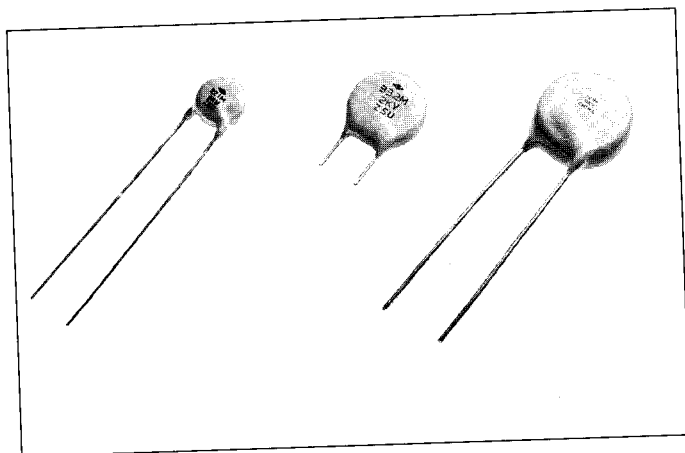


## Series D and S



### Part Number

- See Table 1

### Marking

- See Figure 7

### Packaging

- Available Bulk, Tape & Reel & Ammo Pack

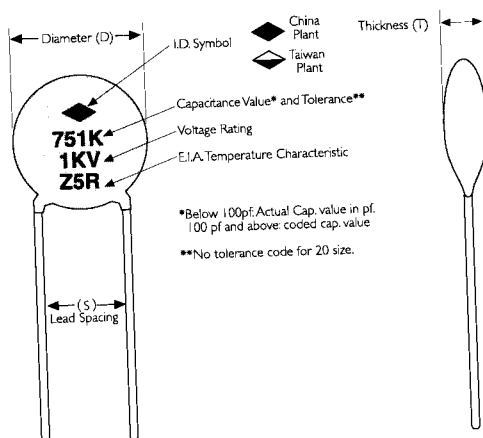
### Lead Material Available

- 100% Copper, solder coated

### Encapsulation

- 50VDC through 2KVDC, Phenolic Resin Coated
- 3KVDC and Higher, Epoxy Coated

### Figure 7 Marking



#### Note(s):

- Standard Lead Space (L/S) for size codes:  
20-47\* 0.250"; available on T&R or ammo  
59 and larger 0.375"; bulk only
- T&R or ammo provided 2,000 pc/Reel, 10,000 pc minimum,

## General Purpose Ceramic Disc Capacitors

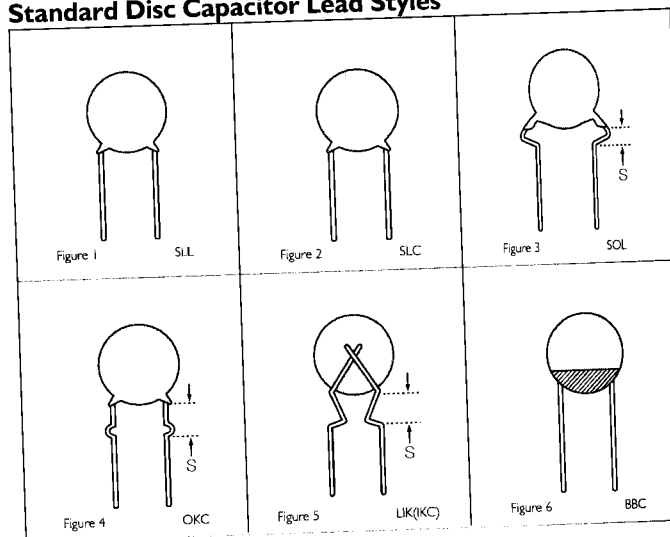
### Features

- Single Layer Construction
- General Purpose and Temperature Compensating Capacitors Available
- High Voltages Available

### Electrical Parameters

Capacitance Range: 0.47 pF through 0.1  $\mu$ F  
Working Voltage DC: 50, 100, 500 & 1000, 2000, 3000 & 6000VDC  
Materials Available: C0H, C0K, C0G, S2L, S3N, X5F, Y5P, Z5F, Z5U

### Standard Disc Capacitor Lead Styles



#### Figure Form Definition

- |   |          |                                                                                      |
|---|----------|--------------------------------------------------------------------------------------|
| 1 | SLL      | Straight Lead, 0.125" max. rundown, no exposed ceramic                               |
| 2 | SLC      | Straight Lead, controlled rundown, 0.031" max. rundown. 0.010" max. exposed ceramic. |
| 3 | SOL      | Stand Off Lead, S = 3.0mm max.                                                       |
| 4 | OKC      | Outside Kink                                                                         |
| 5 | LIK(IKC) | Inside Kink                                                                          |
| 6 | BBC      | Bare Body Construction, bulk only, 0.093" max. exposed disc body.                    |
- } S = 4.75mm max.

