | 10% | Y5E          | .236             | .157 | .252 | .025 | 6.0                   | 4.0 | 6.4 | .6 | SM561K            |
| 680            | 10% | Y5E          | .236             | .157 | .252 | .025 | 6.0                   | 4.0 | 6.4 | .6 | SM681K            |
| 1,000          | 10% | Y5E          | .339             | .157 | .252 | .025 | 8.6                   | 4.0 | 6.4 | .6 | SM102K            |
| 2,200          | 10% | Y5E          | .433             | .157 | .252 | .025 | 11.0                  | 4.0 | 6.4 | .6 | SM222K            |
| 4,700          | 10% | Y5E          | .571             | .157 | .374 | .025 | 14.5                  | 4.0 | 9.5 | .6 | SM472K            |
| 6,800          | 10% | Y5E          | .748             | .157 | .374 | .025 | 19.0                  | 4.0 | 9.5 | .6 | SM682K            |
| 10,000         | 10% | Y5E          | .748             | .157 | .374 | .025 | 19.0                  | 4.0 | 9.5 | .6 | SM103K            |

| Capacity<br>pF | Tol | Temp<br>Coef | Size<br>(Inches) |      |      |      | Size<br>(Millimeters) |     |     |    | Catalog<br>Number |
|----------------|-----|--------------|------------------|------|------|------|-----------------------|-----|-----|----|-------------------|
|                |     |              | D                | T    | S    | d    | D                     | T   | S   | d  |                   |
| 1000 WVDC      |     |              |                  |      |      |      |                       |     |     |    |                   |
| 100            | 10% | Y5P          | .236             | .177 | .252 | .025 | 6.0                   | 4.5 | 6.4 | .6 | SP101K            |
| 150            | 10% | Y5P          | .236             | .177 | .252 | .025 | 6.0                   | 4.5 | 6.4 | .6 | SP151K            |
| 180            | 10% | Y5P          | .236             | .177 | .252 | .025 | 6.0                   | 4.5 | 6.4 | .6 | SP181K            |
| 220            | 10% | Y5P          | .236             | .177 | .252 | .025 | 6.0                   | 4.5 | 6.4 | .6 | SP221K            |
| 270            | 10% | Y5P          | .236             | .177 | .252 | .025 | 6.0                   | 4.5 | 6.4 | .6 | SP271K            |
| 330            | 10% | Y5P          | .236             | .177 | .252 | .025 | 6.0                   | 4.5 | 6.4 | .6 | SP331K            |
| 390            | 10% | Y5P          | .236             | .177 | .252 | .025 | 6.0                   | 4.5 | 6.4 | .6 | SP391K            |
| 470            | 10% | Y5P          | .236             | .177 | .252 | .025 | 6.0                   | 4.5 | 6.4 | .6 | SP471K            |
| 560            | 10% | Y5P          | .236             | .177 | .252 | .025 | 6.0                   | 4.5 | 6.4 | .6 | SP561K            |
| 680            | 10% | Y5P          | .236             | .177 | .252 | .025 | 6.0                   | 4.5 | 6.4 | .6 | SP681K            |
| 1,000          | 10% | Y5P          | .291             | .177 | .252 | .025 | 7.4                   | 4.5 | 6.4 | .6 | SP102K            |
| 1,500          | 10% | Y5P          | .339             | .177 | .252 | .025 | 8.6                   | 4.5 | 6.4 | .6 | SP152K            |
| 1,800          | 10% | Y5P          | .374             | .177 | .252 | .025 | 9.5                   | 4.5 | 6.4 | .6 | SP182K            |
| 2,200          | 10% | Y5P          | .374             | .177 | .252 | .025 | 9.5                   | 4.5 | 6.4 | .6 | SP222K            |
| 2,700          | 10% | Y5P          | .433             | .177 | .252 | .025 | 11.0                  | 4.5 | 6.4 | .6 | SP272K            |
| 3,900          | 10% | Y5P          | .492             | .177 | .252 | .025 | 12.5                  | 4.5 | 6.4 | .6 | SP392K            |
| 4,700          | 10% | Y5P          | .591             | .177 | .374 | .025 | 15.0                  | 4.5 | 9.5 | .6 | SP472K            |

## HIGH VOLTAGE

- Highly Efficient for Bypass and Coupling Applications
- Designed Around EIA Test Spec. RS-165A
- Radial Leads

## GENERAL SPECIFICATIONS

Temperature Range:  
-30°C to +85°C

Voltage Range:  
2,000 and 3,000 WVDC

Capacitance Range:  
100pF to 10,000 pF

Insulation Resistance:  
10,000 megohms (min)

Power Factor @ 1000 Hz:  
2.5% Max

Breakdown Voltage:  
2.5 x rated  
(5 seconds Max)

