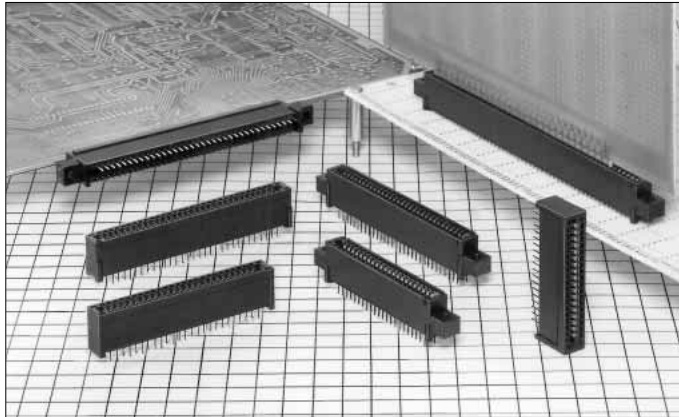


# 2.54mm Pitch Card Edge Connector

## CR22 Series



### ■ Features

1. 2.54mm pitch Contact

2. Variation in number of contacts

20, 30, 34, 36, 44, 50, 60, 62, 68, 72, 80, 100, and 120 contacts are available.

3. Board Mount Type

Straight dip and right angle through hole types are available.

4. To prevent mis-insertion in the board

Using the polarizing key prevents mis-insertion in the printed board.

### ■ Product Standards

|        |  |   |  |
|--------|--|---|--|
| Rating | Current rating: 3A<br>Voltage rating: 300VAC | Operating Temperature Range: -30 to +85°C (Note 1)<br>Operating Humidity Range: 40 to 80% | Storage Temperature Range: -10 to +60°C (Note 2)<br>Storage Humidity Range: 40 to 70% (Note 2) |
|--------|--|---|--|

| Item                             | Specification                                       | Condition  |
|----------------------------------|---|--|
| 1. Insulation Resistance         | 1000M ohms min.                                     | 500V DC  |
| 2. Withstanding Voltage          | No flashover or insulation breakdown.               | 1000V AC/1 minute.   |
| 3. Contact Resistance            | 20m ohms max.                                       | 100mA  |
| 4. Vibration                     | No electrical discontinuity of 10μs or more         | Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 directions.                      |
| 5. Humidity (Steady state)       | Insulation resistance : 1000M ohms min.             | 96 hours at temperature of 40°C and humidity of 90% to 95%   |
| 6. Temperature Cycle             | No damage, cracks, or parts looseness.              | (-65°C : 30 minutes → 15 to 35°C : 5 minutes max. → 125°C : 30 minutes → 15 to 35°C : 5 minutes max.) 5 cycles |
| 7. Durability (Mating/un-mating) | Contact resistance : 20m ohms max.                  | 500 cycles   |
| 8. Resistance to Soldering heat  | No deformation of components affecting performance. | Manual soldering: 350°C for 3 seconds  |

Note 1: Includes temperature rise caused by current flow.

Note 2: The term "storage" refers to products stored for long period of time prior to mounting and use. Operating Temperature Range and Humidity range covers non conducting condition of installed connectors in storage, shipment or during transportation.

Note 3: Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

### ■ Material

| Parts     | Material     | Finish       | Remarks               |
|-----------|--------------|--------------|-----------------------|
| Insulator | PBT          | Black        | UL94V-0               |
| Contact   | Copper alloy | Contact area | Selective gold plated |
|           |              | Lead area    | Tin plated            |