**Table 1 Part Number**

**Series D and S**

| D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 102                                                                                                                                                                                | K                                                                                                                    | 29 | Z5F       | N                                                                                                  | AA                                                                                                                                                                                                                                                                                                              | EM |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----|-----------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--------------|--------------|----|--------------|--------------|----|--------------|--------------|----|--------------|--------------|----|--------------|--------------|----|--------------|--------------|----|---------------|--------------|----|---------------|--------------|----|---------------|--------------|----|---------------|--------------|----|---------------|--------------|----|---------------|--------------|----|---------------|--------------|----|---------------|--------------|----|---------------|--------------|----|---------------|--------------|----|---------------|--------------|----|---------------|--------------|----|---------------|--------------|----|---------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| <b>D Disc</b><br>product line                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Capacitance Value (PF)</b><br>First 2 digits are significant,<br>third digit is a multiplier as<br>follows<br>0 x 1<br>1 x 10<br>2 x 100<br>3 x 1000<br>4 x 10000<br>5 x 100000 | <b>Tolerance Code</b><br>C ±0.25 pF<br>D ±0.5 pF<br>F ±1 pF<br>J ±5%<br>K ±10%<br>M ±20%<br>P +100/-0%<br>Z +80/-20% |    |           | <b>Voltage Code</b><br>F 50VDC<br>H 100VDC<br>L 500VDC<br>N 1KVDC<br>P 2KVDC<br>R 3KVDC<br>U 6KVDC | <b>Test Code</b><br>Class 1<br>Dielectric Strength<br>Code Tested @<br>AA 1500VDC<br>AB 2 x Rated VDC<br>AC 3 x Rated VDC<br>AL 2 x Rated VDC<br>AN 1300 VDC<br><br>Class II & III<br>Dielectric Strength<br>Code Tested @<br>EC 1500 VDC<br>ED 1500 VDC<br>EM 2 x Rated VDC<br>EP 1300 VDC<br>EU 3 x Rated VDC |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| <b>Size Code</b> <table><tr><th>Case Size</th><th>Maximum diameter<br/>Inches (mm)</th><th>Maximum thickness<br/>Inches (mm)</th></tr><tr><td>20</td><td>0.197 (5.00)</td><td>0.157 (3.99)</td></tr><tr><td>25</td><td>0.256 (6.50)</td><td>0.157 (3.99)</td></tr><tr><td>29</td><td>0.290 (7.37)</td><td>0.157 (3.99)</td></tr><tr><td>31</td><td>0.310 (7.87)</td><td>0.157 (3.99)</td></tr><tr><td>33</td><td>0.330 (8.83)</td><td>0.236 (5.99)</td></tr><tr><td>35</td><td>0.350 (8.89)</td><td>0.236 (5.99)</td></tr><tr><td>39</td><td>0.394 (10.01)</td><td>0.157 (3.99)</td></tr><tr><td>43</td><td>0.430 (10.92)</td><td>0.236 (5.99)</td></tr><tr><td>47</td><td>0.472 (11.99)</td><td>0.157 (3.99)</td></tr><tr><td>52</td><td>0.520 (13.21)</td><td>0.236 (5.99)</td></tr><tr><td>59</td><td>0.590 (14.99)</td><td>0.157 (3.99)</td></tr><tr><td>63</td><td>0.630 (16.00)</td><td>0.236 (5.99)</td></tr><tr><td>66</td><td>0.660 (16.76)</td><td>0.313 (7.95)</td></tr><tr><td>73</td><td>0.730 (18.54)</td><td>0.236 (5.99)</td></tr><tr><td>75</td><td>0.750 (19.05)</td><td>0.177 (4.50)</td></tr><tr><td>76</td><td>0.760 (19.30)</td><td>0.313 (7.95)</td></tr><tr><td>79</td><td>0.790 (20.07)</td><td>0.236 (5.99)</td></tr><tr><td>84</td><td>0.840 (21.34)</td><td>0.177 (4.50)</td></tr><tr><td>93</td><td>0.930 (23.62)</td><td>0.177 (4.50)</td></tr><tr><td>96</td><td>0.960 (24.38)</td><td>0.313 (7.95)</td></tr></table> |                                                                                                                                                                                    |                                                                                                                      |    | Case Size | Maximum diameter<br>Inches (mm)                                                                    | Maximum thickness<br>Inches (mm)                                                                                                                                                                                                                                                                                | 20 | 0.197 (5.00) | 0.157 (3.99) | 25 | 0.256 (6.50) | 0.157 (3.99) | 29 | 0.290 (7.37) | 0.157 (3.99) | 31 | 0.310 (7.87) | 0.157 (3.99) | 33 | 0.330 (8.83) | 0.236 (5.99) | 35 | 0.350 (8.89) | 0.236 (5.99) | 39 | 0.394 (10.01) | 0.157 (3.99) | 43 | 0.430 (10.92) | 0.236 (5.99) | 47 | 0.472 (11.99) | 0.157 (3.99) | 52 | 0.520 (13.21) | 0.236 (5.99) | 59 | 0.590 (14.99) | 0.157 (3.99) | 63 | 0.630 (16.00) | 0.236 (5.99) | 66 | 0.660 (16.76) | 0.313 (7.95) | 73 | 0.730 (18.54) | 0.236 (5.99) | 75 | 0.750 (19.05) | 0.177 (4.50) | 76 | 0.760 (19.30) | 0.313 (7.95) | 79 | 0.790 (20.07) | 0.236 (5.99) | 84 | 0.840 (21.34) | 0.177 (4.50) | 93 | 0.930 (23.62) | 0.177 (4.50) | 96 | 0.960 (24.38) | 0.313 (7.95) | <b>Temperature Characteristics</b><br>Class I<br>First 2 Digits<br>C0 C0G<br><br>U1 N080<br>P2 N150<br>R2 N220<br>S2 N330<br>T2 N470<br>U2 N750<br>P3 N1500<br>R3 N2200<br>S3 N3300<br>Class II & III<br><br>First Digit is Lower Temp<br>X -55°C<br>Y -30°C<br>Z +10°C<br><br>Second Digit is Upper Temp<br>5 +85°C<br>6 +105°C<br>7 +125°C<br>8 +150°C<br><br>Third Digit is Percent Change Allowed*<br>F ±7.5%<br>P ±10%<br>R ±15%<br>S ±22%<br>T +22/-33%<br>U +22/-56%<br>V +22/-82% |  |  |
