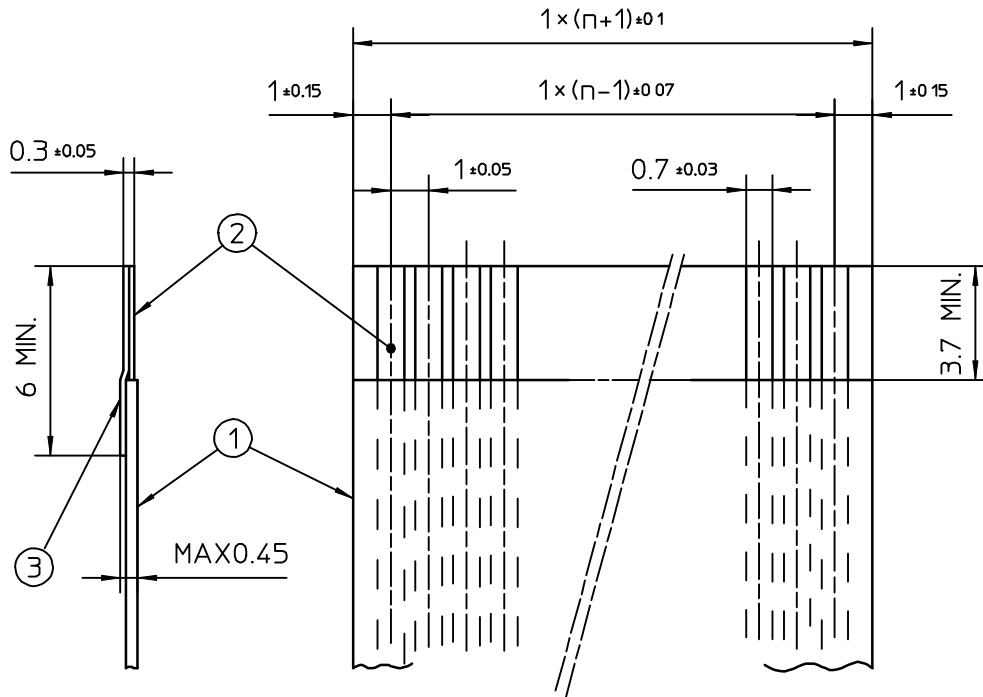


RECOMMENDED CABLE (FFC)


n : NO. OF CONDUCTORS



| PT. NO. | DESCRIPTION     | MATERIAL                                | NOTE                                |
|---------|-----------------|---|-------------------------------------|
| 1       | INSULATOR       | FLAME RESISTING POLYESTER OR EQUIVALENT | _____                               |
| 2       | CONDUCTOR       | COPPER FOIL                             | PLATING : TIN OR SOLDER<br>1μm MIN. |
| 3       | SUPPORTING TAPE | FLAME RESISTING POLYESTER OR EQUIVALENT | _____                               |

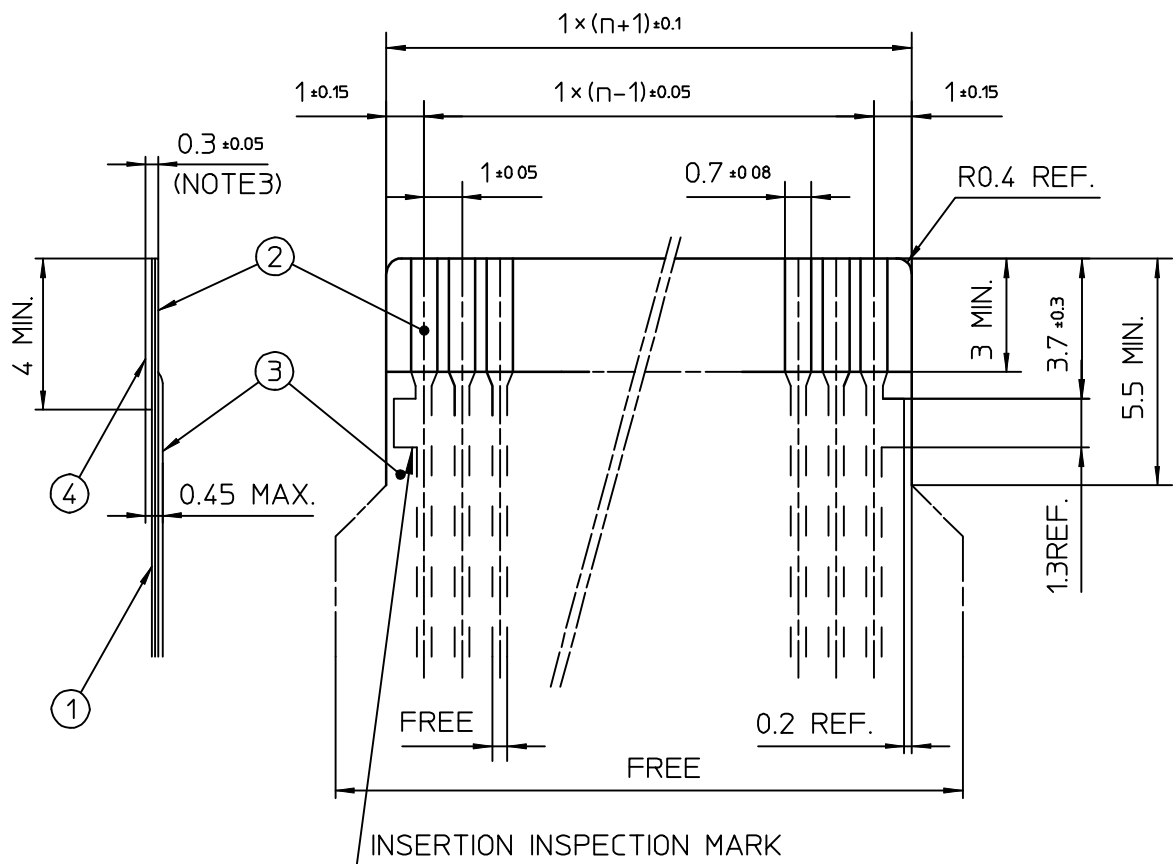
NOTES

1. NO BURR AT EACH PORTION.
2. NO PEELING IN COMMON USE.

|      |      |             |      |       |          |    |   |     |
|------|------|-------------|------|-------|----------|----|---|-----|
|      |      |             |      |       | SCALE    | ∞  | RECOMMENDED CABLE   |     |
|      |      |             |      |       | DIM. IN  | mm | CAT NO.   |     |
|      |      |             |      |       | DESIGNED |    | HFW__R-1/2__  |     |
|      |      |             |      |       | DRAWN    |    | DRAWING NO  | REV |
|      |      |             |      |       | CHECKED  |    | JSA 93574   |     |
|      |      |             |      |       | APPROVED |    |  DF-136<br>REV.B |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |    |   |     |