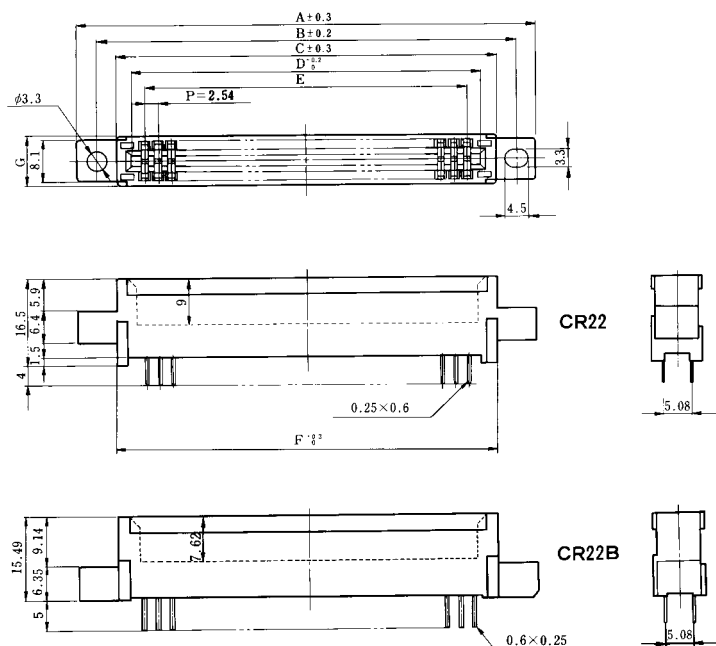
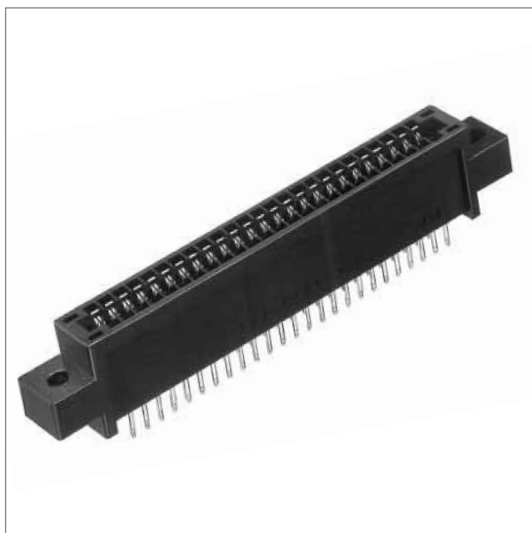
### ■ Ordering Information

**CR22**   **A** - **50**   **D** - **2.54**   **DS**

①   ②   ③   ④   ⑤   ⑥

|   |   |
|---|---|
| ① Series Name : CR22                            | ③ Number of contacts : 20, 30, 34, 36, 44, 50, 60, 62, 68, 72, 80, 100, 120 |
| ② Blank : With Mounting hole                    |   |
| A : Without mounting hole                       |   |
| B : Card Edge 7.62mm type with mounting hole    |   |
| C : Card Edge 7.62mm type without mounting hole |   |
| D : VERSA bus type with mounting hole           |   |
| E : VERSA bus type without mounting hole        | ④ Contact alignment : D : Double side                                       |
|   | ⑤ Contact pitch : 2.54mm  |
|   | ⑥ Contact type  |
|   | DS : Straight type  |
|   | DSA : Right angle type  |

■ Straight Through hole Type

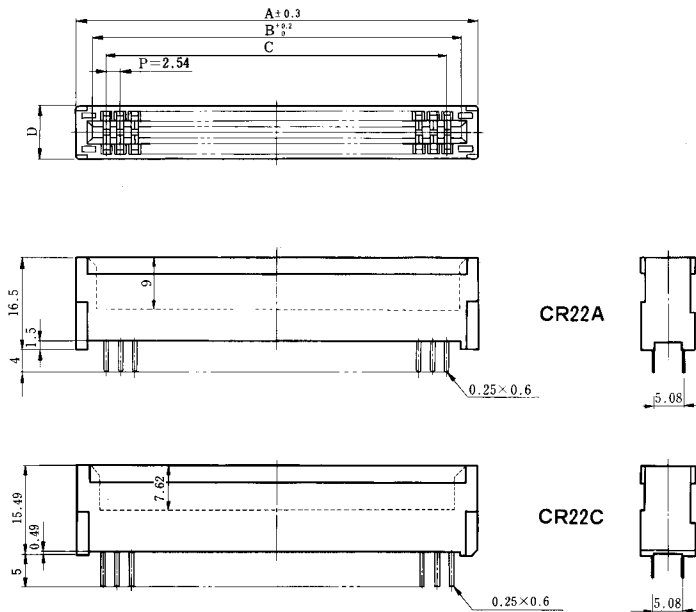
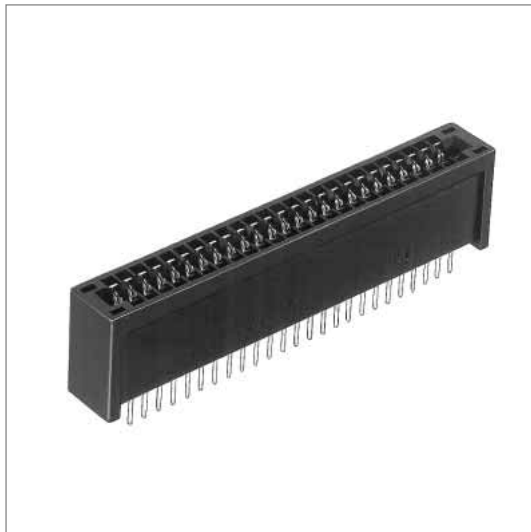


