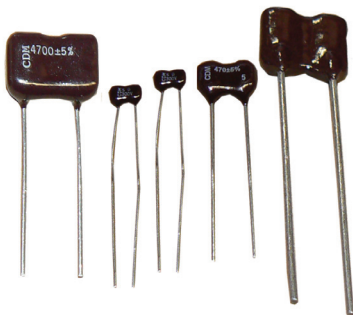


# Mica Capacitors, Standard Dipped

Types CD10, D10, CD15, CD19, CD30, CD42, CDV19, CDV30



Stability and mica go hand-in-hand when you need to count on stable capacitance over a wide temperature range. CDE's standard dipped silvered mica capacitors are the first choice for timing and close tolerance applications. These standard types are widely available through distribution.

## Highlights

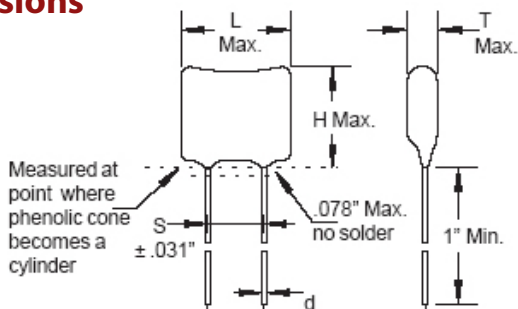
- Reel packaging available
- High temperature – up to +150 °C
- Dimensions meet EIA RS153B specification
- 100,000 V/μs dV/dt pulse capability minimum
- Non-flammable units that meet IEC 695-2-2 are available

## Specifications

|                             |                                                              |
|-----------------------------|--------------------------------------------------------------|
| Capacitance Range           | 1 pF to 91,000 pF                                            |
| Capacitance Tolerance       | ±1/2 pF (D), ±1 pF (C), ±1/2% (E), ±1% (F), ±2% (G), ±5% (J) |
| Rated Voltage               | 100 Vdc to 2500 Vdc                                          |
| Operating Temperature Range | –55 °C to +125 °C (O) –55 °C to +150 °C (P)*                 |
| Dielectric Strength Test    | 200% of rated voltage                                        |
| RoHS Compliant              |                                                              |

\* P temperature range available for types CD10, CD15, CD19, CD30 and CD42

## Dimensions



### Construction Details

|                   |                                                      |
|-------------------|------------------------------------------------------|
| Case Material     | Epoxy                                                |
| Terminal Material | Copper clad steel, nickle undercoat, 100% tin finish |

## Ordering Information

Order by complete part number as below. For other options, write your requirements on your purchase order or request for quotation.

## Part Numbering System (Radial-Leaded Silvered Mica Capacitors, except D10\*)

|                 |                     |                                                                                           |                                                                              |                       |                                                |                 |                                             |
|-----------------|---------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------|------------------------------------------------|-----------------|---------------------------------------------|
| CD15            | C                   | D                                                                                         | 100                                                                          | J                     | O                                              | 3               | F                                           |
| Series          | Characteristic Code | Voltage (Vdc)                                                                             | Capacitance (pF)                                                             | Capacitance Tolerance | Temperature Range                              | Vibration Grade | Blank = Not Specified<br>F = RoHS Compliant |
|                 |                     | F = 1000 Vdc<br>A = 100 Vdc<br>C = 300 Vdc<br>D = 500 Vdc<br>J = 2000 Vdc<br>K = 2500 Vdc | 010 = 1 pF<br>100 = 10 pF<br>(1.5) = 1.5 pF<br>361 = 360 pF<br>122 = 1200 pF |                       | O = –55 °C to +125 °C<br>P = –55 °C to +150 °C |                 |                                             |
| Characteristics |                     |                                                                                           | Capacitance Tolerance                                                        |                       | Vibration Grade                                |                 |                                             |

| Code | Temp. Coeff.<br>ppm/ °C | Capacitance<br>Drift | Standard Cap.<br>Range |
|------|-------------------------|----------------------|------------------------|
| C    | –200 to +200            | ±(0.5%+0.1 pF)       | 1–18 pF                |
| E    | –20 to +100             | ±(0.1%+0.1 pF)       | 20–82 pF               |
| F    | 0 to +70                | ±(0.05%+0.1 pF)      | 91 pF and up           |

| Tol. Code | Tolerance | Capacitance Range |
|-----------|-----------|-------------------|
| C         | ±1 pF     | 1–9 pF            |
| D         | ±1/2 pF   | 1–99 pF           |
| E         | ±1/2 %    | 100 pF and up     |
| F         | ±1 %      | 50 pF and up      |
| G         | ±2 %      | 25 pF and up      |
| H         | ±3 %      | 18 pF and up      |
| J         | ±5 %      | 10 pF and up      |

| No. | MIL-STD-202            | Vibration Condition (Hz) |
|-----|------------------------|--------------------------|
| 3   | Method 204 Condition D | 10 to 2,000              |

## Options Available

- Non-flammable units per IEC 695-2-2 are available for standard dipped capacitors. Specify IEC 695-2-2 on your order.
- Tape and reeling, specify per application guide.