Lead Length: 1 inch minimum

| Capacity<br>pF | Tol | Temp<br>Coef | Size<br>(Inches) |      |      |      | Size<br>(Millimeters) |     |     |    | Catalog<br>Number |
|----------------|-----|--------------|------------------|------|------|------|-----------------------|-----|-----|----|-------------------|
|                |     |              | D                | T    | S    | d    | D                     | T   | S   | d  |                   |
| 2000 WVDC      |     |              |                  |      |      |      |                       |     |     |    |                   |
| 1,000          | 20% | Y5U          | .394             | .197 | .252 | .032 | 10.0                  | 5.0 | 6.4 | .8 | HS102M            |
| 1,500          | 20% | Y5U          | .394             | .197 | .252 | .032 | 10.0                  | 5.0 | 6.4 | .8 | HS152M            |
| 2,200          | 20% | Y5U          | .472             | .197 | .252 | .032 | 12.0                  | 5.0 | 6.4 | .8 | HS222M            |
| 3,300          | 20% | Y5U          | .591             | .197 | .374 | .032 | 15.0                  | 5.0 | 9.5 | .8 | HS332M            |
| 4,700          | 20% | Y5U          | .591             | .197 | .374 | .032 | 15.0                  | 5.0 | 9.5 | .8 | HS472M            |
| 6,800          | 20% | Y5U          | .787             | .197 | .374 | .032 | 20.0                  | 5.0 | 9.5 | .8 | HS682M            |
| 10,000         | 20% | Y5U          | .787             | .197 | .374 | .032 | 20.0                  | 5.0 | 9.5 | .8 | HS103M            |
| 3000 WVDC      |     |              |                  |      |      |      |                       |     |     |    |                   |
| 100            | 10% | Y5P          | .394             | .236 | .374 | .032 | 10.0                  | 6.0 | 9.5 | .8 | HT101K            |
| 120            | 10% | Y5P          | .394             | .236 | .374 | .032 | 10.0                  | 6.0 | 9.5 | .8 | HT121K            |
| 150            | 10% | Y5P          | .394             | .236 | .374 | .032 | 10.0                  | 6.0 | 9.5 | .8 | HT151K            |
| 180            | 10% | Y5P          | .394             | .236 | .374 | .032 | 10.0                  | 6.0 | 9.5 | .8 | HT181K            |
| 220            | 10% | Y5P          | .394             | .236 | .374 | .032 | 10.0                  | 6.0 | 9.5 | .8 | HT221K            |
| 270            | 10% | Y5P          | .394             | .236 | .374 | .032 | 10.0                  | 6.0 | 9.5 | .8 | HT271K            |
| 330            | 10% | Y5P          | .394             | .236 | .374 | .032 | 10.0                  | 6.0 | 9.5 | .8 | HT331K            |

| Capacity<br>pF | Tol | Temp<br>Coef | Size<br>(Inches) |      |      |      | Size<br>(Millimeters) |     |     |    | Catalog<br>Number |
|----------------|-----|--------------|------------------|------|------|------|-----------------------|-----|-----|----|-------------------|
|                |     |              | D                | T    | S    | d    | D                     | T   | S   | d  |                   |
| 3000 WVDC      |     |              |                  |      |      |      |                       |     |     |    |                   |
| 390            | 10% | Y5P          | .394             | .236 | .374 | .032 | 10.0                  | 6.0 | 9.5 | .8 | HT391K            |
| 470            | 10% | Y5P          | .394             | .236 | .374 | .032 | 10.0                  | 6.0 | 9.5 | .8 | HT471K            |
| 560            | 10% | Y5P          | .394             | .236 | .374 | .032 | 10.0                  | 6.0 | 9.5 | .8 | HT561K            |
| 680            | 10% | Y5P          | .472             | .236 | .374 | .032 | 12.0                  | 6.0 | 9.5 | .8 | HT681K            |
| 820            | 10% | Y5P          | .472             | .236 | .374 | .032 | 12.0                  | 6.0 | 9.5 | .8 | HT821K            |
| 1,000          | 10% | Y5P          | .591             | .236 | .374 | .032 | 15.0                  | 6.0 | 9.5 | .8 | HT102K            |
| 1,000          | 20% | Y5U          | .394             | .236 | .374 | .032 | 10.0                  | 6.0 | 9.5 | .8 | HT102M            |
| 1,200          | 10% | Y5P          | .591             | .236 | .374 | .032 | 15.0                  | 6.0 | 9.5 | .8 | HT122K            |
| 1,500          | 10% | Y5P          | .591             | .236 | .374 | .032 | 15.0                  | 6.0 | 9.5 | .8 | HT152K            |
| 1,500          | 20% | Y5U          | .472             | .236 | .374 | .032 | 12.0                  | 6.0 | 9.5 | .8 | HT152M            |
| 1,800          | 10% | Y5P          | .591             | .236 | .374 | .032 | 15.0                  | 6.0 | 9.5 | .8 | HT182K            |
| 1,800          | 20% | Y5U          | .591             | .236 | .374 | .032 | 15.0                  | 6.0 | 9.5 | .8 | HT182M            |
| 2,200          | 10% | Y5P          | .787             | .236 | .374 | .032 | 20.0                  | 6.0 | 9.5 | .8 | HT222K            |
| 2,200          | 20% | Y5U          | .591             | .236 | .374 | .032 | 15.0                  | 6.0 | 9.5 | .8 | HT222M            |
| 2,700          | 10% | Y5P          | .787             | .236 | .374 | .032 | 20.0                  | 6.0 | 9.5 | .8 | HT272K            |
| 3,300          | 10% | Y5P          | .787             | .236 | .374 | .032 | 20.0                  | 6.0 | 9.5 | .8 | HT332K            |
| 4,700          | 20% | Y5U          | .787             | .236 | .374 | .032 | 20.0                  | 6.0 | 9.5 | .8 | HT472M            |
| 6,800          | 20% | Y5U          | .787             | .236 | .374 | .032 | 20.0                  | 6.0 | 9.5 | .8 | HT682M            |

Disc Ceramic Capacitors