

07

Single Layer  
Ceramic Capacitor

TYPE:SC/SD/SE/SF/SG

SELECTION

| Type | Series                    | Case size code | Nominal Capacitance (pF) | Highest Working Voltage | Temperature Coefficient       | Operating temperature          |
|------|---------------------------|----------------|--------------------------|-------------------------|-------------------------------|--------------------------------|
| SD   | Straight-sided SLC        | 10~90          | 0.03~11000               | 100V                    | AG、CG、UK、VL、KL、DM、2X1、2F2、X7S | -55℃ ~125℃、<br>-55℃ ~85℃ (2F2) |
| SD   | Recessed metalization SLC | 10~50          | 0.02~2900                | 100V                    | AG、CG、UK、VL、KL、DM、2X1、2F2、X7S |                                |
| SE   | Array type SLC            | 15~50          | 7~1200                   | 100V                    | 2X1、2F2、X7S                   |                                |
| SF   | Binary SLC                | 15~40          | 0.08~4                   | 100V                    | AG、CG、UK、VL、KL、DM             |                                |
| SG   | Gap SLC                   | 10~50          | 0.02~1100                | 50V                     | AG、CG、UK、VL、KL、DM、2X1、2F2、X7S |                                |

SD Straight-sided SLC

1 Features

- ◆ Small size, high accuracy, rugged construction, stable performance;
- ◆ Gold electrode is compatible with gold wire, gold strip etc;
- ◆ Higher capacitance with same size;
- ◆ Facilitate matching of the capacitor width and stripline width;
- ◆ Low-cost type is available for SLC with Class 3 dielectric. Applicable to conductive adhesive mounting.



2 Applications

Widely Applicable to Optical and Wireless Communication Equipment. The Functional Applications Are D.C. Blocking, Bypassing, Filtering, Coupling, Tuning, Matching Etc. in High Frequency and Micro-Wave Circuits.

3 How to order

| SD     | N      | 25             | 2X1    | 2A       | 101M                   | C                | C       | 01          |
|--------|--------|----------------|--------|----------|------------------------|------------------|---------|-------------|
| Type   | Series | Case size Code | TCC    | Rated V. | Capacitance& Tolerance | Termination Code | Packing | Design code |
| Table1 | Table2 | Table3         | Table4 | Table5   | Table 6、 7             | Table8           | Table9  | Table 10    |

| Table 1 Type | Table 2 Series    | Drawing |
|--------------|-------------------|---------|
| SD: SLC      | N: straight-sided |         |

| Table 3 Case size code (mm) |               |       |             |
|-----------------------------|---------------|-------|-------------|
| Case size code              | W             | Lmax  | T           |
| 10                          | 0.254 ± 0.076 | 0.330 | 0.07 ~ 0.40 |
| 12                          | 0.305 ± 0.076 | 0.381 |             |
| 15                          | 0.381 ± 0.076 | 0.508 |             |
| 20                          | 0.508 ± 0.076 | 0.635 |             |
| 25                          | 0.635 ± 0.127 | 0.762 |             |
| 30                          | 0.762 ± 0.127 | 0.889 |             |
| 35                          | 0.889 ± 0.127 | 1.016 |             |
| 50                          | 1.270 ± 0.254 | 1.524 |             |
| 70                          | 1.778 ± 0.254 | 2.032 |             |
| 90                          | 2.286 ± 0.254 | 2.540 |             |

Note: For capacitance below 0.5pF, thickness T max. is 0.4mm or 2L/3 (whichever is thicker) .

SD Straight-sided SLC

| Table 4 TCC          | Operating temperature | Table 5 Rated Voltage |      |
|----------------------|-----------------------|-----------------------|------|
| AG、CG、UK<br>VL、KL、DM | −55℃ ~ 125℃           | 1C                    | 16V  |
| 2X1                  | −55℃ ~ 125℃           | 1E                    | 25V  |
| 2F2                  | −55℃ ~ 85℃            | 1H                    | 50V  |
| 2F4                  | −25℃ ~ 85℃            | 1J                    | 63V  |
| X7R、 X7S             | −55℃ ~ 125℃           | 2A                    | 100V |