Standard tolerance is ±1/2 pF for less than 10 pF and ±5% for 10 pF and up

\* Order type D10 using the catalog numbers shown in ratings tables.

# Mica Capacitors, Standard Dipped

Types CD10, D10, CD15, CD19, CD30, CD42, CDV19, CDV30

## Ratings

| Cap<br>(pF) | Volts<br>(Vdc) | Catalog<br>Part Number | L<br>in (mm) | H<br>in (mm) | T<br>in (mm) | S<br>in (mm) | d<br>in (mm) |
|-------------|----------------|------------------------|--------------|--------------|--------------|--------------|--------------|
| 1           | 500            | CD10CD010DO3F          | 0.36 ( 9.1)  | 0.33 ( 8.4)  | 0.19 (4.8)   | 0.141 (3.6)  | 0.016 (.4)   |
| 1           | 500            | CD15CD010DO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 2           | 500            | CD10CD020DO3F          | 0.36 ( 9.1)  | 0.33 ( 8.4)  | 0.19 (4.8)   | 0.141 (3.6)  | 0.016 (.4)   |
| 2           | 500            | CD15CD020DO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 3           | 500            | CD10CD03F0DO3F         | 0.36 ( 9.1)  | 0.33 ( 8.4)  | 0.19 (4.8)   | 0.141 (3.6)  | 0.016 (.4)   |
| 3           | 500            | CD15CD03F0DO3F         | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 5           | 500            | CD10CD050DO3F          | 0.36 ( 9.1)  | 0.33 ( 8.4)  | 0.19 (4.8)   | 0.141 (3.6)  | 0.016 (.4)   |
| 5           | 500            | CD15CD050DO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 5           | 1000           | CDV19CF050DO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 (8.7)  | 0.032 (.8)   |
| 7           | 500            | CD10CD070DO3F          | 0.36 ( 9.1)  | 0.33 ( 8.4)  | 0.19 (4.8)   | 0.141 (3.6)  | 0.016 (.4)   |
| 7           | 500            | CD15CD070DO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 7           | 1000           | CDV19CF070DO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 (8.7)  | 0.032 (.8)   |
| 10          | 500            | CD10CD100JO3F          | 0.36 ( 9.1)  | 0.33 ( 8.4)  | 0.19 (4.8)   | 0.141 (3.6)  | 0.016 (.4)   |
| 10          | 500            | CD15CD100JO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 10          | 1000           | CDV19CF100JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 (8.7)  | 0.032 (.8)   |
| 12          | 500            | CD10CD120JO3F          | 0.36 ( 9.1)  | 0.33 ( 8.4)  | 0.19 (4.8)   | 0.141 (3.6)  | 0.016 (.4)   |
| 12          | 500            | CD15CD120JO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 12          | 1000           | CDV19CF120JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 (8.7)  | 0.032 (.8)   |
| 15          | 500            | CD10CD150JO3F          | 0.36 ( 9.1)  | 0.33 ( 8.4)  | 0.19 (4.8)   | 0.141 (3.6)  | 0.016 (.4)   |
| 15          | 500            | CD15CD150JO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 15          | 1000           | CDV19CF150JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 (8.7)  | 0.032 (.8)   |
| 18          | 500            | CD10CD180JO3F          | 0.36 ( 9.1)  | 0.33 ( 8.4)  | 0.19 (4.8)   | 0.141 (3.6)  | 0.016 (.4)   |
| 18          | 500            | CD15CD180JO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 18          | 1000           | CDV19CF180JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 (.8)   |
| 22          | 500            | CD10ED220JO3F          | 0.36 ( 9.1)  | 0.33 ( 8.4)  | 0.19 (4.8)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 22          | 500            | CD15ED220JO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 22          | 1000           | CDV19EF220JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 27          | 500            | CD10ED270JO3F          | 0.37 ( 9.4)  | 0.33 ( 8.4)  | 0.19 (4.8)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 27          | 500            | CD15ED270JO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 27          | 1000           | CDV19EF270JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 27          | 1500           | CDV30EH270JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 27          | 2000           | CDV30EJ270JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 27          | 2500           | CDV30EK270JO3F         | 0.78 (19.8)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 33          | 500            | CD10ED330JO3F          | 0.37 ( 9.4)  | 0.34 ( 8.6)  | 0.19 (4.8)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 33          | 500            | CD15ED330JO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 33          | 1000           | CDV19EF330JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 33          | 1500           | CDV30EH330JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 33          | 2000           | CDV30EJ330JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 33          | 2500           | CDV30EK330JO3F         | 0.78 (19.8)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 39          | 500            | CD10ED390JO3F          | 0.37 ( 9.4)  | 0.34 ( 8.6)  | 0.19 (4.8)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 39          | 500            | CD15ED390JO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 39          | 1000           | CDV19EF390JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 39          | 1500           | CDV30EH390JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 39          | 2000           | CDV30EJ390JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |

# Mica Capacitors, Standard Dipped

Types CD10, D10, CD15, CD19, CD30, CD42, CDV19, CDV30

| Cap<br>(pF) | Volts<br>(Vdc) | Catalog<br>Part Number | L<br>in (mm) | H<br>in (mm) | T<br>in (mm) | S<br>in (mm) | d<br>in (mm) |
|-------------|----------------|------------------------|--------------|--------------|--------------|--------------|--------------|
| 39          | 2500           | CDV30EK390JO3F         | 0.78 (19.8)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 47          | 500            | CD10ED470JO3F          | 0.37 ( 9.4)  | 0.34 ( 8.6)  | 0.19 (4.8)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 47          | 500            | CD15ED470JO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 47          | 1000           | CDV19EF470JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 47          | 1500           | CDV30EH470JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 47          | 2000           | CDV30EJ470JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 47          | 2500           | CDV30EK470JO3F         | 0.78 (19.8)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 56          | 500            | CD10ED560JO3F          | 0.37 ( 9.4)  | 0.34 ( 8.6)  | 0.19 (4.8)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 56          | 500            | CD15ED560JO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.17 (4.3)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 56          | 1000           | CDV19EF560JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 56          | 1500           | CDV30EH560JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 56          | 2500           | CDV30EK560JO3F         | 0.78 (19.8)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 68          | 500            | CD10ED680JO3F          | 0.37 ( 9.4)  | 0.34 ( 8.6)  | 0.19 (4.8)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 68          | 500            | CD15ED680JO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.18 (4.6)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 68          | 1000           | CDV19EF680JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 68          | 1500           | CDV30EH680JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 68          | 2000           | CDV30EJ680JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 68          | 2500           | CDV30EK680JO3F         | 0.78 (19.8)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 82          | 500            | CD10ED820JO3F          | 0.37 ( 9.4)  | 0.35 ( 8.9)  | 0.20 (5.1)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 82          | 500            | CD15ED820JO3F          | 0.45 (11.4)  | 0.36 ( 9.1)  | 0.18 (4.6)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 82          | 1000           | CDV19EF820JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 82          | 1500           | CDV30EH820JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 82          | 2000           | CDV30EJ820JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 82          | 2500           | CDV30EK820JO3F         | 0.78 (19.8)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 100         | 500            | CD10FD101JO3F          | 0.37 ( 9.4)  | 0.35 ( 8.9)  | 0.20 (5.1)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 100         | 500            | CD15FD101JO3F          | 0.46 (11.7)  | 0.36 ( 9.1)  | 0.18 (4.6)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 100         | 500            | CD19FD101JO3F          | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 100         | 1000           | CDV19FF101JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 100         | 1500           | CDV30FH101JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 100         | 2000           | CDV30FJ101JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 100         | 2500           | CDV30FK101JO3F         | 0.78 (19.8)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 120         | 500            | CD10FD121JO3F          | 0.38 ( 9.7)  | 0.35 ( 8.9)  | 0.20 (5.1)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 120         | 500            | CD15FD121JO3F          | 0.46 (11.7)  | 0.37 ( 9.4)  | 0.18 (4.6)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 120         | 500            | CD19FD121JO3F          | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 120         | 1000           | CDV19FF121JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 120         | 1500           | CDV30FH121JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 120         | 2000           | CDV30FJ121JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 120         | 2500           | CDV30FK121JO3F         | 0.78 (19.8)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 150         | 500            | CD10FD151JO3F          | 0.38 ( 9.7)  | 0.36 ( 9.1)  | 0.21 (5.3)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 150         | 500            | CD15FD151JO3F          | 0.46 (11.7)  | 0.37 ( 9.4)  | 0.19 (4.8)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 150         | 500            | CD19FD151JO3F          | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 150         | 1000           | CDV19FF151JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 150         | 1500           | CDV30FH151JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 150         | 2000           | CDV30FJ151JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |

# Mica Capacitors, Standard Dipped

## Types CD10, D10, CD15, CD19, CD30, CD42, CDV19, CDV30

| Cap<br>(pF) | Volts<br>(Vdc) | Catalog<br>Part Number | L<br>in (mm) | H<br>in (mm) | T<br>in (mm) | S<br>in (mm) | d<br>in (mm) |
|-------------|----------------|------------------------|--------------|--------------|--------------|--------------|--------------|
| 180         | 500            | CD10FD181JO3F          | 0.39 (9.9)   | 0.37 (9.4)   | 0.21 (5.3)   | 0.141 (3.6)  | 0.016 (.4)   |
| 180         | 500            | CD15FD181JO3F          | 0.46 (11.7)  | 0.37 (9.4)   | 0.19 (4.8)   | 0.234 (5.9)  | 0.025 (.6)   |
| 180         | 500            | CD19FD181JO3F          | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 (8.7)  | 0.032 (.8)   |
| 180         | 1000           | CDV19FF181JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 (8.7)  | 0.032 (.8)   |
| 180         | 1500           | CDV30FH181JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 180         | 2000           | CDV30FJ181JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 220         | 500            | CD10FD221JO3F          | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 (3.6)  | 0.016 (.4)   |
| 220         | 500            | CD15FD221JO3F          | 0.46 (11.7)  | 0.38 (9.7)   | 0.20 (5.1)   | 0.234 (5.9)  | 0.025 (.6)   |
| 220         | 500            | CD19FD221JO3F          | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 (8.7)  | 0.032 (.8)   |
| 220         | 1000           | CDV19FF221JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 (8.7)  | 0.032 (.8)   |
| 220         | 1500           | CDV30FH221JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 220         | 2000           | CDV30FJ221JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 270         | 300            | CD10FC271JO3F          | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 (3.6)  | 0.016 (.4)   |
| 270         | 500            | CD19FD271JO3F          | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 (8.7)  | 0.032 (.8)   |
| 270         | 500            | D105F271JO3F           | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 (3.6)  | 0.016 (.4)   |
| 270         | 500            | CD15FD271JO3F          | 0.47 (11.9)  | 0.39 (9.9)   | 0.21 (5.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 270         | 1000           | CDV19FF271JO3F         | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 (8.7)  | 0.032 (.8)   |
| 270         | 1500           | CDV30FH271JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 270         | 2000           | CDV30FJ271JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 330         | 100            | CD10FA331JO3F          | 0.39 (9.9)   | 0.37 (9.4)   | 0.22 (5.6)   | 0.141 (3.6)  | 0.016 (.4)   |
| 330         | 500            | D105F331JO3F           | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 (3.6)  | 0.016 (.4)   |
| 330         | 500            | CD15FD331JO3F          | 0.47 (11.9)  | 0.39 (9.9)   | 0.21 (5.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 330         | 500            | CD19FD331JO3F          | 0.64 (16.3)  | 0.50 (12.7)  | 0.19 (4.8)   | 0.344 (8.7)  | 0.032 (.8)   |
| 330         | 2000           | CDV30FJ331JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 330         | 2500           | CDV30FK331JO3F         | 0.78 (19.8)  | 0.87 (22.1)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 390         | 100            | CD10FA391JO3F          | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 (3.6)  | 0.016 (.4)   |
| 390         | 500            | D105F391JO3F           | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 (3.6)  | 0.016 (.4)   |
| 390         | 500            | CD15FD391JO3F          | 0.47 (11.9)  | 0.39 (9.9)   | 0.21 (5.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 390         | 500            | CD19FD391JO3F          | 0.64 (16.3)  | 0.51 (13.0)  | 0.20 (5.1)   | 0.344 (8.7)  | 0.032 (.8)   |
| 390         | 1000           | CDV19FF391JO3F         | 0.65 (16.5)  | 0.51 (13.0)  | 0.20 (5.1)   | 0.344 (8.7)  | 0.032 (.8)   |
| 390         | 1500           | CDV30FH391JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 470         | 500            | D105F471JO3F           | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 (3.6)  | 0.016 (.4)   |
| 470         | 500            | CD15FD471JO3F          | 0.47 (11.9)  | 0.40 (10.2)  | 0.22 (5.6)   | 0.234 (5.9)  | 0.025 (.6)   |
| 470         | 500            | CD19FD471JO3F          | 0.64 (16.3)  | 0.51 (13.0)  | 0.20 (5.1)   | 0.344 (8.7)  | 0.032 (.8)   |
| 470         | 1500           | CDV30FH471JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 470         | 2000           | CDV30FJ471JO3F         | 0.77 (19.6)  | 0.87 (22.1)  | 0.26 (6.6)   | 0.438 (11.1) | 0.040 (1.0)  |
| 470         | 2500           | CDV30FK471JO3F         | 0.78 (19.8)  | 0.87 (22.1)  | 0.27 (6.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 560         | 300            | D103F561JO3F           | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 (3.6)  | 0.016 (.4)   |
| 560         | 300            | CD15FC561JO3F          | 0.46 (11.7)  | 0.38 (9.7)   | 0.21 (5.3)   | 0.234 (5.9)  | 0.025 (.6)   |
| 560         | 500            | CD19FD561JO3F          | 0.65 (16.5)  | 0.51 (13.0)  | 0.20 (5.1)   | 0.344 (8.7)  | 0.032 (.8)   |
| 560         | 1000           | CDV19FF561JO3F         | 0.65 (16.5)  | 0.51 (13.0)  | 0.21 (5.3)   | 0.344 (8.7)  | 0.032 (.8)   |
| 560         | 1500           | CDV30FH561JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 560         | 2000           | CDV30FJ561JO3F         | 0.77 (19.6)  | 0.87 (22.1)  | 0.26 (6.6)   | 0.438 (11.1) | 0.040 (1.0)  |
| 560         | 2500           | CDV30FK561JO3F         | 0.78 (19.8)  | 0.87 (22.1)  | 0.27 (6.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 680         | 300            | D103F681JO3F           | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 (3.6)  | 0.016 (.4)   |