RECOMMENDED CABLE (FPC)


n : NO. OF CONDUCTORS



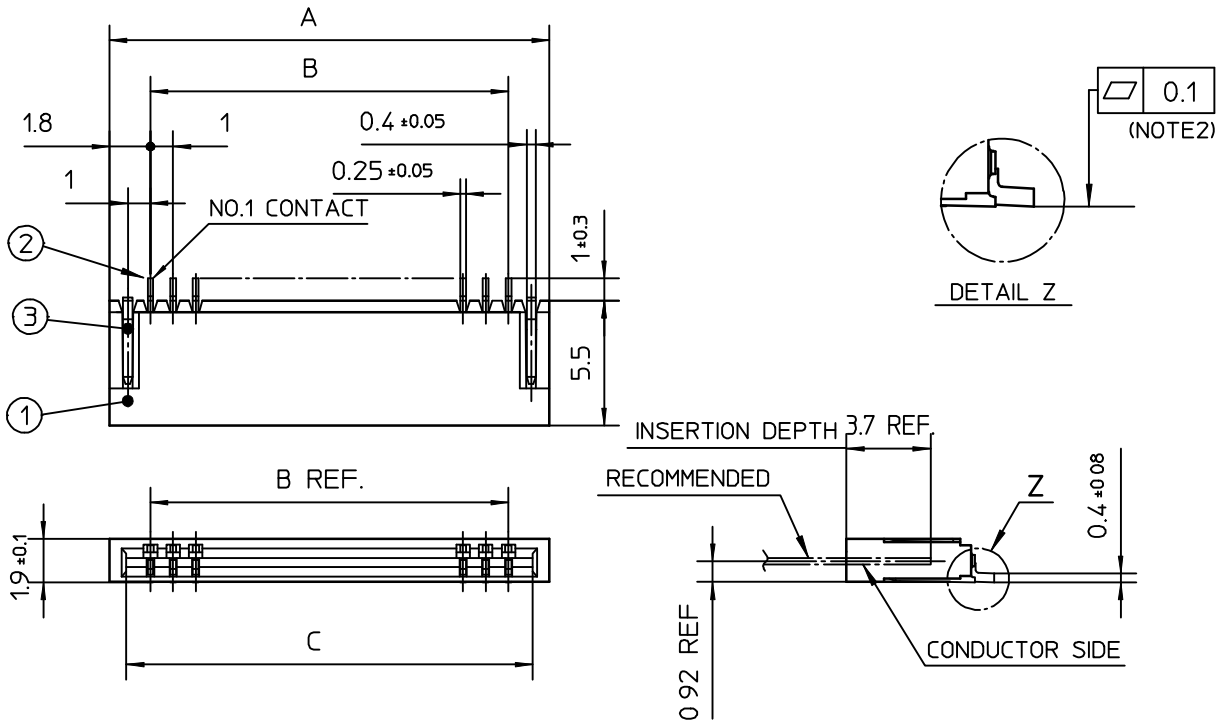
| PT. NO. | DESCRIPTION     | MATERIAL                               | THICKNESS (μm) |
|---------|-----------------|--|----------------|
| 1       | BASE FILM       | POLYIMIDE OR POLYESTER OR EQUIVALENT   | 25             |
| 2       | CONDUCTOR       | COPPER FOIL(PLATING : SOLDER 1μm MIN.) | 35             |
| 3       | OVERLAY         | POLYIMIDE OR POLYESTER OR EQUIVALENT   | —              |
| 4       | SUPPORTING TAPE | POLYESTER OR POLYIMIDE OR EQUIVALENT   | 188            |

NOTES

1. NO BURR AT EACH PORTION.
2. NO PEELING IN COMMON USE.
3. TOTAL THICKNESS LIMIT OF EACH MATERIAL (INCLUDING ADHESIVE AGENT) IS SPECIFIED.

|      |      |             |      |       |          |    |   |     |
|------|------|-------------|------|-------|----------|----|---|-----|
|      |      |             |      |       | SCALE    | ∞  | RECOMMENDED CABLE   |     |
|      |      |             |      |       | DIM. IN  | mm | CAT NO.   |     |
|      |      |             |      |       | DESIGNED |    | HFW__R-1/2__  |     |
|      |      |             |      |       | DRAWN    |    | DRAWING NO  | REV |
|      |      |             |      |       | CHECKED  |    | JSA 93573   |     |
|      |      |             |      |       | APPROVED |    |  DF-136<br>REV.B |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |    |   |     |

TOLERANCES  
UNLESS OTHERWISE SPECIFIED : ±0.2

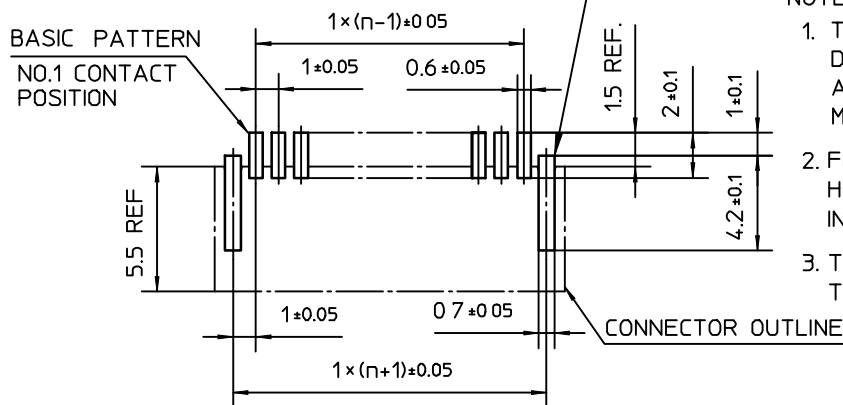


| PT. NO. | PARTS NAME     | MATERIAL                              | Q'TY | NOTE                |
|---------|----------------|---------------------------------------|------|---------------------|
| 1       | HOUSING        | PA6T RESIN GLASS REINFORCED (UL94V-0) | 1    | COLOR : BLACK       |
| 2       | CONTACT        | PHOSPHOR BRONZE                       | n    | PLATING : TIN ALLOY |
| 3       | MOUNTING PLATE |                                       | 2    |                     |

n : NO. OF CONTACTS

RECOMMENDED PC BOARD LAYOUT  
(COMPONENT SIDE)

PATTERN FOR MOUNTING PLATE FIXING



NOTES

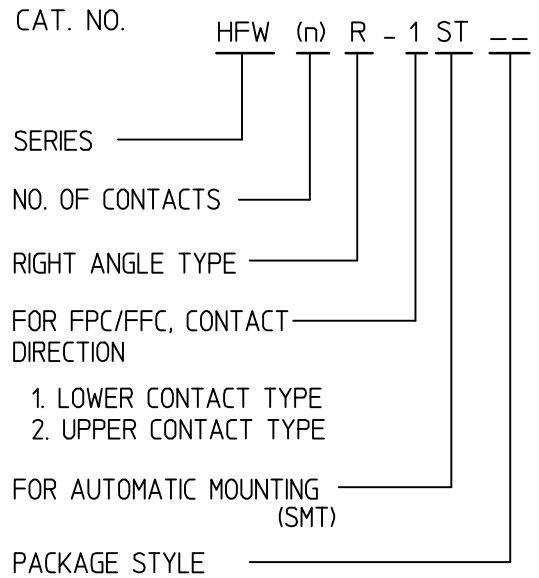
1. THIS PRODUCT IS THE CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND COPES WITH AUTOMATIC MOUNTING (SMT).
2. FLATNESS OF CONTACT TERMINAL FOR HOUSING MUST BE WITHIN TOLERANCE IN Z PORTION DETAILED DRAWING
3. THIS PRODUCT IS LOWER CONTACT TYPE CONNECTOR.

|      |      |             |      |       |          |    |   |     |
|------|------|-------------|------|-------|----------|----|---|-----|
|      |      |             |      |       | SCALE    | ∞  | 1mm SPACING SURFACE MOUNT FPC/FFC CONNECTOR |     |
|      |      |             |      |       | DIM. IN  | mm | CAT NO.                                     |     |
|      |      |             |      |       | DESIGNED |    | HFW__R-1ST__                                |     |
|      |      |             |      |       | DRAWN    |    | DRAWING NO                                  | REV |
|      |      |             |      |       | CHECKED  |    | JSA 93571                                   |     |
|      |      |             |      |       | APPROVED |    |   |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |    | DF-136 REV.B                                |     |