| Case Size                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Maximum diameter<br>Inches (mm)                                                                                                                                                    | Maximum thickness<br>Inches (mm)                                                                                     |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.197 (5.00)                                                                                                                                                                       | 0.157 (3.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.256 (6.50)                                                                                                                                                                       | 0.157 (3.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 29                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.290 (7.37)                                                                                                                                                                       | 0.157 (3.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.310 (7.87)                                                                                                                                                                       | 0.157 (3.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 33                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.330 (8.83)                                                                                                                                                                       | 0.236 (5.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.350 (8.89)                                                                                                                                                                       | 0.236 (5.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 39                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.394 (10.01)                                                                                                                                                                      | 0.157 (3.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 43                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.430 (10.92)                                                                                                                                                                      | 0.236 (5.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 47                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.472 (11.99)                                                                                                                                                                      | 0.157 (3.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 52                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.520 (13.21)                                                                                                                                                                      | 0.236 (5.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 59                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.590 (14.99)                                                                                                                                                                      | 0.157 (3.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 63                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.630 (16.00)                                                                                                                                                                      | 0.236 (5.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 66                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.660 (16.76)                                                                                                                                                                      | 0.313 (7.95)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 73                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.730 (18.54)                                                                                                                                                                      | 0.236 (5.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 75                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.750 (19.05)                                                                                                                                                                      | 0.177 (4.50)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 76                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.760 (19.30)                                                                                                                                                                      | 0.313 (7.95)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 79                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.790 (20.07)                                                                                                                                                                      | 0.236 (5.99)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 84                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.840 (21.34)                                                                                                                                                                      | 0.177 (4.50)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.930 (23.62)                                                                                                                                                                      | 0.177 (4.50)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
| 96                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.960 (24.38)                                                                                                                                                                      | 0.313 (7.95)                                                                                                         |    |           |                                                                                                    |                                                                                                                                                                                                                                                                                                                 |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |              |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |    |               |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |

**Ceramic Disc Capacitor Distributor Part Number**

**General Purpose**

| Series | Volt    | Note                   | Coded Capacitance |
|--------|---------|------------------------|-------------------|
| CK     | 50V     | Z5V TC                 |                   |
| DC     | 100V    | Z5V TC                 |                   |
| CE     | 500V    | X5F TC                 |                   |
| CF     | 500V    | Z5P TC                 |                   |
| DD     | 1000V   | Various TC             |                   |
| GAP    | Special | See Catalog for Detail |                   |

**Temperature Compensating**

| Series | Volt | Note   | Coded Capacitance |
|--------|------|--------|-------------------|
| DTZ    | 500V | NPO TC |                   |

**High Voltage Capacitors**

| Series | Volt  | Capacitance (pF) |
|--------|-------|------------------|
| DD30   | 3000V |                  |
| DD60   | 6000V |                  |

102 = 1,000 pF  
i.e. the third digit signifies the number of zeros

**Mechanical & Packaging Code**

| Code | Lead Space | Lead Dia. | Lead Length         | Form | Pack        |
|------|------------|-----------|---------------------|------|-------------|
| AA   | .250"      | #22       | 1.00* min.          | SLL  | Bulk        |
| AB   | .375"      | #22       | 1.00* min.          | SLL  | Bulk        |
| BE   | .250"      | #22       | .187 + .031/- .016* | SLC  | Bulk        |
| BF   | .375"      | #22       | .187 + .031/- .016* | SLC  | Bulk        |
| CE   | .250"      | #22       | .187 + .031/- .016* | BBC  | Bulk        |
| CF   | .375"      | #22       | .187 + .031/- .016* | BBC  | Bulk        |
| EA   | .250"      | #22       | .100* min.          | SOL  | Bulk        |
| EB   | .375"      | #22       | .100* min.          | SOL  | Bulk        |
| FE   | .250"      | #22       | .187 + .031/- .016* | IKC  | Bulk        |
| FF   | .375"      | #22       | .187 + .031/- .016* | IKC  | Bulk        |
| GE   | .250"      | #22       | .187 + .031/- .016* | OKC  | Bulk        |
| GF   | .375"      | #22       | .187 + .031/- .016* | OKC  | Bulk        |
| MA   | .200"      | #22       | .100* min.          | SLL  | Bulk        |
| TE   | .250"      | #22       | H = 16mm min.       | SLC  | Tape & Reel |
| TF   | .250"      | #22       | Ho = 16 $\pm$ 0.5mm | IKC  | Tape & Reel |
| TH   | .200"      | #22       | Ho = 16 $\pm$ 0.5mm | IKC  | Tape & Reel |
| TK   | .200"      | #22       | Ho = 16 $\pm$ 0.5mm | SOL  | Tape & Reel |
| TM   | .200"      | #22       | H = 16mm min.       | SLC  | Tape & Reel |

Note: All 6Kvdc discs use #20 avg. lead dia.