# Mica Capacitors, Standard Dipped

## Types CD10, D10, CD15, CD19, CD30, CD42, CDV19, CDV30

| Cap<br>(pF) | Volts<br>(Vdc) | Catalog<br>Part Number | L<br>in (mm) | H<br>in (mm) | T<br>in (mm) | S<br>in (mm) | d<br>in (mm) |
|-------------|----------------|------------------------|--------------|--------------|--------------|--------------|--------------|
| 680         | 300            | CD15FC681JO3F          | 0.47 (11.9)  | 0.39 (9.9)   | 0.21 (5.3)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 680         | 500            | CD19FD681JO3F          | 0.65 (16.5)  | 0.51 (13.0)  | 0.21 (5.3)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 680         | 1000           | CDV19FF681JO3F         | 0.66 (16.8)  | 0.52 (13.2)  | 0.22 (5.6)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 680         | 1500           | CDV30FH681JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 680         | 2000           | CDV30FJ681JO3F         | 0.77 (19.6)  | 0.87 (22.1)  | 0.26 (6.6)   | 0.438 (11.1) | 0.040 (1.0)  |
| 680         | 2500           | CDV30FK681JO3F         | 0.78 (19.8)  | 0.87 (22.1)  | 0.27 (6.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 820         | 300            | D103F821JO3F           | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 820         | 300            | CD15FC821JO3F          | 0.47 (11.9)  | 0.39 (9.9)   | 0.21 (5.3)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 820         | 500            | CD19FD821JO3F          | 0.65 (16.5)  | 0.51 (13.0)  | 0.21 (5.3)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 820         | 1000           | CDV19FF821JO3F         | 0.66 (16.8)  | 0.53 (13.5)  | 0.23 (5.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 820         | 1500           | CDV30FH821JO3F         | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 820         | 2000           | CDV30FJ821JO3F         | 0.77 (19.6)  | 0.87 (22.1)  | 0.26 (6.6)   | 0.438 (11.1) | 0.040 (1.0)  |
| 820         | 2500           | CDV30FK821JO3F         | 0.78 (19.8)  | 0.87 (22.1)  | 0.27 (6.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 1000        | 100            | D101F102JO3F           | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 1000        | 100            | CD15FA102JO3F          | 0.48 (12.2)  | 0.40 (10.2)  | 0.23 (5.8)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 1000        | 500            | CD19FD102JO3F          | 0.65 (16.5)  | 0.52 (13.2)  | 0.22 (5.6)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 1000        | 1000           | CDV19FF102JO3F         | 0.67 (17.0)  | 0.53 (13.5)  | 0.25 (6.4)   | 0.344 ( 9.7) | 0.032 ( .8)  |
| 1000        | 1500           | CDV30FH102JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.26 (6.6)   | 0.438 (11.1) | 0.040 (1.0)  |
| 1000        | 2000           | CDV30FJ102JO3F         | 0.78 (19.8)  | 0.88 (22.4)  | 0.28 (7.1)   | 0.438 (11.1) | 0.040 (1.0)  |
| 1000        | 2500           | CDV30FK102JO3F         | 0.79 (20.1)  | 0.88 (22.4)  | 0.31 (7.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 1200        | 100            | D101F122JO3F           | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 1200        | 100            | CD15FA122JO3F          | 0.49 (12.4)  | 0.42 (10.7)  | 0.24 (6.1)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 1200        | 500            | CD19FD122JO3F          | 0.66 (16.8)  | 0.52 (13.2)  | 0.22 (5.6)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 1200        | 1500           | CDV30FH122JO3F         | 0.77 (19.6)  | 0.86 (21.8)  | 0.26 (6.6)   | 0.438 (11.1) | 0.040 (1.0)  |