Unit: mm

| Part Number                | CL No.          | Number of Contacts | A      | B      | C      | D      | E      | F      | G   | RoHS |
|----------------------------|-----------------|--------------------|--------|--------|--------|--------|--------|--------|-----|------|
| CR22 - 20D-2.54DS(70)      | CL522-0063-9-70 | 20                 | 49.04  | 41.44  | 34.04  | 27.94  | 22.86  | 34.04  | 9.5 | YES  |
| CR22 - 30D-2.54DS(70)      | CL522-0009-3-70 | 30                 | 61.74  | 54.14  | 46.74  | 40.64  | 35.56  | 46.74  | 9.5 |      |
| CR22 - 34D-2.54DS(70)      | CL522-0011-5-70 | 34                 | 66.82  | 59.22  | 51.82  | 45.72  | 40.64  | 51.82  | 9.5 |      |
| CR22 - 44D-2.54DS(70)      | CL522-0001-1-70 | 44                 | 79.52  | 71.92  | 64.52  | 58.42  | 53.34  | 64.52  | 9.5 |      |
| CR22 - 50D-2.54DS(70)      | CL522-0003-7-70 | 50                 | 87.14  | 79.54  | 72.14  | 66.04  | 60.96  | 72.14  | 9.5 |      |
| CR22B- 50D-2.54DS(70)      | CL522-0047-2-70 |                    | 84.71  | 78.11  | 70.1   | 66.04  | 60.96  | 70.1   | 9.4 |      |
| CR22 - 68D-2.54DS(70)      | CL522-0017-1-70 | 68                 | 110    | 102.4  | 95     | 88.9   | 83.82  | 95     | 9.5 |      |
| CR22 - 72D-2.54DS(70)      | CL522-0019-7-70 | 72                 | 115.08 | 107.48 | 100.08 | 93.98  | 88.9   | 100.08 | 9.5 |      |
| CR22 - 80D-2.54DS(70)      | CL522-0049-8-70 | 80                 | 125.24 | 117.64 | 110.24 | 104.14 | 99.06  | 110.24 | 9.5 |      |
| CR22 - 100D-2.54DS(70)     | CL522-0005-2-70 | 100                | 150.64 | 143.04 | 135.64 | 129.54 | 124.46 | 135.64 | 9.5 |      |
| Note CR22D-120D-2.54DS(70) | CL522-0053-5-70 | 120                | 176.04 | 168.44 | 161.04 | 154.75 | 149.86 | 161.04 | 10  |      |

Note : The 120 contacts type differs in configuration.