| Table 6 Nominal Capacitance                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EIA Capacitance code in pF.1st two digit are significant figures of capacitance; 3rd digit denotes number of Zeros; R=decimal point; For examples: 103=10,000pF; 3R9=3.9pF. |

| Table 7 Capacitance Tolerance |                |                          |               |      |               |
|-------------------------------|----------------|--------------------------|---------------|------|---------------|
| NominalCapacitance < 10pF     |                | NominalCapacitance≥ 10pF |               |      |               |
| Code                          | Tolerance (pF) | Code                     | Tolerance (%) | Code | Tolerance (%) |
| A                             | ± 0.05         | F                        | ± 1           | L    | ± 15          |
| B                             | ± 0.1          | G                        | ± 2           | M    | ± 20          |
| C                             | ± 0.25         | J                        | ± 5           | S    | −20 ~ +50     |
| D                             | ± 0.50         | K                        | ± 10          | Z    | −20 ~ +80     |

| Table 8 Termination           | Table 9 Packing                                                          | Table 10 Design code                                                                                          |
|-------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| P:TiW/Au                      | C:Waffle<br>E:Blue film,7.87" blue film,no ring<br>F:Blue film, 6 " ring | Design code: Blank if no special design;<br>For special design, two digit number will be used , start from 01 |
| T:TiW/Ni/Au                   |                                                                          |                                                                                                               |
| C:NiCr/Au                     |                                                                          |                                                                                                               |
| S:Special Electrode           |                                                                          |                                                                                                               |
| BA:Upper Ti/Ni/Au,Lower Ti/Pt |                                                                          |                                                                                                               |

SD

Straight-sided SLC

| 4 Capacitance Value for Class 1 / Class 2 Ceramic |               |                        |      |      |      |      |     |     |      |      |
|---------------------------------------------------|---------------|------------------------|------|------|------|------|-----|-----|------|------|
| Case size code                                    | Rated Voltage | Capacitance range (pF) |      |      |      |      |     |     |      |      |
|                                                   |               | TCC                    | AG   | CG   | UK   | VL   | KL  | DM  | 2X1  | 2F2  |
| 10                                                | 50V           | min.                   | 0.03 | 0.05 | 0.36 | 0.55 | 1.2 | 1.5 | 3.1  | 26   |
|                                                   |               | max.                   | 0.11 | 0.64 | 0.82 | 1.8  | 2.8 | 3.5 | 32   | 78   |
| 12                                                | 50V           | min.                   | 0.05 | 0.08 | 0.58 | 0.89 | 1.9 | 2.4 | 5.0  | 42   |
|                                                   |               | max.                   | 0.15 | 0.87 | 1.1  | 2.4  | 3.8 | 4.7 | 43   | 110  |
| 15                                                | 50V           | min.                   | 0.07 | 0.13 | 0.93 | 1.4  | 3.1 | 3.9 | 8.0  | 68   |
|                                                   |               | max.                   | 0.22 | 1.3  | 1.6  | 3.6  | 5.5 | 6.9 | 64   | 160  |
|                                                   | 100V          | min.                   | 0.04 | 0.07 | 0.51 | 0.78 | 1.7 | 2.1 | 4.4  | 37   |
|                                                   |               | max.                   | 0.16 | 0.95 | 1.6  | 3.5  | 5.3 | 6.7 | 47   | 120  |
| 20                                                | 50V           | min.                   | 0.15 | 0.26 | 1.8  | 2.8  | 6.1 | 7.6 | 16   | 130  |
|                                                   |               | max.                   | 0.37 | 2.1  | 2.7  | 6.0  | 9.2 | 12  | 110  | 260  |
|                                                   | 100V          | min.                   | 0.07 | 0.13 | 0.89 | 1.4  | 3.0 | 3.8 | 7.7  | 65   |
|                                                   |               | max.                   | 0.27 | 1.6  | 2.6  | 5.8  | 8.9 | 11  | 79   | 190  |
| 25                                                | 50V           | min.                   | 0.20 | 0.35 | 2.4  | 3.8  | 8.3 | 10  | 21   | 180  |
|                                                   |               | max.                   | 0.65 | 3.7  | 4.8  | 10   | 16  | 20  | 190  | 450  |
|                                                   | 100V          | min.                   | 0.1  | 0.18 | 1.2  | 1.9  | 4.2 | 5.2 | 11   | 90   |
|                                                   |               | max.                   | 0.48 | 2.8  | 4.6  | 10   | 16  | 19  | 140  | 340  |
| 30                                                | 50V           | min.                   | 0.30 | 0.54 | 3.8  | 5.8  | 13  | 16  | 33   | 280  |
|                                                   |               | max.                   | 0.88 | 5.1  | 6.5  | 14   | 22  | 28  | 260  | 620  |
|                                                   | 100V          | min.                   | 0.12 | 0.22 | 1.5  | 2.4  | 5.2 | 6.5 | 13   | 110  |
|                                                   |               | max.                   | 0.65 | 3.8  | 6.3  | 14   | 21  | 27  | 190  | 460  |
| 35                                                | 50V           | min.                   | 0.43 | 0.76 | 5.3  | 8.2  | 18  | 23  | 46   | 390  |
|                                                   |               | max.                   | 1.2  | 6.8  | 8.7  | 19   | 29  | 37  | 340  | 820  |
|                                                   | 100V          | min.                   | 0.17 | 0.29 | 2.1  | 3.2  | 6.9 | 8.7 | 18   | 150  |
|                                                   |               | max.                   | 0.87 | 5.0  | 8.4  | 18   | 28  | 35  | 250  | 610  |
| 50                                                | 100V          | min.                   | 0.29 | 0.52 | 3.6  | 5.6  | 12  | 15  | 31   | 260  |
|                                                   |               | max.                   | 2.0  | 11   | 19   | 41   | 64  | 80  | 570  | 1400 |
| 70                                                | 100V          | min.                   | 0.65 | 1.1  | 8.0  | 12   | 27  | 34  | 69   | 580  |
|                                                   |               | max.                   | 3.5  | 20   | 34   | 74   | 110 | 140 | 1000 | 2500 |
| 90                                                | 100V          | min.                   | 1.1  | 2.0  | 14   | 22   | 48  | 60  | 120  | 1000 |
|                                                   |               | max.                   | 4.5  | 26   | 43   | 95   | 150 | 180 | 1300 | 3200 |