Conversion Factors:  
1 inch = 25.4001 mm  
1mm = .03937 inch

# Ceramic Disc Capacitors

## General Purpose

**PHILIPS**

| Capacitance Value | DC Voltage | Capacitance Tolerance | Temperature Coefficient | Lead Space (Pitch) | Distributor Part Number | Philips Part Number | Packaging Type |
|-------------------|------------|-----------------------|-------------------------|--------------------|-------------------------|---------------------|----------------|
| 5,000 pF          | 50         | +80%/-20%             | Z5V                     | 0.250"             | CK502                   | D502Z20Z5VFABEU     | Bulk           |
| 0.01 $\mu$ F      | 50         | +80%/-20%             | Z5V                     | 0.250"             | CK103                   | D103Z25Z5VFABEU     | Bulk           |
| 0.02 $\mu$ F      | 50         | +80%/-20%             | Z5V                     | 0.375"             | CK203                   | D203Z29Z5VFABEU     | Bulk           |
| 0.025 $\mu$ F     | 50         | +80%/-20%             | Z5V                     | 0.375"             | CK253                   | D253Z31Z5VFABEU     | Bulk           |
| 0.03 $\mu$ F      | 50         | +80%/-20%             | Z5V                     | 0.250"             | CK303                   | D303Z59Z5VFABEU     | Bulk           |
| 0.05 $\mu$ F      | 50         | +80%/-20%             | Z5V                     | 0.375"             | CK503                   | D503Z39Z5VFABEU     | Bulk           |
| 0.1 $\mu$ F       | 50         | +80%/-20%             | Z5V                     | 0.375"             | CK104                   | D104Z69Z5VFAZAA     | Bulk           |
| 5,000 pF          | 100        | $\pm$ 20%             | Z5V                     | 0.250"             | DC502                   | D502M25Z5VHAAEU     | Bulk           |
| 0.01 $\mu$ F      | 100        | $\pm$ 20%             | Z5V                     | 0.250"             | DC103                   | D103M31Z5VHAAEU     | Bulk           |
| 0.02 $\mu$ F      | 100        | $\pm$ 20%             | Z5V                     | 0.375"             | DC203                   | D203M47Z5VHABEU     | Bulk           |
| 0.025 $\mu$ F     | 100        | $\pm$ 20%             | Z5V                     | 0.375"             | DC253                   | D253M47Z5VHABEU     | Bulk           |
| 0.05 $\mu$ F      | 100        | $\pm$ 20%             | Z5V                     | 0.375"             | DC503                   | D503M69Z5VHABEU     | Bulk           |
| 0.1 $\mu$ F       | 100        | $\pm$ 20%             | Z5V                     | 0.375"             | DC104                   | S104M69Z5VHAZAA     | Bulk           |
| 1.5 pF            | 500        | $\pm$ .5 pF           | C0K                     | 0.250"             | DTZ1R5                  | D159D20C0KLA AAA    | Bulk           |
| 2.2 pF            | 500        | $\pm$ .5 pF           | C0K                     | 0.250"             | DTZ2R2                  | D229D20C0KLA AAA    | Bulk           |
| 3.3 pF            | 500        | $\pm$ .5 pF           | C0J                     | 0.250"             | DTZ3R3                  | D339D20C0JLA AAA    | Bulk           |
| 4.7 pF            | 500        | $\pm$ .5 pF           | C0J                     | 0.250"             | DTZ4R7                  | D479D20C0JLA AAA    | Bulk           |
| 6.8 pF            | 500        | $\pm$ .5 pF           | C0H                     | 0.250"             | DTZ6R8                  | D689D20C0HLA AAA    | Bulk           |
| 10 pF             | 500        | $\pm$ 5%              | C0G                     | 0.250"             | DTZ10                   | D100J20C0GLA AAA    | Bulk           |
| 15 pF             | 500        | $\pm$ 5%              | C0G                     | 0.250"             | DTZ15                   | D150J20C0GLA AAA    | Bulk           |
| 18 pF             | 500        | $\pm$ 5%              | C0G                     | 0.250"             | DTZ18                   | D180J20C0GLA AAA    | Bulk           |
| 20 pF             | 500        | $\pm$ 5%              | C0G                     | 0.250"             | DTZ20                   | D200J25C0GLA AAA    | Bulk           |
| 22 pF             | 500        | $\pm$ 5%              | C0G                     | 0.250"             | DTZ22                   | D220J25C0GLA AAA    | Bulk           |
| 25 pF             | 500        | $\pm$ 5%              | C0G                     | 0.250"             | DTZ25                   | D250J25C0GLA AAA    | Bulk           |
| 27 pF             | 500        | $\pm$ 5%              | C0G                     | 0.250"             | DTZ27                   | D270J25C0GLA AAA    | Bulk           |
| 33 pF             | 500        | $\pm$ 5%              | C0G                     | 0.250"             | DTZ33                   | D330J25C0GLA AAA    | Bulk           |
| 47 pF             | 500        | $\pm$ 5%              | C0G                     | 0.250"             | DTZ47                   | D470J29C0GLA AAA    | Bulk           |
| 56 pF             | 500        | $\pm$ 5%              | C0G                     | 0.250"             | DTZ56                   | D560J31C0GLA AAA    | Bulk           |
| 68 pF             | 500        | $\pm$ 5%              | C0G                     | 0.250"             | DTZ68                   | D680J39C0GLA AAA    | Bulk           |
| 75 pF             | 500        | $\pm$ 5%              | C0G                     | 0.375"             | DTZ75                   | D750J39C0GLABAA     | Bulk           |
| 82 pF             | 500        | $\pm$ 5%              | C0G                     | 0.375"             | DTZ82                   | D820J39C0GLABAA     | Bulk           |
| 100 pF            | 500        | $\pm$ 5%              | C0G                     | 0.375"             | DTZ100                  | D101J39C0GLABAA     | Bulk           |
| 120 pF            | 500        | $\pm$ 5%              | C0G                     | 0.375"             | DTZ120                  | D121J47C0GLABAA     | Bulk           |
| 150 pF            | 500        | $\pm$ 5%              | C0G                     | 0.375"             | DTZ150                  | D151J47C0GLABAA     | Bulk           |
| 200 pF            | 500        | $\pm$ 5%              | C0G                     | 0.375"             | DTZ200                  | D201J59C0GLABAA     | Bulk           |
| 220 pF            | 500        | $\pm$ 5%              | C0G                     | 0.375"             | DTZ220                  | D221J59C0GLABAA     | Bulk           |
| 150 pF            | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE151                   | D151K20X5FLAAEC     | Bulk           |
| 220 pF            | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE221                   | D221K20X5FLAAEC     | Bulk           |
| 330 pF            | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE331                   | D331K20X5FLAAEC     | Bulk           |
| 470 pF            | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE471                   | D471K25X5FLAAEC     | Bulk           |
| 500 pF            | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE501                   | D501K25X5FLAAEC     | Bulk           |
| 560 pF            | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE561                   | D561K25X5FLAAEA     | Bulk           |
| 680 pF            | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE681                   | D681K25X5FLAAEA     | Bulk           |
| 750 pF            | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE751                   | D751K25X5FLAAEA     | Bulk           |
| 800 pF            | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE801                   | D801K25X5FLAAEC     | Bulk           |
| 820 pF            | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE821                   | D821K29X5FLAAEC     | Bulk           |
| 1000 pF           | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE102                   | D102K29X5FLAAEC     | Bulk           |
| 1200 pF           | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE122                   | D122K31X5FLAAEC     | Bulk           |
| 1500 pF           | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE152                   | D152K39X5FLAAEC     | Bulk           |
| 1800 pF           | 500        | $\pm$ 10%             | X5F                     | 0.250"             | CE182                   | D182K39X5FLAAEC     | Bulk           |