CAT. NO. & DIMENSIONS

| (NOTE3) | NO. OF CONTACTS (n) | CAT. NO.       | DIMENSIONS (NOTE2) |         |         |
|---------|---------------------|----------------|--------------------|---------|---------|
|         |                     |                | A ± 0.2            | B ± 0.2 | C ± 0.1 |
|         | 4                   | HFW4R-1/2ST__  | 6.6                | 3       | 5.14    |
|         | 5                   | HFW5R-1/2ST__  | 7.6                | 4       | 6.14    |
|         | 6                   | HFW6R-1/2ST__  | 8.6                | 5       | 7.14    |
|         | 7                   | HFW7R-1/2ST__  | 9.6                | 6       | 8.14    |
|         | 8                   | HFW8R-1/2ST__  | 10.6               | 7       | 9.14    |
|         | 9                   | HFW9R-1/2ST__  | 11.6               | 8       | 10.14   |
|         | 10                  | HFW10R-1/2ST__ | 12.6               | 9       | 11.14   |
|         | 11                  | HFW11R-1/2ST__ | 13.6               | 10      | 12.14   |
|         | 12                  | HFW12R-1/2ST__ | 14.6               | 11      | 13.14   |
|         | 13                  | HFW13R-1/2ST__ | 15.6               | 12      | 14.14   |
|         | 14                  | HFW14R-1/2ST__ | 16.6               | 13      | 15.14   |
|         | 15                  | HFW15R-1/2ST__ | 17.6               | 14      | 16.14   |
|         | 16                  | HFW16R-1/2ST__ | 18.6               | 15      | 17.14   |
|         | 17                  | HFW17R-1/2ST__ | 19.6               | 16      | 18.14   |
|         | 18                  | HFW18R-1/2ST__ | 20.6               | 17      | 19.14   |
|         | 19                  | HFW19R-1/2ST__ | 21.6               | 18      | 20.14   |
|         | 20                  | HFW20R-1/2ST__ | 22.6               | 19      | 21.14   |
| *       | 21                  | HFW21R-1/2ST__ | 23.6               | 20      | 22.14   |
|         | 22                  | HFW22R-1/2ST__ | 24.6               | 21      | 23.14   |
|         | 23                  | HFW23R-1/2ST__ | 25.6               | 22      | 24.14   |
|         | 24                  | HFW24R-1/2ST__ | 26.6               | 23      | 25.14   |
|         | 25                  | HFW25R-1/2ST__ | 27.6               | 24      | 26.14   |
|         | 26                  | HFW26R-1/2ST__ | 28.6               | 25      | 27.14   |
|         | 27                  | HFW27R-1/2ST__ | 29.6               | 26      | 28.14   |
| *       | 28                  | HFW28R-1/2ST__ | 30.6               | 27      | 29.14   |
| *       | 29                  | HFW29R-1/2ST__ | 31.6               | 28      | 30.14   |
|         | 30                  | HFW30R-1/2ST__ | 32.6               | 29      | 31.14   |



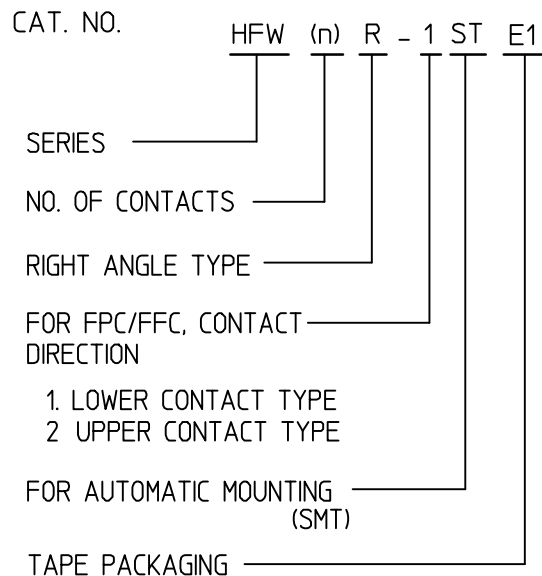
NOTES

1. THIS PRODUCT IS THE CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND COPEs WITH AUTOMATIC MOUNTING (SMT).
2. SEE PART DRAWINGS FOR DIMENSIONS A~C.
3. PLEASE CONSULT US IN CASE OF USING PARTS WITH \* MARK.

|      |      |             |      |       |          |    |   |     |
|------|------|-------------|------|-------|----------|----|---|-----|
|      |      |             |      |       | SCALE    | ∞  | CAT. NO. TABLE FOR 1mm SPACING SMT CONNECTOR  |     |
|      |      |             |      |       | DIM. IN  | mm | CAT NO.   |     |
|      |      |             |      |       | DESIGNED |    | HFW__R-1/2ST__  |     |
|      |      |             |      |       | DRAWN    |    | DRAWING NO  | REV |
|      |      |             |      |       | CHECKED  |    | JSA 93575   |     |
|      |      |             |      |       | APPROVED |    |  DF-136<br>REV.B |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |    |   |     |


CAT. NO. & DIMENSIONS

| (NOTE4) | NO. OF CONTACTS (n) | CAT. NO. (NOTE2) | DIMENSIONS (NOTE3) |         |         |
|---------|---------------------|------------------|--------------------|---------|---------|
|         |                     |                  | E ± 5              | F ± 0.3 | G ± 0.1 |
|         | 4                   | HFW4R-1/2STE1    | 28.4               | 24      | —       |
|         | 5                   | HFW5R-1/2STE1    | 28.4               | 24      | —       |
|         | 6                   | HFW6R-1/2STE1    | 28.4               | 24      | —       |
|         | 7                   | HFW7R-1/2STE1    | 28.4               | 24      | —       |
|         | 8                   | HFW8R-1/2STE1    | 28.4               | 24      | —       |
|         | 9                   | HFW9R-1/2STE1    | 28.4               | 24      | —       |
|         | 10                  | HFW10R-1/2STE1   | 28.4               | 24      | —       |
|         | 11                  | HFW11R-1/2STE1   | 28.4               | 24      | —       |
|         | 12                  | HFW12R-1/2STE1   | 28.4               | 24      | —       |
|         | 13                  | HFW13R-1/2STE1   | 28.4               | 24      | —       |
|         | 14                  | HFW14R-1/2STE1   | 28.4               | 24      | —       |
|         | 15                  | HFW15R-1/2STE1   | 36.4               | 32      | 28.4    |
|         | 16                  | HFW16R-1/2STE1   | 36.4               | 32      | 28.4    |
|         | 17                  | HFW17R-1/2STE1   | 36.4               | 32      | 28.4    |
|         | 18                  | HFW18R-1/2STE1   | 36.4               | 32      | 28.4    |
|         | 19                  | HFW19R-1/2STE1   | 48.4               | 44      | 40.4    |
|         | 20                  | HFW20R-1/2STE1   | 48.4               | 44      | 40.4    |
| *       | 21                  | HFW21R-1/2STE1   | 48.4               | 44      | 40.4    |
|         | 22                  | HFW22R-1/2STE1   | 48.4               | 44      | 40.4    |
|         | 23                  | HFW23R-1/2STE1   | 48.4               | 44      | 40.4    |
|         | 24                  | HFW24R-1/2STE1   | 48.4               | 44      | 40.4    |
|         | 25                  | HFW25R-1/2STE1   | 48.4               | 44      | 40.4    |
|         | 26                  | HFW26R-1/2STE1   | 48.4               | 44      | 40.4    |
|         | 27                  | HFW27R-1/2STE1   | 48.4               | 44      | 40.4    |
| *       | 28                  | HFW28R-1/2STE1   | 48.4               | 44      | 40.4    |
| *       | 29                  | HFW29R-1/2STE1   | 48.4               | 44      | 40.4    |
|         | 30                  | HFW30R-1/2STE1   | 60.4               | 56      | 52.4    |