## ■Straight Through hole Type

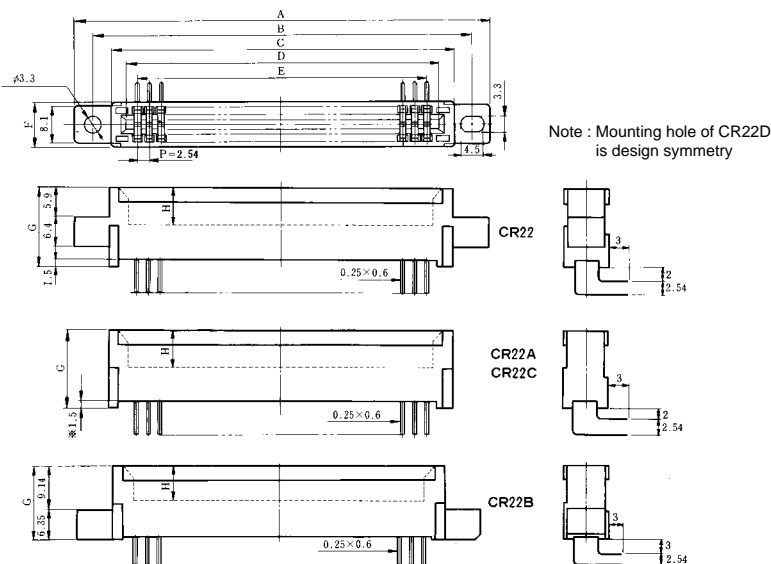


Unit: mm

| Part Number                | CL No.          | Number of Contacts | A      | B      | C      | D   | RoHS |
|----------------------------|-----------------|--------------------|--------|--------|--------|-----|------|
| CR22A- 20D-2.54DS(70)      | CL522-0064-1-70 | 20                 | 34.04  | 27.94  | 22.86  | 9.5 | YES  |
| CR22A- 30D-2.54DS(70)      | CL522-0010-2-70 | 30                 | 46.74  | 40.64  | 35.56  | 9.5 |      |
| CR22A- 34D-2.54DS(70)      | CL522-0012-8-70 | 34                 | 51.82  | 45.72  | 40.64  | 9.5 |      |
| CR22A- 36D-2.54DS(70)      | CL522-0008-0-70 | 36                 | 54.36  | 48.26  | 43.18  | 9.5 |      |
| CR22C- 36D-2.54DS(70)      | CL522-0072-0-70 |                    | 52.32  | 48.26  | 43.18  | 9.4 |      |
| CR22A- 44D-2.54DS(70)      | CL522-0002-4-70 | 44                 | 64.52  | 58.42  | 53.34  | 9.5 |      |
| CR22A- 50D-2.54DS(70)      | CL522-0004-0-70 | 50                 | 72.14  | 66.04  | 60.96  | 9.5 |      |
| CR22C- 50D-2.54DS(70)      | CL522-0048-5-70 |                    | 70.1   | 66.04  | 60.96  | 9.4 |      |
| CR22A- 60D-2.54DS(70)      | CL522-0014-3-70 | 60                 | 84.84  | 78.74  | 73.66  | 9.5 |      |
| CR22A- 62D-2.54DS(70)      | CL522-0016-9-70 | 62                 | 87.38  | 81.28  | 76.2   | 9.5 |      |
| CR22C- 62D-2.54DS(70)      | CL522-0060-0-70 |                    | 85.34  | 81.28  | 76.2   | 9.4 |      |
| CR22A- 68D-2.54DS(70)      | CL522-0018-4-70 | 68                 | 95     | 88.9   | 83.82  | 9.5 |      |
| CR22A- 72D-2.54DS(70)      | CL522-0020-6-70 | 72                 | 100.08 | 93.98  | 88.9   | 9.5 |      |
| CR22A- 80D-2.54DS(70)      | CL522-0050-7-70 | 80                 | 110.24 | 104.14 | 99.06  | 9.5 |      |
| CR22A-100D-2.54DS(70)      | CL522-0006-5-70 | 100                | 135.64 | 129.54 | 124.46 | 9.5 |      |
| Note CR22E-120D-2.54DS(70) | CL522-0054-8-70 | 120                | 161.04 | 154.75 | 149.86 | 10  |      |

Note : The 120 contacts type differs in configuration.