| Capacitance Value | DC Voltage | Capacitance Tolerance | Temperature Coefficient | Lead Space (Pitch) | Distributor Part Number | Philips Part Number | Packaging Type |
|-------------------|------------|-----------------------|-------------------------|--------------------|-------------------------|---------------------|----------------|
| 2000 pF           | 500        | ±10%                  | X5F                     | 0.250"             | CE202                   | D202K39X5FLAAEC     | Bulk           |
| 2200 pF           | 500        | ±10%                  | X5F                     | 0.250"             | CE222                   | D222K39X5FLAAEC     | Bulk           |
| 3300 pF           | 500        | ±10%                  | X5F                     | 0.375"             | CE332                   | D332K47X5FLABEC     | Bulk           |
| 3900 pF           | 500        | ±10%                  | X5F                     | 0.375"             | CE392                   | D392K59X5FLABEC     | Bulk           |
| 4700 pF           | 500        | ±10%                  | X5F                     | 0.375"             | CE472                   | D472K59X5FLABEC     | Bulk           |
| 5000 pF           | 500        | ±10%                  | X5F                     | 0.375"             | CE502                   | D502K59X5FLABED     | Bulk           |
| 6200 pF           | 500        | ±10%                  | X5F                     | 0.375"             | CE622                   | D622K69X5FLABED     | Bulk           |
| 8200 pF           | 500        | ±10%                  | X5F                     | 0.375"             | CE822                   | D822K75X5FLABEC     | Bulk           |
| 0.01 µF           | 500        | ±10%                  | X5F                     | 0.375"             | CE103                   | D103K84X5FLABEA     | Bulk           |
| 0.01 µF           | 500        | +100/-0%              | Z5U                     | 0.375"             | DD6103                  | D103P59Z5ULABED     | Bulk           |
| 0.015 µF          | 500        | +80%/-20%             | Z5U                     | 0.375"             | DD153                   | D153Z59Z5ULABED     | Bulk           |
| 0.02 µF           | 500        | +80%/-20%             | Z5U                     | 0.375"             | DD203                   | D203Z59Z5ULABED     | Bulk           |
| 0.03 µF           | 500        | +80%/-20%             | Z5U                     | 0.375"             | DD303                   | D303Z69Z5ULAZAA     | Bulk           |
| 0.04 µF           | 500        | +80%/-20%             | Z5U                     | 0.375"             | DD403                   | D403Z84Z5ULAZAA     | Bulk           |
| 0.05 µF           | 500        | +80%/-20%             | Z5U                     | 0.375"             | DD503                   | D503Z93Z5ULAZAA     | Bulk           |
| 0.1 µF            | 500        | +80%/-20%             | Z5V                     | 0.375"             | DD104                   | S104Z93Z5VLAZAA     | Bulk           |
| 3.3 pF            | 1000       | ±10%                  | S2L                     | 0.250"             | DD3R3                   | D339K20S2LNAAAL     | Bulk           |
| 5.0 pF            | 1000       | ±10%                  | S2L                     | 0.250"             | DD050                   | D509K20S2LNAAAL     | Bulk           |
| 6.0 pF            | 1000       | ±10%                  | S2L                     | 0.250"             | DD060                   | D609K20S2LNAAAL     | Bulk           |
| 6.8 pF            | 1000       | ±10%                  | S2L                     | 0.250"             | DD6R8                   | D689K20S2LNAAAL     | Bulk           |
| 7.0 pF            | 1000       | ±10%                  | S2L                     | 0.250"             | DD070                   | D709K20S2LNAAAL     | Bulk           |
| 8.0 pF            | 1000       | ±10%                  | S2L                     | 0.250"             | DD080                   | D809K25S2LNAAAL     | Bulk           |
| 10 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD100                   | D100K25S2LNAAAL     | Bulk           |
| 12 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD120                   | D120K25S2LNAAAL     | Bulk           |
| 15 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD150                   | D150K25S2LNAAAL     | Bulk           |
| 18 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD180                   | D180K29S2LNAAAL     | Bulk           |
| 20 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD200                   | D200K29S2LNAAAL     | Bulk           |
| 22 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD220                   | D220K29S2LNAAAL     | Bulk           |
| 24 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD240                   | D240K29S2LNAAAL     | Bulk           |
| 25 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD250                   | D250K29S2LNAAAL     | Bulk           |
| 27 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD270                   | D270K31S2LNAAAL     | Bulk           |
| 30 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD300                   | D300K31S2LNAAAL     | Bulk           |
| 33 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD330                   | D330K39S2LNAAAL     | Bulk           |
| 39 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD390                   | D390K39S2LNAAAL     | Bulk           |
| 47 pF             | 1000       | ±10%                  | S2L                     | 0.250"             | DD470                   | D470K39S2LNAAAL     | Bulk           |
| 50 pF             | 1000       | ±10%                  | S3N                     | 0.250"             | DD500                   | D500K25S3NNAAAL     | Bulk           |
| 51 pF             | 1000       | ±10%                  | S3N                     | 0.250"             | DD510                   | D510K25S3NNAAAL     | Bulk           |
| 56 pF             | 1000       | ±10%                  | S3N                     | 0.250"             | DD560                   | D560K25S3NNAAAL     | Bulk           |
| 68 pF             | 1000       | ±10%                  | S3N                     | 0.250"             | DD680                   | D680K25S3NNAAAL     | Bulk           |
| 75 pF             | 1000       | ±10%                  | S3N                     | 0.250"             | DD750                   | D750K25S3NNAAAL     | Bulk           |
| 82 pF             | 1000       | ±10%                  | S3N                     | 0.250"             | DD820                   | D820K25S3NNAAAL     | Bulk           |
| 91 pF             | 1000       | ±10%                  | S3N                     | 0.250"             | DD910                   | D910K29S3NNAAAL     | Bulk           |
| 100 pF            | 1000       | ±10%                  | S3N                     | 0.250"             | DD101                   | D101K29S3NNAAAL     | Bulk           |
| 120 pF            | 1000       | ±10%                  | S3N                     | 0.250"             | DD121                   | D121K29S3NNAAAL     | Bulk           |
| 130 pF            | 1000       | ±10%                  | S3N                     | 0.250"             | DD131                   | D131K31S3NNAAAL     | Bulk           |
| 150 pF            | 1000       | ±10%                  | S3N                     | 0.250"             | DD151                   | D151K31S3NNAAAL     | Bulk           |
| 180 pF            | 1000       | ±10%                  | S3N                     | 0.250"             | DD181                   | D181K39S3NNAAAL     | Bulk           |
| 200 pF            | 1000       | ±10%                  | S3N                     | 0.250"             | DD201                   | D201K39S3NNAAAL     | Bulk           |
| 220 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD221                   | D221K25Z5FNAAEM     | Bulk           |
| 240 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD241                   | D241K25Z5FNAAEM     | Bulk           |