| 1200        | 2000           | CDV30FJ122JO3F         | 0.78 (19.8)  | 0.88 (22.4)  | 0.28 (7.1)   | 0.438 (11.1) | 0.040 (1.0)  |
| 1200        | 2500           | CDV30FK122JO3F         | 0.79 (20.1)  | 0.88 (22.4)  | 0.31 (7.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 1500        | 100            | D101F152JO3F           | 0.39 (9.9)   | 0.38 (9.7)   | 0.22 (5.6)   | 0.141 ( 3.6) | 0.016 ( .4)  |
| 1500        | 100            | CD15FA152JO3F          | 0.50 (12.7)  | 0.43 (10.9)  | 0.25 (6.4)   | 0.234 ( 5.9) | 0.025 ( .6)  |
| 1500        | 500            | CD19FD152JO3F          | 0.66 (16.8)  | 0.52 (13.2)  | 0.23 (5.8)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 1500        | 1000           | CDV19FF152JO3F         | 0.68 (17.3)  | 0.54 (13.7)  | 0.27 (6.9)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 1500        | 1500           | CDV30FH152JO3F         | 0.78 (19.8)  | 0.87 (22.1)  | 0.28 (7.1)   | 0.438 (11.1) | 0.040 (1.0)  |
| 1500        | 2000           | CDV30FJ152JO3F         | 0.79 (20.1)  | 0.89 (22.6)  | 0.32 (8.1)   | 0.438 (11.1) | 0.040 (1.0)  |
| 1500        | 2500           | CDV30FK152JO3F         | 0.80 (20.3)  | 0.89 (22.6)  | 0.35 (8.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 1800        | 500            | CD19FD182JO3F          | 0.67 (17.0)  | 0.53 (13.5)  | 0.24 (6.1)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 1800        | 1000           | CDV19FF182JO3F         | 0.68 (17.3)  | 0.55 (14.0)  | 0.29 (7.4)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 1800        | 1500           | CDV30FH182JO3F         | 0.78 (19.8)  | 0.87 (22.1)  | 0.29 (7.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 1800        | 2000           | CDV30FJ182JO3F         | 0.79 (20.1)  | 0.89 (22.6)  | 0.34 (8.6)   | 0.438 (11.1) | 0.040 (1.0)  |
| 1800        | 2500           | CDV30FK182JO3F         | 0.81 (20.6)  | 0.90 (22.9)  | 0.37 (9.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 2200        | 500            | CD19FD222JO3F          | 0.67 (17.0)  | 0.53 (13.5)  | 0.25 (6.4)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 2200        | 500            | CD30FD222JO3F          | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 2200        | 1000           | CDV19FF222JO3F         | 0.69 (17.5)  | 0.56 (14.2)  | 0.31 (7.9)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 2200        | 1500           | CDV30FH222JO3F         | 0.79 (20.1)  | 0.88 (22.4)  | 0.31 (7.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 2700        | 500            | CD19FD272JO3F          | 0.68 (17.3)  | 0.54 (13.7)  | 0.27 (6.9)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 2700        | 500            | CD30FD272JO3F          | 0.77 (19.6)  | 0.85 (21.6)  | 0.25 (6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 2700        | 1000           | CDV19FF272JO3F         | 0.70 (17.8)  | 0.57 (14.5)  | 0.34 (8.6)   | 0.344 ( 8.7) | 0.032 ( .8)  |