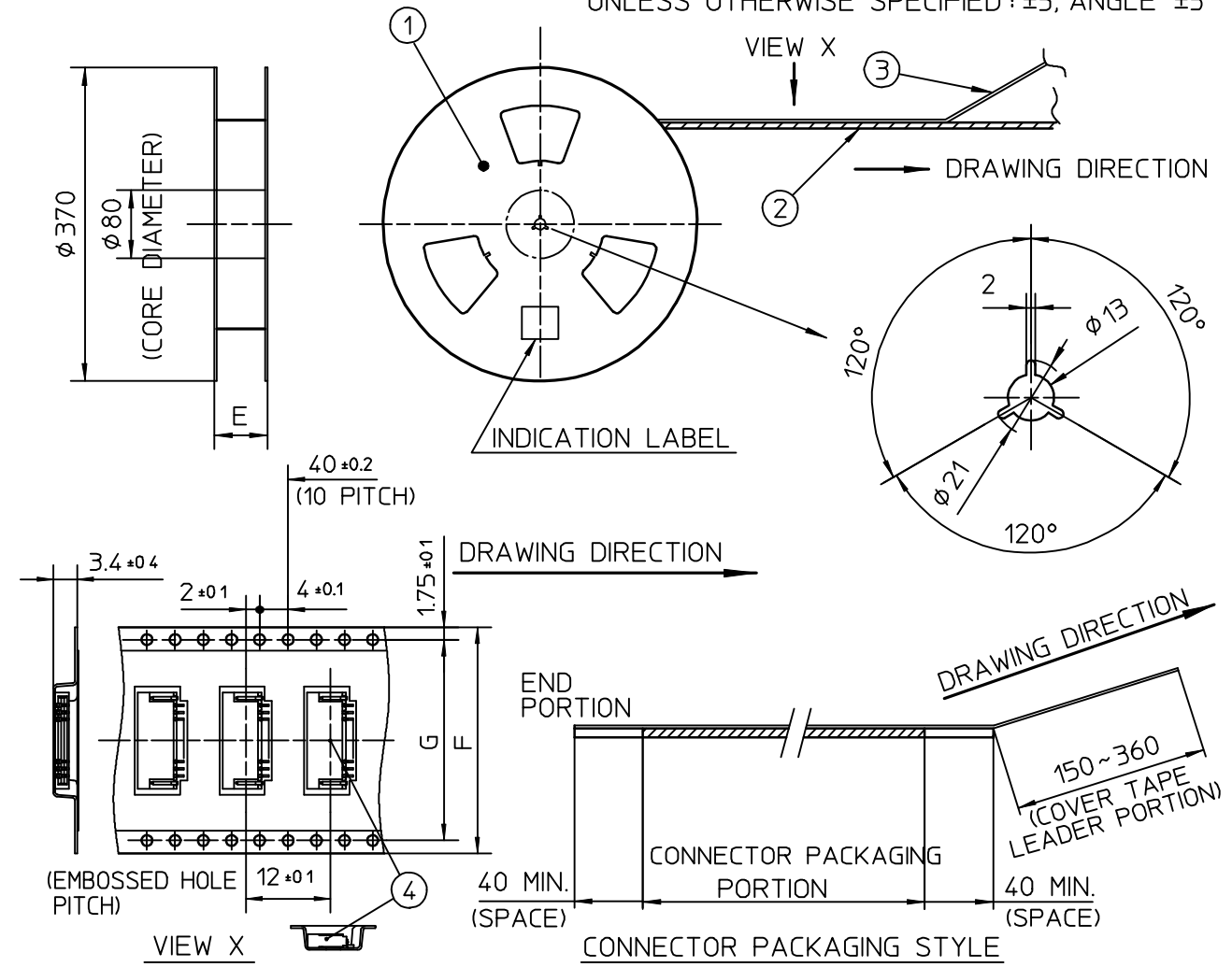


NOTES

1. THIS PRODUCT IS THE CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND COPE WITH AUTOMATIC MOUNTING (SMT).
2. THIS CATALOG NO. INDICATES PLASTIC TAPE PACKAGED CONNECTOR.
3. SEE PART DRAWINGS FOR DIMENSIONS E~G.
4. PLEASE CONSULT US IN CASE OF USING PARTS WITH \* MARK.

|      |      |             |      |       |          |    |   |     |
|------|------|-------------|------|-------|----------|----|---|-----|
|      |      |             |      |       | SCALE    | ∞  | CAT. NO. TABLE FOR PLASTIC TAPE PACKAGED 1mm SPACING SMT CONN.  |     |
|      |      |             |      |       | DIM. IN  | mm | CAT NO.   |     |
|      |      |             |      |       | DESIGNED |    | HFW__R-1/2STE1  |     |
|      |      |             |      |       | DRAWN    |    | DRAWING NO  | REV |
|      |      |             |      |       | CHECKED  |    | JSA 93589   |     |
|      |      |             |      |       | APPROVED |    |  DF-136<br>REV.B |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |    |   |     |

TOLERANCES  
UNLESS OTHERWISE SPECIFIED : ±5, ANGLE ±5°



| PT. NO. | PARTS NAME             | CAT. NO.     | MATERIAL          | Q'TY  | NOTE                 |
|---------|------------------------|--------------|-------------------|-------|----------------------|
| 1       | REEL                   | _____        | CARDBOARD         | 1     | COLOR : WHITE        |
| 2       | PLASTIC (EMBOSSD) TAPE | _____        | PET               | _____ | COLOR : TRANSPARENCY |
| 3       | COVER                  | _____        | POLYESTER         | _____ | COLOR : TRANSPARENCY |
| 4       | CONNECTOR              | HFW__R-1ST__ | SEE ATTACHED DWG. | 2000  | LOWER CONTACT TYPE   |

NOTES

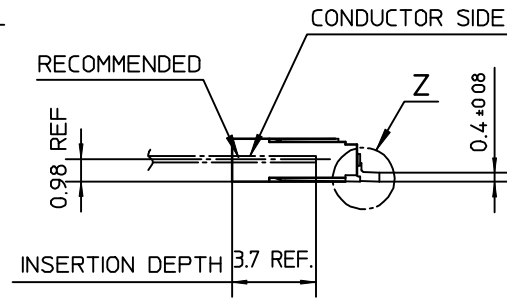
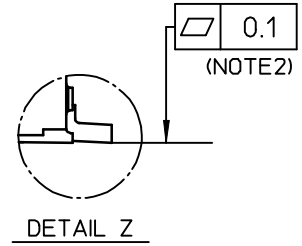
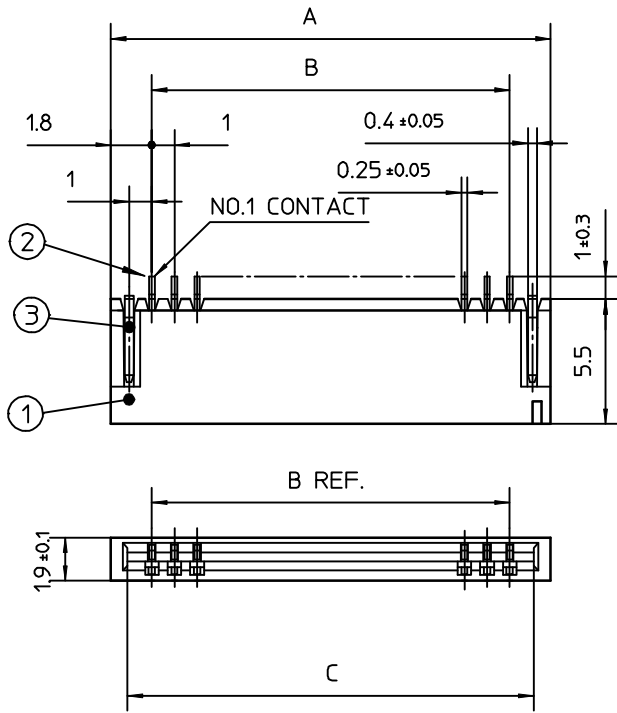
1. THIS IS PLASTIC TAPE PACKAGED CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND COPES WITH AUTOMATIC MOUNTING (SMT).
2. SEE JIS C 0806 (PACKING OF ELECTRONIC COMPONENTS ON CONTINUOUS TAPES (SURFACE MOUNTING DEVICES)) FOR SHAPE AND DIMENSIONS OF PLASTIC (EMBOSSD) TAPE AND REEL.