# Ceramic Disc Capacitors

## General Purpose

**PHILIPS**

| Capacitance Value | DC Voltage | Capacitance Tolerance | Temperature Coefficient | Lead Space (Pitch) | Distributor Part Number | Philips Part Number | Packaging Type |
|-------------------|------------|-----------------------|-------------------------|--------------------|-------------------------|---------------------|----------------|
| 250 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD251                   | D251K25Z5FNAAEM     | Bulk           |
| 270 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD271                   | D271K25Z5FNAAEM     | Bulk           |
| 300 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD301                   | D301K25Z5FNAAEM     | Bulk           |
| 330 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD331                   | D331K25Z5FNAAEM     | Bulk           |
| 350 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD351                   | D351K25Z5FNAAEM     | Bulk           |
| 360 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD361                   | D361K25Z5FNAAEM     | Bulk           |
| 390 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD391                   | D391K25Z5FNAAEM     | Bulk           |
| 400 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD401                   | D401K25Z5FNAAEM     | Bulk           |
| 470 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD471                   | D471K29Z5FNAAEM     | Bulk           |
| 500 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD501                   | D501K29Z5FNAAEM     | Bulk           |
| 510 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD511                   | D511K29Z5FNAAEM     | Bulk           |
| 560 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD561                   | D561K31Z5FNAAEM     | Bulk           |
| 600 pF            | 1000       | ±10%                  | Z5R                     | 0.250"             | DD601                   | D601K29Z5RNAEM      | Bulk           |
| 680 pF            | 1000       | ±10%                  | Z5R                     | 0.250"             | DD681                   | D681K29Z5RNAEM      | Bulk           |
| 750 pF            | 1000       | ±10%                  | Z5R                     | 0.250"             | DD751                   | D751K29Z5RNAEM      | Bulk           |
| 820 pF            | 1000       | ±10%                  | Z5F                     | 0.250"             | DD821                   | D821K39Z5FNAAEM     | Bulk           |
| 910 pF            | 1000       | ±10%                  | Z5R                     | 0.250"             | DD911                   | D911K29Z5RNAEM      | Bulk           |
| 1000 pF           | 1000       | ±10%                  | Z5F                     | 0.250"             | DD102                   | D102K39Z5FNAAEM     | Bulk           |
| 1000 pF           | 1000       | +100%/-0%             | Z5U                     | 0.250"             | DD102G                  | D102P25Z5UNAAEM     | Bulk           |
| 1200 pF           | 1000       | ±10%                  | Z5R                     | 0.250"             | DD122                   | D122K39Z5RNAEM      | Bulk           |
| 1300 pF           | 1000       | ±10%                  | Z5R                     | 0.250"             | DD132                   | D132K39Z5RNAEM      | Bulk           |
| 1500 pF           | 1000       | ±10%                  | Z5R                     | 0.250"             | DD152                   | D152K39Z5RNAEM      | Bulk           |
| 1500 pF           | 1000       | +100%/-0%             | Z5U                     | 0.250"             | DD152G                  | D152P25Z5UNAAEM     | Bulk           |
| 1600 pF           | 1000       | ±10%                  | Z5R                     | 0.250"             | DD162                   | D162K39Z5RNAEM      | Bulk           |
| 1800 pF           | 1000       | ±10%                  | Z5R                     | 0.250"             | DD182                   | D182K39Z5RNAEM      | Bulk           |
| 2000 pF           | 1000       | ±20%                  | Z5U                     | 0.250"             | DD202                   | D202M29Z5UNAAEM     | Bulk           |
| 2200 pF           | 1000       | ±20%                  | Z5U                     | 0.250"             | DD222                   | D222M29Z5UNAAEM     | Bulk           |
| 2500 pF           | 1000       | ±20%                  | Z5U                     | 0.250"             | DD252                   | D252M31Z5UNAAEM     | Bulk           |
| 2700 pF           | 1000       | ±20%                  | Z5U                     | 0.250"             | DD272                   | D272M31Z5UNAAEM     | Bulk           |
| 3000 pF           | 1000       | ±20%                  | Z5U                     | 0.250"             | DD302                   | D302M31Z5UNAAEM     | Bulk           |
| 3300 pF           | 1000       | ±20%                  | Z5U                     | 0.250"             | DD332                   | D332M39Z5UNAAEM     | Bulk           |
| 3900 pF           | 1000       | ±20%                  | Z5U                     | 0.250"             | DD392                   | D392M39Z5UNAAEM     | Bulk           |
| 4000 pF           | 1000       | ±20%                  | Z5U                     | 0.250"             | DD402                   | D402M39Z5UNAAEM     | Bulk           |
| 4300 pF           | 1000       | ±20%                  | Z5U                     | 0.250"             | DD432                   | D432M39Z5UNAAEM     | Bulk           |
| 4700 pF           | 1000       | ±20%                  | Z5U                     | 0.250"             | DD472                   | D472M39Z5UNAAEM     | Bulk           |
| 5000 pF           | 1000       | ±20%                  | Z5U                     | 0.250"             | DD5022                  | D502M39Z5UNAAEM     | Bulk           |
| 5000 pF           | 1000       | +100%/-0%             | Z5U                     | 0.375"             | DD502                   | D502P47Z5UNABEM     | Bulk           |
| 5600 pF           | 1000       | ±20%                  | Z5U                     | 0.250"             | DD562                   | D562M47Z5UNAAEM     | Bulk           |
| 6800 pF           | 1000       | ±20%                  | Z5U                     | 0.375"             | DD682                   | D682M47Z5UNABEM     | Bulk           |
| 7500 pF           | 1000       | ±20%                  | Z5U                     | 0.375"             | DD752                   | D752M47Z5UNABEM     | Bulk           |
| 8200 pF           | 1000       | ±20%                  | Z5U                     | 0.375"             | DD822                   | D822M47Z5UNABEM     | Bulk           |
| 0.01 µF           | 1000       | ±20%                  | Z5U                     | 0.375"             | DD1032                  | D103M59Z5UNABEM     | Bulk           |
| 0.01 µF           | 1000       | +100%/-0%             | Z5U                     | 0.375"             | DD103                   | D103P69Z5UNABEM     | Bulk           |
| 4.7 pF            | 3000       | ±20%                  | S2L                     | 0.250"             | DD304R7                 | D479M35S2LRAAAL     | Bulk           |
| 10 pF             | 3000       | ±20%                  | S2L                     | 0.250"             | DD30100                 | D100M35S2LRAAAL     | Bulk           |
| 15 pF             | 3000       | ±20%                  | S2L                     | 0.250"             | DD30150                 | D150M35S2LRAAAL     | Bulk           |
| 22 pF             | 3000       | ±20%                  | S3N                     | 0.250"             | DD30220                 | D220M35S3NRAAAL     | Bulk           |
| 30 pF             | 3000       | ±20%                  | S3N                     | 0.250"             | DD30300                 | D300M35S3NRAAAL     | Bulk           |
| 33 pF             | 3000       | ±20%                  | S3N                     | 0.250"             | DD30330                 | D330M35S3NRAAAL     | Bulk           |
| 47 pF             | 3000       | ±20%                  | S3N                     | 0.250"             | DD30470                 | D470M35S3NRAAAL     | Bulk           |