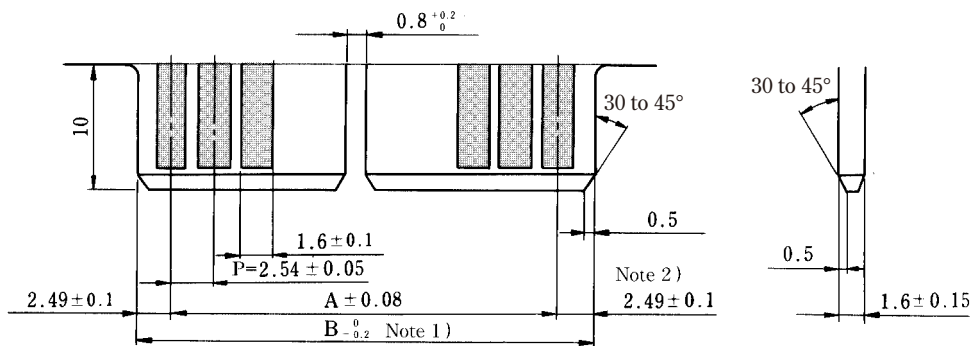
Right Angle Through hole Type



Unit: mm

| Part Number            | CL No.          | Number of Contacts | A      | B      | C      | D      | E      | F   | G     | H    | RoHS |
|------------------------|-----------------|--------------------|--------|--------|--------|--------|--------|-----|-------|------|------|
| CR22 - 30D-2.54DSA(70) | CL522-0023-4-70 | 30                 | 61.74  | 54.14  | 46.74  | 40.64  | 35.56  | 9.5 | 16.5  | 9    | YES  |
| CR22A- 30D-2.54DSA(70) | CL522-0034-0-70 |                    | —      | —      | 46.74  | 40.64  | 35.56  | 9.5 | 16.5  | 9    |      |
| CR22 - 34D-2.54DSA(70) | CL522-0024-7-70 | 34                 | 66.82  | 59.22  | 51.82  | 45.72  | 40.64  | 9.5 | 16.5  | 9    |      |
| CR22A- 34D-2.54DSA(70) | CL522-0035-3-70 |                    | —      | —      | 51.82  | 45.72  | 40.64  | 9.5 | 16.5  | 9    |      |
| CR22 - 36D-2.54DSA(70) | CL522-0025-0-70 | 36                 | 69.36  | 61.76  | 54.36  | 48.26  | 43.18  | 9.5 | 16.5  | 9    |      |
| CR22A- 44D-2.54DSA(70) | CL522-0037-9-70 | 44                 | —      | —      | 64.52  | 58.42  | 53.34  | 9.5 | 16.5  | 9    |      |
| CR22 - 50D-2.54DSA(70) | CL522-0027-5-70 | 50                 | 87.14  | 79.54  | 72.14  | 66.04  | 60.96  | 9.5 | 16.5  | 9    |      |
| CR22B- 50D-2.54DSA(70) | CL522-0045-7-70 |                    | 84.71  | 78.11  | 70.1   | 66.04  | 60.96  | 9.4 | 15.49 | 7.62 |      |
| CR22 - 60D-2.54DSA(70) | CL522-0028-8-70 | 60                 | 99.84  | 92.24  | 84.84  | 78.74  | 73.66  | 9.5 | 16.5  | 9    |      |
| CR22 - 62D-2.54DSA(70) | CL522-0029-0-70 | 62                 | 102.38 | 94.78  | 87.38  | 81.28  | 76.2   | 9.5 | 16.5  | 9    |      |
| CR22A- 62D-2.54DSA(70) | CL522-0040-3-70 |                    | —      | —      | 87.38  | 81.28  | 76.2   | 9.5 | 16.5  | 9    |      |
| CR22 - 68D-2.54DSA(70) | CL522-0030-0-70 | 68                 | 110    | 102.4  | 95.00  | 88.9   | 83.82  | 9.5 | 16.5  | 9    |      |
| CR22 - 72D-2.54DSA(70) | CL522-0031-2-70 | 72                 | 115.08 | 107.48 | 100.08 | 93.98  | 88.9   | 9.5 | 16.5  | 9    |      |
| CR22 -100D-2.54DSA(70) | CL522-0033-8-70 | 100                | 150.64 | 143.04 | 135.64 | 129.54 | 124.46 | 9.5 | 16.5  | 9    |      |
| CR22A-100D-2.54DSA(70) | CL522-0044-4-70 |                    | —      | —      | 135.64 | 129.54 | 124.46 | 9.5 | 16.5  | 9    |      |

### PCB Dimensions



Note 1. The 120 contacts type indicates  $154.69_{-0.25}^0$ .

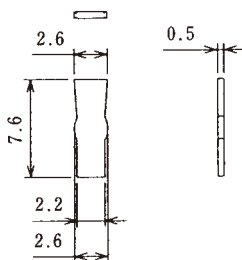
Note 2. The 120 contacts type indicates 2.415.

Unit: mm

| Number of Contacts | 12    | 30    | 34    | 36    | 44    | 50    | 60    | 62    | 68    | 72    | 80     | 100    | 120    |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| A                  | 22.86 | 35.56 | 40.64 | 43.18 | 53.34 | 60.96 | 73.66 | 76.2  | 83.82 | 88.9  | 99.06  | 124.46 | 149.86 |
| B                  | 27.84 | 40.54 | 45.62 | 48.16 | 58.32 | 65.94 | 78.64 | 81.18 | 88.80 | 93.88 | 104.04 | 129.44 | 154.69 |

### Polarizing Key

CR13-GPIN(A)

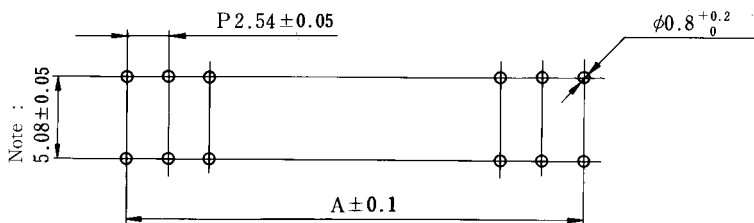


| Part Number  | CL No.     | Material   | Color | RoHS |
|--------------|------------|------------|-------|------|
| CR13-GPIN(A) | 513-0010-1 | Polyacetal | White | YES  |

Note: Using the polarizing key prevents mis-insertion in the printed board.

To use the polarizing key, insert the polarizing key so as to hit the mold bottom.

### PCB mounting pattern



Unit: mm

| Number of Contacts | 12    | 30    | 34    | 36    | 44    | 50    | 60    | 62   | 68    | 72   | 80    | 100    | 120    |
|--------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|--------|--------|
| A                  | 22.86 | 35.56 | 40.64 | 43.18 | 53.34 | 60.96 | 73.66 | 76.2 | 83.82 | 88.9 | 99.06 | 124.46 | 149.86 |

Note : The contact DSA type indicates  $2.54\text{mm} \pm 0.05$ .