|      |      |             |      |       |          |    |                           |     |
|------|------|-------------|------|-------|----------|----|---------------------------|-----|
|      |      |             |      |       | SCALE    | ∕  | 1mm SPACING SMT CONNECTOR |     |
|      |      |             |      |       | DIM. IN  | mm | CAT NO.                   |     |
|      |      |             |      |       | DESIGNED |    | HFW__R-1STE1              |     |
|      |      |             |      |       | DRAWN    |    | DRAWING NO                | REV |
|      |      |             |      |       | CHECKED  |    | JSA 93577                 |     |
|      |      |             |      |       | APPROVED |    |                           |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |    |                           |     |



DF-136  
REV.B

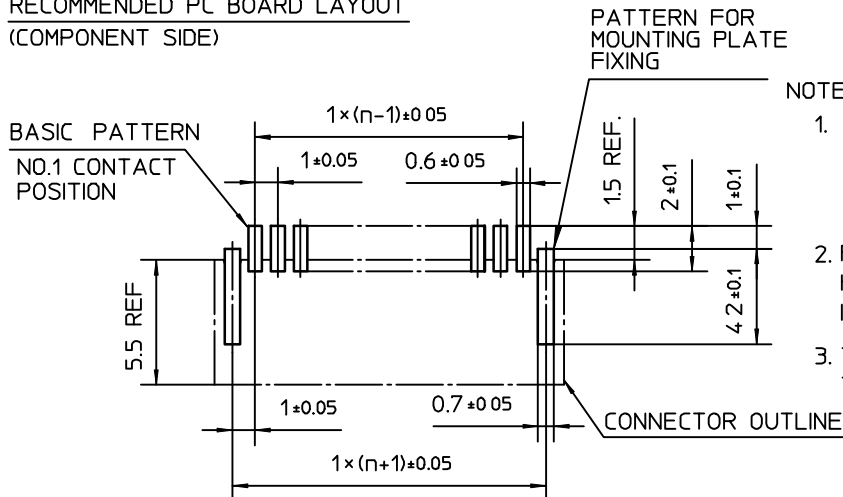
TOLERANCES  
UNLESS OTHERWISE SPECIFIED :  $\pm 0.2$



| PT NO | PARTS NAME     | MATERIAL                              | Q'TY | NOTE                |
|-------|----------------|---------------------------------------|------|---------------------|
| 1     | HOUSING        | PA6T RESIN GLASS REINFORCED (UL94V-0) | 1    | COLOR : BLACK       |
| 2     | CONTACT        | PHOSPHOR BRONZE                       | n    | PLATING : TIN ALLOY |
| 3     | MOUNTING PLATE |                                       | 2    |                     |

n : NO. OF CONTACTS

RECOMMENDED PC BOARD LAYOUT  
(COMPONENT SIDE)



NOTES

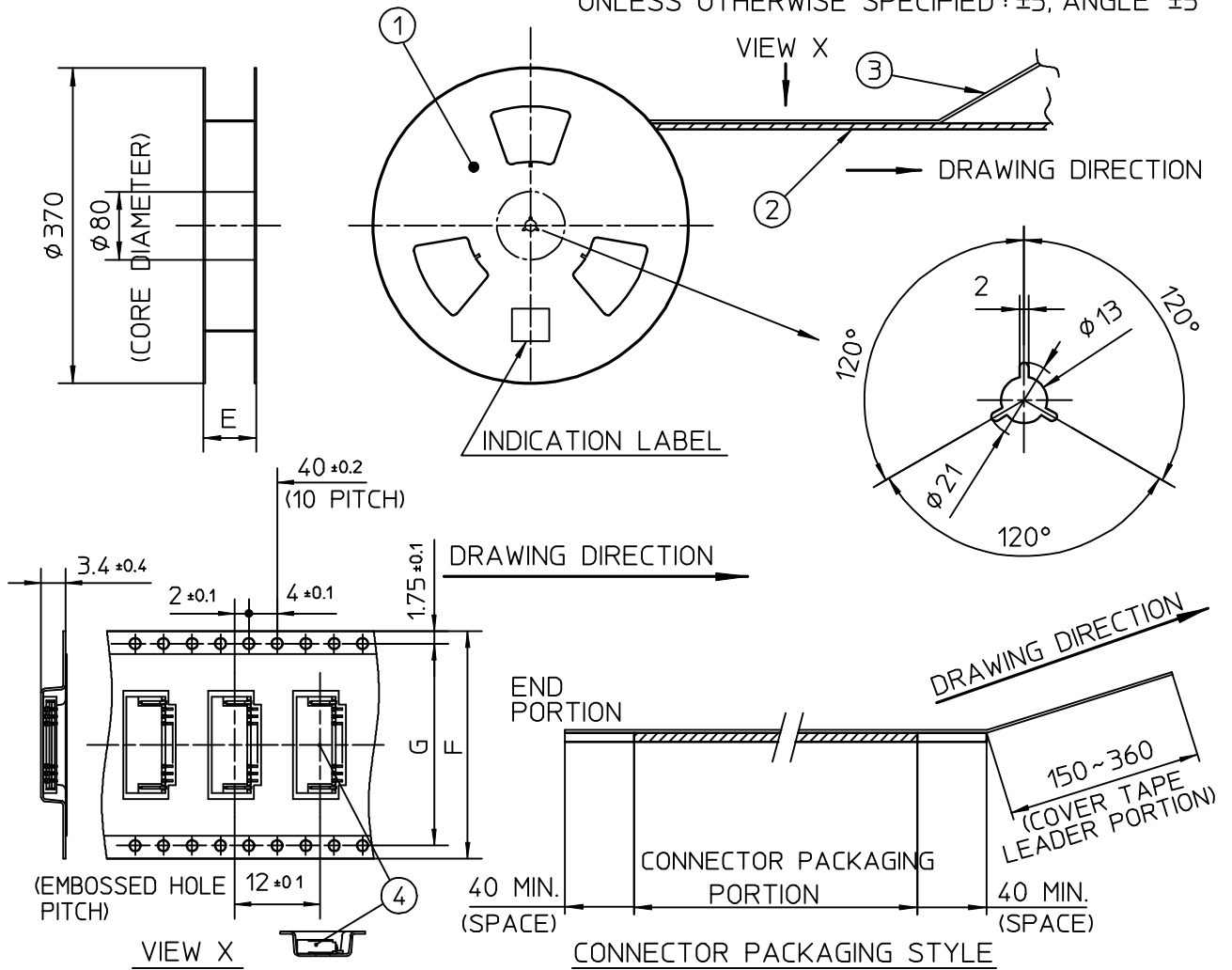
1. THIS PRODUCT IS THE CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND COPE WITH AUTOMATIC MOUNTING (SMT).
2. FLATNESS OF CONTACT TERMINAL FOR HOUSING MUST BE WITHIN TOLERANCE IN Z PORTION DETAILED DRAWING.
3. THIS PRODUCT IS UPPER CONTACT TYPE CONNECTOR.