| Capacitance Value | DC Voltage | Capacitance Tolerance | Temperature Coefficient | Lead Space (Pitch) | Distributor Part Number | Philips Part Number | Packaging Type |
|-------------------|------------|-----------------------|-------------------------|--------------------|-------------------------|---------------------|----------------|
| 50 pF             | 3000       | ±20%                  | S3N                     | 0.250"             | DD30500                 | D500M35S3NRAAAL     | Bulk           |
| 68 pF             | 3000       | ±20%                  | S3N                     | 0.250"             | DD30680                 | D680M35S3NRAAAL     | Bulk           |
| 82 pF             | 3000       | ±20%                  | S3N                     | 0.250"             | DD30820                 | D820M35S3NRAAAL     | Bulk           |
| 100 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30101                 | D101M35Z5URAAEM     | Bulk           |
| 150 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30151                 | D151M35Z5URAAEM     | Bulk           |
| 200 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30201                 | D201M35Z5URAAEM     | Bulk           |
| 220 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30221                 | D221M35Z5URAAEM     | Bulk           |
| 250 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30251                 | D251M35Z5URAAEM     | Bulk           |
| 270 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30271                 | D271M35Z5URAAEM     | Bulk           |
| 300 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30301                 | D301M35Z5URAAEM     | Bulk           |
| 330 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30331                 | D331M35Z5URAAEM     | Bulk           |
| 390 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30391                 | D391M35Z5URAAEM     | Bulk           |
| 470 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30471                 | D471M35Z5URAAEM     | Bulk           |
| 500 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30501                 | D501M35Z5URAAEM     | Bulk           |
| 680 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30681                 | D681M35Z5URAAEM     | Bulk           |
| 750 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30751                 | D751M35Z5URAAEM     | Bulk           |
| 820 pF            | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30821                 | D821M35Z5URAAEM     | Bulk           |
| 1000 pF           | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30102                 | D102M43Z5URAAEM     | Bulk           |
| 1200 pF           | 3000       | ±20%                  | Z5U                     | 0.250"             | DD30122                 | D122M43Z5URAAEM     | Bulk           |
| 1500 pF           | 3000       | ±20%                  | Z5U                     | 0.375"             | DD30152                 | D152M43Z5URABEM     | Bulk           |
| 2000 pF           | 3000       | ±20%                  | Z5U                     | 0.375"             | DD30202                 | D202M52Z5URABEM     | Bulk           |
| 2200 pF           | 3000       | ±20%                  | Z5U                     | 0.375"             | DD30222                 | D222M52Z5URABEM     | Bulk           |
| 2700 pF           | 3000       | ±20%                  | Z5U                     | 0.375"             | DD30272                 | D272M52Z5URABEM     | Bulk           |
| 3000 pF           | 3000       | ±20%                  | Z5U                     | 0.375"             | DD30302                 | D302M63Z5URABEM     | Bulk           |
| 3300 pF           | 3000       | ±20%                  | Z5U                     | 0.375"             | DD30332                 | D332M63Z5URABEM     | Bulk           |
| 3900 pF           | 3000       | ±20%                  | Z5U                     | 0.375"             | DD30392                 | D392M63Z5URABEM     | Bulk           |
| 4700 pF           | 3000       | ±20%                  | Z5U                     | 0.375"             | DD30472                 | D472M73Z5URABEM     | Bulk           |
| 5000 pF           | 3000       | ±20%                  | Z5U                     | 0.375"             | DD30502                 | D502M73Z5URABEM     | Bulk           |
| 0.01 µF           | 3000       | ±20%                  | Z5U                     | 0.375"             | DD30103                 | D103M96Z5URABEM     | Bulk           |
| 10 pF             | 6000       | ±20%                  | S2L                     | 0.375"             | DD60100                 | D100M62S2LUABAL     | Bulk           |
| 15 pF             | 6000       | ±20%                  | S2L                     | 0.375"             | DD60150                 | D150M66S2LUABAL     | Bulk           |
| 30 pF             | 6000       | ±20%                  | S3N                     | 0.375"             | DD60300                 | D300M66S3NUABAL     | Bulk           |
| 39 pF             | 6000       | ±20%                  | S3N                     | 0.375"             | DD60390                 | D390M66S3NUABAL     | Bulk           |
| 47 pF             | 6000       | ±20%                  | S3N                     | 0.375"             | DD60470                 | D470M66S3NUABAL     | Bulk           |
| 50 pF             | 6000       | ±20%                  | S3N                     | 0.375"             | DD60500                 | D500M66S3NUABAL     | Bulk           |
| 75 pF             | 6000       | ±20%                  | S3N                     | 0.375"             | DD60750                 | D750M66S3NUABAL     | Bulk           |
| 82 pF             | 6000       | ±20%                  | S3N                     | 0.375"             | DD60820                 | D820M66S3NUABAL     | Bulk           |
| 100 pF            | 6000       | ±20%                  | S3N                     | 0.375"             | DD60101                 | D101M66S3NUABAA     | Bulk           |
| 120 pF            | 6000       | ±20%                  | S3N                     | 0.375"             | DD60121                 | D121M66S3NUABAL     | Bulk           |
| 150 pF            | 6000       | ±20%                  | Z5F                     | 0.375"             | DD60151                 | D151M66Z5FUABAL     | Bulk           |
| 180 pF            | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60181                 | D181M66Z5UUABEM     | Bulk           |
| 200 pF            | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60201                 | D201M66Z5UUABEM     | Bulk           |
| 220 pF            | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60221                 | D221M66Z5UUABEM     | Bulk           |
| 250 pF            | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60251                 | D251M66Z5UUABEM     | Bulk           |
| 300 pF            | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60301                 | D301M66Z5UUABEM     | Bulk           |
| 390 pF            | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60391                 | D391M66Z5UUABEM     | Bulk           |
| 470 pF            | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60471                 | D471M66Z5UUABEM     | Bulk           |
| 500 pF            | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60501                 | D501M66Z5UUABEM     | Bulk           |
| 750 pF            | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60751                 | D751M66Z5UUABEM     | Bulk           |
| 820 pF            | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60821                 | D821M66Z5UUABEM     | Bulk           |

# Ceramic Disc Capacitors

## General Purpose

**PHILIPS**

| Capacitance Value | DC Voltage | Capacitance Tolerance | Temperature Coefficient | Lead Space (Pitch) | Distributor Part Number | Philips Part Number | Packaging Type |
|-------------------|------------|-----------------------|-------------------------|--------------------|-------------------------|---------------------|----------------|
| 1000 pF           | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60102                 | D102M66Z5UUABEM     | Bulk           |
| 1200 pF           | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60122                 | D122M66Z5UUABEM     | Bulk           |
| 1500 pF           | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60152                 | D152M66Z5UUABEM     | Bulk           |
| 2000 pF           | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60202                 | D202M76Z5UUABEM     | Bulk           |
| 2200 pF           | 6000       | ±20%                  | Z5U                     | 0.375"             | DD60222                 | D222M76Z5UUABEM     | Bulk           |