SD

Straight-sided SLC

| 5 Capacitance Value for Class 3 Ceramic |               |                        |         |               |      |         |
|-----------------------------------------|---------------|------------------------|---------|---------------|------|---------|
| Case size code                          | Rated Voltage | Capacitance range (pF) |         |               |      |         |
|                                         |               | TCC                    | X7R/X7S | Rated Voltage | TCC  | X7R/X7S |
| 10                                      | 16V、25V、50V   | min.                   | 44      | 63V           | min. | 44      |
|                                         |               | max.                   | 180     |               | max. | 160     |
| 12                                      | 16V、25V、50V   | min.                   | 55      | 63V           | min. | 55      |
|                                         |               | max.                   | 240     |               | max. | 220     |
| 15                                      | 16V、25V、50V   | min.                   | 70      | 63V           | min. | 70      |
|                                         |               | max.                   | 360     |               | max. | 320     |
| 20                                      | 16V、25V、50V   | min.                   | 130     | 63V           | min. | 130     |
|                                         |               | max.                   | 600     |               | max. | 540     |
| 25                                      | 16V、25V、50V   | min.                   | 180     | 63V           | min. | 180     |
|                                         |               | max.                   | 1000    |               | max. | 940     |
| 30                                      | 16V、25V、50V   | min.                   | 280     | 63V           | min. | 280     |
|                                         |               | max.                   | 1400    |               | max. | 1300    |
| 35                                      | 16V、25V、50V   | min.                   | 400     | 63V           | min. | 400     |
|                                         |               | max.                   | 1900    |               | max. | 1700    |
| 50                                      | 16V、25V、50V   | min.                   | 700     | 63V           | min. | 700     |
|                                         |               | max.                   | 4300    |               | max. | 3900    |
| 70                                      | 16V、25V、50V   | min.                   | 1600    | 63V           | min. | 1600    |
|                                         |               | max.                   | 7700    |               | max. | 6900    |
| 90                                      | 16V、25V、50V   | min.                   | 2700    | 63V           | min. | 2700    |
|                                         |               | max.                   | 12000   |               | max. | 11000   |