|      |      |             |      |       |          |          |   |     |
|------|------|-------------|------|-------|----------|----------|---|-----|
|      |      |             |      |       | SCALE    | $\times$ | 1mm SPACING SURFACE MOUNT FPC/FFC CONNECTOR |     |
|      |      |             |      |       | DIM. IN  | mm       | CAT NO.                                     |     |
|      |      |             |      |       | DESIGNED |          | HFV__R-2ST__                                |     |
|      |      |             |      |       | DRAWN    |          | DRAWING NO                                  | REV |
|      |      |             |      |       | CHECKED  |          | JSA 93572                                   |     |
|      |      |             |      |       | APPROVED |          |   |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |          |   |     |



DF-136  
REV.B

TOLERANCES  
UNLESS OTHERWISE SPECIFIED :  $\pm 5$ , ANGLE  $\pm 5^\circ$



| PT. NO. | PARTS NAME             | CAT. NO.     | MATERIAL          | Q'TY | NOTE                 |
|---------|------------------------|--------------|-------------------|------|----------------------|
| 1       | REEL                   | _____        | CARDBOARD         | 1    | COLOR : WHITE        |
| 2       | PLASTIC (EMBOSSD) TAPE | _____        | PET               | —    | COLOR : TRANSPARENCY |
| 3       | COVER                  | _____        | POLYESTER         | —    | COLOR : TRANSPARENCY |
| 4       | CONNECTOR              | HFW__R-2ST__ | SEE ATTACHED DWG. | 2000 | UPPER CONTACT TYPE   |

NOTES

- THIS IS PLASTIC TAPE PACKAGED CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND COPES WITH AUTOMATIC MOUNTING (SMT).
- SEE JIS C 0806 (PACKING OF ELECTRONIC COMPONENTS ON CONTINUOUS TAPES (SURFACE MOUNTING DEVICES)) FOR SHAPE AND DIMENSIONS OF PLASTIC (EMBOSSD) TAPE AND REEL.

|      |      |             |      |       |          |          |                           |     |
|------|------|-------------|------|-------|----------|----------|---------------------------|-----|
|      |      |             |      |       | SCALE    | $\times$ | 1mm SPACING SMT CONNECTOR |     |
|      |      |             |      |       | DIM. IN  | mm       | CAT NO.                   |     |
|      |      |             |      |       | DESIGNED |          | HFW__R-2STE1              |     |
|      |      |             |      |       | DRAWN    |          | DRAWING NO                | REV |
|      |      |             |      |       | CHECKED  |          | JSA 93578                 |     |
|      |      |             |      |       | APPROVED |          |                           |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |          |                           |     |

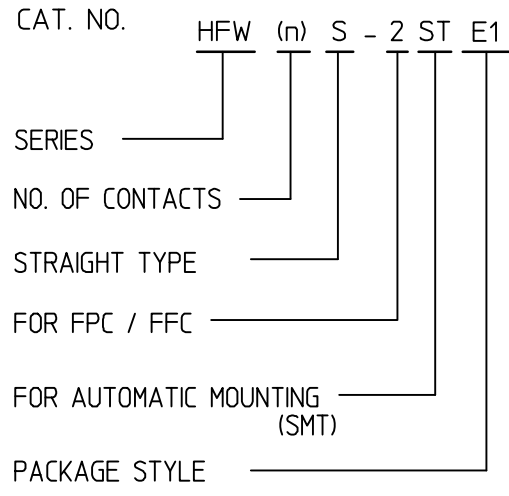


DF-136  
REV.B




CAT. NO. & DIMENSIONS

| (NOTE.4) | NO OF CONTACTS (n) | CAT. NO. (NOTE2) | DIMENSIONS (NOTE3) |         |         |
|----------|--------------------|------------------|--------------------|---------|---------|
|          |                    |                  | F ± 5              | G ± 0.3 | H ± 0.1 |
|          | 4                  | HFW4S-2STE1      | 28.4               | 24      | —       |
|          | 5                  | HFW5S-2STE1      | 28.4               | 24      | —       |
|          | 6                  | HFW6S-2STE1      | 28.4               | 24      | —       |
|          | 7                  | HFW7S-2STE1      | 28.4               | 24      | —       |
|          | 8                  | HFW8S-2STE1      | 28.4               | 24      | —       |
| *        | 9                  | HFW9S-2STE1      | 28.4               | 24      | —       |
|          | 10                 | HFW10S-2STE1     | 28.4               | 24      | —       |
|          | 11                 | HFW11S-2STE1     | 28.4               | 24      | —       |
|          | 12                 | HFW12S-2STE1     | 28.4               | 24      | —       |
|          | 13                 | HFW13S-2STE1     | 28.4               | 24      | —       |
|          | 14                 | HFW14S-2STE1     | 36.4               | 32      | 28.4    |
|          | 15                 | HFW15S-2STE1     | 36.4               | 32      | 28.4    |
|          | 16                 | HFW16S-2STE1     | 36.4               | 32      | 28.4    |
|          | 17                 | HFW17S-2STE1     | 36.4               | 32      | 28.4    |
|          | 18                 | HFW18S-2STE1     | 48.4               | 44      | 40.4    |
|          | 19                 | HFW19S-2STE1     | 48.4               | 44      | 40.4    |
|          | 20                 | HFW20S-2STE1     | 48.4               | 44      | 40.4    |
|          | 21                 | HFW21S-2STE1     | 48.4               | 44      | 40.4    |
|          | 22                 | HFW22S-2STE1     | 48.4               | 44      | 40.4    |
|          | 23                 | HFW23S-2STE1     | 48.4               | 44      | 40.4    |
|          | 24                 | HFW24S-2STE1     | 48.4               | 44      | 40.4    |
|          | 25                 | HFW25S-2STE1     | 48.4               | 44      | 40.4    |
|          | 26                 | HFW26S-2STE1     | 48.4               | 44      | 40.4    |
|          | 27                 | HFW27S-2STE1     | 48.4               | 44      | 40.4    |
|          | 28                 | HFW28S-2STE1     | 48.4               | 44      | 40.4    |
|          | 29                 | HFW29S-2STE1     | 60.4               | 56      | 52.4    |
|          | 30                 | HFW30S-2STE1     | 60.4               | 56      | 52.4    |
| *        | 31                 | HFW31S-2STE1     | 60.4               | 56      | 52.4    |
|          | 32                 | HFW32S-2STE1     | 60.4               | 56      | 52.4    |
| *        | 33                 | HFW33S-2STE1     | 60.4               | 56      | 52.4    |



NOTES

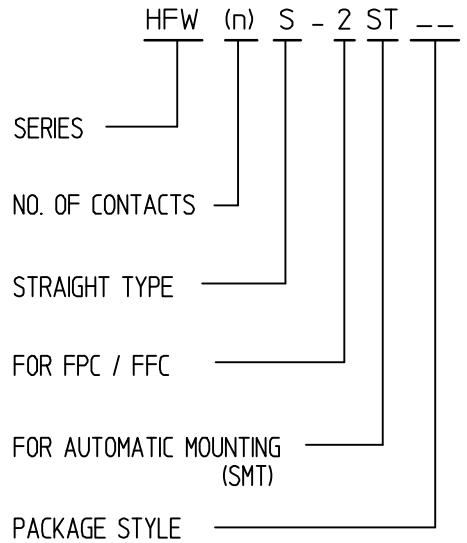
1. THIS PRODUCT IS THE CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND COPE WITH AUTOMATIC MOUNTING (SMT).
2. THIS CATALOG NO. INDICATES PLASTIC TAPE PACKAGED CONNECTOR.
3. SEE PART DRAWINGS FOR DIMENSIONS F~H
4. PLEASE CONSULT US IN CASE OF USING PARTS WITH \* MARK.