# Mica Capacitors, Standard Dipped

## Types CD10, D10, CD15, CD19, CD30, CD42, CDV19, CDV30

| Cap<br>(pF) | Volts<br>(Vdc) | Catalog<br>Part Number | L<br>in (mm) | H<br>in (mm) | T<br>in (mm) | S<br>in (mm) | d<br>in (mm) |
|-------------|----------------|------------------------|--------------|--------------|--------------|--------------|--------------|
| 2700        | 1500           | CDV30FH272JO3F         | 0.79 (20.1)  | 0.88 (22.4)  | 0.33( 8.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 2700        | 2000           | CDV30FJ272JO3F         | 0.81 (20.6)  | 0.91 (23.1)  | 0.40(10.2)   | 0.438 (11.1) | 0.040 (1.0)  |
| 2700        | 2500           | CDV30FK272JO3F         | 0.83 (21.1)  | 0.92 (23.4)  | 0.45(11.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 3300        | 500            | CD19FD332JO3F          | 0.68 (17.3)  | 0.55 (14.0)  | 0.29( 7.4)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 3300        | 500            | CD30FD332JO3F          | 0.77 (19.6)  | 0.86 (21.8)  | 0.25( 6.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 3300        | 1000           | CDV19FF332JO3F         | 0.72 (18.3)  | 0.59 (15.0)  | 0.38( 9.7)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 3300        | 1500           | CDV30FH332JO3F         | 0.80 (20.3)  | 0.89 (22.6)  | 0.35( 8.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 3300        | 2000           | CDV30FJ332JO3F         | 0.82 (20.8)  | 0.92 (23.4)  | 0.44(11.2)   | 0.438 (11.1) | 0.040 (1.0)  |
| 3900        | 500            | CD19FD392JO3F          | 0.69 (17.5)  | 0.56 (14.2)  | 0.31( 7.9)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 3900        | 500            | CD30FD392JO3F          | 0.77 (19.6)  | 0.86 (21.8)  | 0.26( 6.6)   | 0.438 (11.1) | 0.040 (1.0)  |
| 3900        | 1000           | CDV19FF392JO3F         | 0.74 (18.8)  | 0.61 (15.5)  | 0.42(10.7)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 3900        | 1500           | CDV30FH392JO3F         | 0.80 (20.3)  | 0.89 (22.6)  | 0.36( 9.1)   | 0.438 (11.1) | 0.040 (1.0)  |
| 3900        | 2000           | CDV30FJ392JO3F         | 0.83 (21.1)  | 0.93 (23.6)  | 0.46(11.7)   | 0.438 (11.1) | 0.040 (1.0)  |
| 4700        | 500            | CD19FD472JO3F          | 0.70 (17.8)  | 0.58 (14.7)  | 0.35( 8.9)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 4700        | 500            | CD30FD472JO3F          | 0.78 (19.8)  | 0.86 (21.8)  | 0.27( 6.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 4700        | 1000           | CDV19FF472JO3F         | 0.76 (19.3)  | 0.63 (16.0)  | 0.46(11.7)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 4700        | 1500           | CDV30FH472JO3F         | 0.81 (20.6)  | 0.90 (22.9)  | 0.38( 9.7)   | 0.438 (11.1) | 0.040 (1.0)  |
| 5600        | 300            | CD19FC562JO3F          | 0.68 (17.3)  | 0.56 (14.2)  | 0.31( 7.9)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 5600        | 500            | CD30FD562JO3F          | 0.78 (19.8)  | 0.87 (22.1)  | 0.29( 7.4)   | 0.438 (11.1) | 0.040 (1.0)  |
| 5600        | 1000           | CDV30FF562JO3F         | 0.80 (20.3)  | 0.89 (22.6)  | 0.34( 8.6)   | 0.438 (11.1) | 0.040 (1.0)  |
| 5600        | 1500           | CDV30FH562JO3F         | 0.82 (20.8)  | 0.91 (23.1)  | 0.40(10.2)   | 0.438 (11.1) | 0.040 (1.0)  |