|      |      |             |      |       |          |    |   |     |
|------|------|-------------|------|-------|----------|----|---|-----|
|      |      |             |      |       | SCALE    | ∞  | CAT NO. TABLE FOR PLASTIC TAPE PACKAGED 1mm SPACING SMT CONN.   |     |
|      |      |             |      |       | DIM. IN  | mm | CAT NO.   |     |
|      |      |             |      |       | DESIGNED |    | HFW__S-2STE1  |     |
|      |      |             |      |       | DRAWN    |    | DRAWING NO  | REV |
|      |      |             |      |       | CHECKED  |    | JSA 93584   |     |
|      |      |             |      |       | APPROVED |    |  DF-136<br>REV.B |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |    |   |     |

CAT. NO. & DIMENSIONS


| (NOTE 3) | NO. OF CONTACTS (n) | CAT. NO.     | DIMENSIONS (NOTE2) |         |         |         |         |
|----------|---------------------|--------------|--------------------|---------|---------|---------|---------|
|          |                     |              | A ± 0.2            | B ± 0.2 | C ± 0.2 | D ± 0.2 | E ± 0.2 |
|          | 4                   | HFW4S-2ST__  | 7                  | 5.14    | 3       | —       | —       |
|          | 5                   | HFW5S-2ST__  | 8                  | 6.14    | 4       | —       | —       |
|          | 6                   | HFW6S-2ST__  | 9                  | 7.14    | 5       | —       | —       |
|          | 7                   | HFW7S-2ST__  | 10                 | 8.14    | 6       | —       | —       |
|          | 8                   | HFW8S-2ST__  | 11                 | 9.14    | 7       | —       | —       |
| *        | 9                   | HFW9S-2ST__  | 12                 | 10.14   | 8       | 0.35    | 7.3     |
|          | 10                  | HFW10S-2ST__ | 13                 | 11.14   | 9       | 0.35    | 8.3     |
|          | 11                  | HFW11S-2ST__ | 14                 | 12.14   | 10      | 1.35    | 7.3     |
|          | 12                  | HFW12S-2ST__ | 15                 | 13.14   | 11      | 1.35    | 8.3     |
|          | 13                  | HFW13S-2ST__ | 16                 | 14.14   | 12      | 2.35    | 7.3     |
|          | 14                  | HFW14S-2ST__ | 17                 | 15.14   | 13      | 2.35    | 8.3     |
|          | 15                  | HFW15S-2ST__ | 18                 | 16.14   | 14      | 3.35    | 7.3     |
|          | 16                  | HFW16S-2ST__ | 19                 | 17.14   | 15      | 3.35    | 8.3     |
|          | 17                  | HFW17S-2ST__ | 20                 | 18.14   | 16      | 4.35    | 7.3     |
|          | 18                  | HFW18S-2ST__ | 21                 | 19.14   | 17      | 4.35    | 8.3     |
|          | 19                  | HFW19S-2ST__ | 22                 | 20.14   | 18      | 5.35    | 7.3     |
|          | 20                  | HFW20S-2ST__ | 23                 | 21.14   | 19      | 5.35    | 8.3     |
|          | 21                  | HFW21S-2ST__ | 24                 | 22.14   | 20      | 6.35    | 7.3     |
|          | 22                  | HFW22S-2ST__ | 25                 | 23.14   | 21      | 6.35    | 8.3     |
|          | 23                  | HFW23S-2ST__ | 26                 | 24.14   | 22      | 7.35    | 7.3     |
|          | 24                  | HFW24S-2ST__ | 27                 | 25.14   | 23      | 7.35    | 8.3     |
|          | 25                  | HFW25S-2ST__ | 28                 | 26.14   | 24      | 8.35    | 7.3     |
|          | 26                  | HFW26S-2ST__ | 29                 | 27.14   | 25      | 8.35    | 8.3     |
|          | 27                  | HFW27S-2ST__ | 30                 | 28.14   | 26      | 9.35    | 7.3     |
|          | 28                  | HFW28S-2ST__ | 31                 | 29.14   | 27      | 9.35    | 8.3     |
|          | 29                  | HFW29S-2ST__ | 32                 | 30.14   | 28      | 10.35   | 7.3     |
|          | 30                  | HFW30S-2ST__ | 33                 | 31.14   | 29      | 10.35   | 8.3     |
| *        | 31                  | HFW31S-2ST__ | 34                 | 32.14   | 30      | 11.35   | 7.3     |
|          | 32                  | HFW32S-2ST__ | 35                 | 33.14   | 31      | 11.35   | 8.3     |
| *        | 33                  | HFW33S-2ST__ | 36                 | 34.14   | 32      | 12.35   | 7.3     |

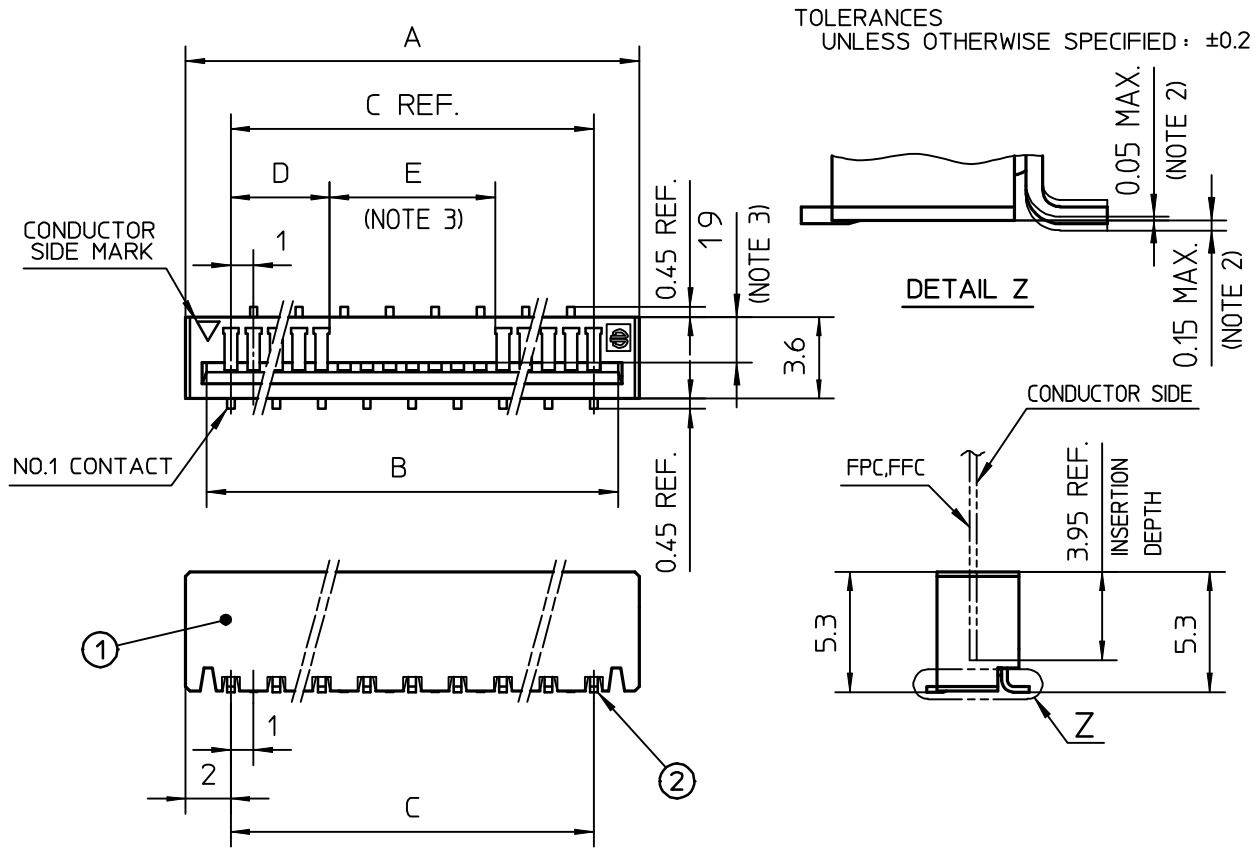
CAT. NO.