| 6800        | 300            | CD19FC682JO3F          | 0.69 (17.5)  | 0.57 (14.5)  | 0.33( 8.4)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 6800        | 500            | CD30FD682JO3F          | 0.78 (19.8)  | 0.88 (22.4)  | 0.30( 7.6)   | 0.438 (11.1) | 0.040 (1.0)  |
| 6800        | 1000           | CDV30FF682JO3F         | 0.80 (20.3)  | 0.89 (22.6)  | 0.36( 9.1)   | 0.438 (11.1) | 0.040 (1.0)  |
| 6800        | 1500           | CDV30FH682JO3F         | 0.83 (21.1)  | 0.92 (23.4)  | 0.42(10.7)   | 0.438 (11.1) | 0.040 (1.0)  |
| 8200        | 100            | CD19FA822JO3F          | 0.70 (17.8)  | 0.58 (14.7)  | 0.35( 8.9)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 8200        | 500            | CD30FD822JO3F          | 0.79 (20.1)  | 0.88 (22.4)  | 0.32( 8.1)   | 0.438 (11.1) | 0.040 (1.0)  |
| 8200        | 1000           | CDV30FF822JO3F         | 0.81 (20.6)  | 0.90 (22.9)  | 0.39( 9.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 8200        | 1500           | CDV30FH822JO3F         | 0.84 (21.3)  | 0.93 (23.6)  | 0.46(11.7)   | 0.438 (11.1) | 0.040 (1.0)  |
| 10000       | 100            | CD19FA103JO3F          | 0.72 (18.3)  | 0.60 (15.2)  | 0.37( 9.4)   | 0.344 ( 8.7) | 0.032 ( .8)  |
| 10000       | 500            | CD30FD103JO3F          | 0.80 (20.3)  | 0.89 (22.6)  | 0.34( 8.6)   | 0.438 (11.1) | 0.040 (1.0)  |
| 10000       | 1000           | CDV30FF103JO3F         | 0.82 (20.8)  | 0.91 (23.1)  | 0.42(10.7)   | 0.438 (11.1) | 0.040 (1.0)  |
| 12000       | 500            | CD30FD123JO3F          | 0.80 (20.3)  | 0.89 (22.6)  | 0.36( 9.1)   | 0.438 (11.1) | 0.040 (1.0)  |
| 12000       | 1000           | CDV30FF123JO3F         | 0.83 (21.1)  | 0.92 (23.4)  | 0.46(11.7)   | 0.438 (11.1) | 0.040 (1.0)  |
| 15000       | 500            | CD30FD153JO3F          | 0.81 (20.6)  | 0.90 (22.9)  | 0.39( 9.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 18000       | 500            | CD30FD183JO3F          | 0.82 (20.8)  | 0.91 (23.1)  | 0.43(10.9)   | 0.438 (11.1) | 0.040 (1.0)  |
| 22000       | 500            | CD30FD223JO3F          | 0.83 (21.1)  | 0.93 (23.6)  | 0.46(11.7)   | 0.438 (11.1) | 0.040 (1.0)  |
| 22000       | 500            | CD42FD223JO3F          | 1.42 (36.1)  | 0.88 (22.4)  | 0.31( 7.9)   | 1.063 (27.0) | 0.040 (1.0)  |
| 33000       | 100            | CD30FA333JO3F          | 0.83 (21.1)  | 0.91 (23.1)  | 0.44(11.2)   | 0.438 (11.1) | 0.040 (1.0)  |
| 33000       | 500            | CD42FD333JO3F          | 1.44 (36.6)  | 0.89 (22.6)  | 0.36( 9.1)   | 1.063 (27.0) | 0.040 (1.0)  |
| 39000       | 500            | CD42FD393JO3F          | 1.45 (36.8)  | 0.90 (22.9)  | 0.40(10.2)   | 1.063 (27.0) | 0.040 (1.0)  |
| 47000       | 500            | CD42FD473JO3F          | 1.47 (37.3)  | 0.91 (23.1)  | 0.45(11.4)   | 1.063 (27.0) | 0.040 (1.0)  |
| 68000       | 300            | CD42FC683JO3F          | 1.48 (37.6)  | 0.92 (23.4)  | 0.47(11.9)   | 1.063 (27.0) | 0.040 (1.0)  |
| 82000       | 100            | CD42FA823JO3F          | 1.48 (37.6)  | 0.92 (23.4)  | 0.46(11.7)   | 1.063 (27.0) | 0.040 (1.0)  |
| 91000       | 100            | CD42FA913JO3F          | 1.50 (38.1)  | 0.94 (23.9)  | 0.50(12.7)   | 1.063 (27.0) | 0.040 (1.0)  |