NOTES

1. THIS PRODUCT IS THE CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND COPES WITH AUTOMATIC MOUNTING (SMT).
2. SEE PART DRAWINGS FOR DIMENSIONS A~E.
3. PLEASE CONSULT US IN CASE OF USING PARTS WITH \* MARK.

|      |      |             |      |       |          |    |   |     |
|------|------|-------------|------|-------|----------|----|---|-----|
|      |      |             |      |       | SCALE    | ∞  | CAT NO. TABLE FOR 1mm SPACING SMT CONNECTOR   |     |
|      |      |             |      |       | DIM. IN  | mm | CAT NO.   |     |
|      |      |             |      |       | DESIGNED |    | HFW__S-2ST__  |     |
|      |      |             |      |       | DRAWN    |    | DRAWING NO  | REV |
|      |      |             |      |       | CHECKED  |    | JSA 93586   |     |
|      |      |             |      |       | APPROVED |    |  DF-136<br>REV.B |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |    |   |     |

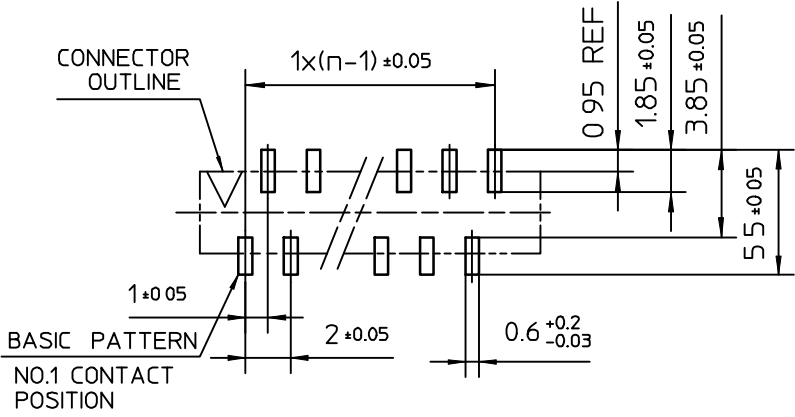


TOLERANCES  
UNLESS OTHERWISE SPECIFIED: ±0.2

| PT. NO. | PARTS NAME | MATERIAL                              | Q'TY | NOTE               |
|---------|------------|---------------------------------------|------|--------------------|
| 1       | HOUSING    | PA6T RESIN GLASS REINFORCED (UL94V-0) | 1    | COLOR :BLACK       |
| 2       | CONTACT    | PHOSPHOR BRONZE                       | n    | PLATING :TIN ALLOY |


n : NO. OF CONTACTS

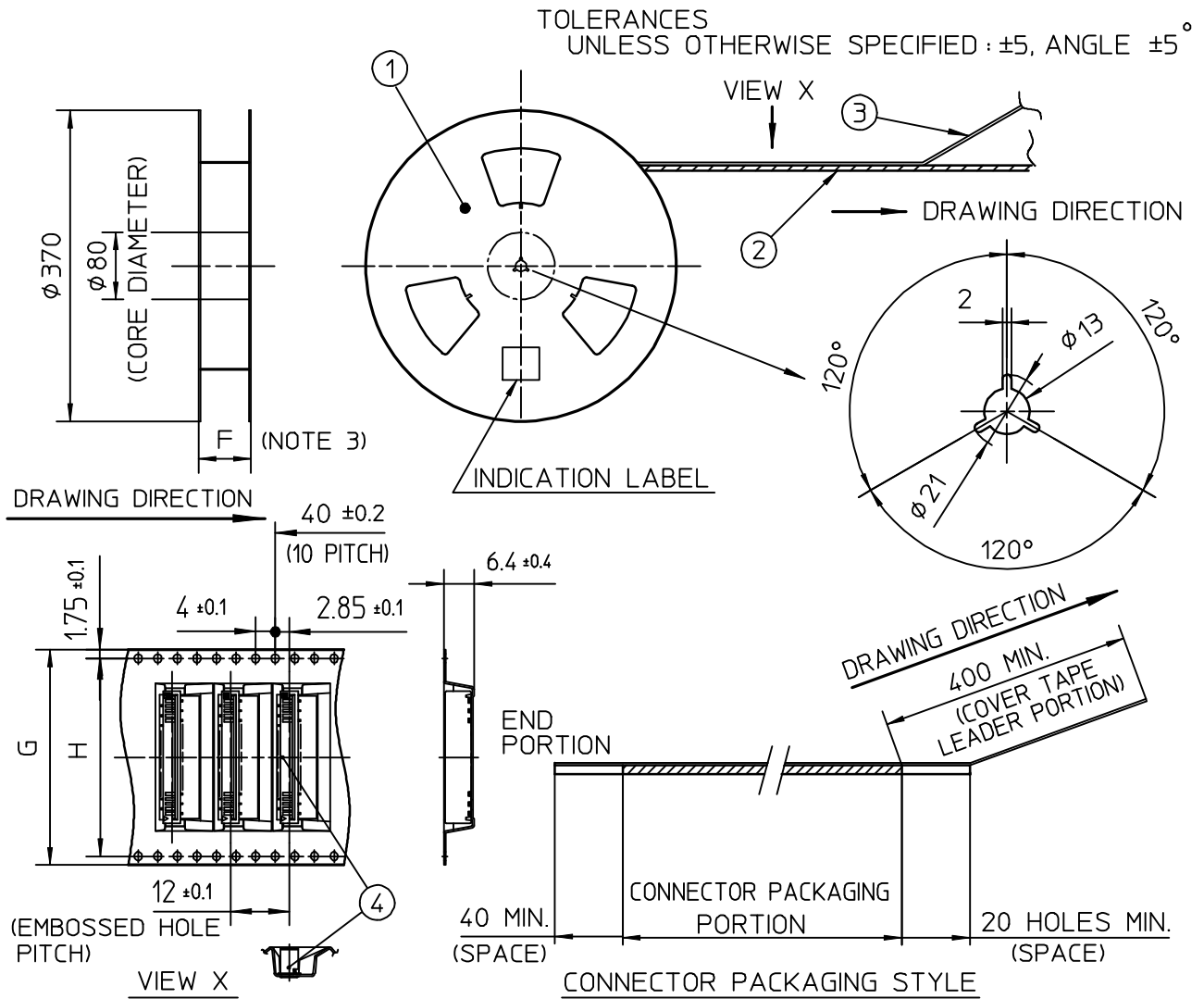
RECOMMENDED PC BOARD LAYOUT  
(COMPONENT SIDE)



NOTES

1. THIS PRODUCT IS THE CONNECTOR DESIGNED TO TERMINATE FPC/FFC AND COPES WITH AUTOMATIC MOUNTING (SMT).
2. FLATNESS OF CONTACT TERMINAL MUST BE WITHIN TOLERANCE IN Z PORTION DETAILED DRAWING.
3. THIS DIMENSION IS SPACE FOR THE NOZZLE OF MOUNTER.

|      |      |             |      |       |          |    |   |     |
|------|------|-------------|------|-------|----------|----|---|-----|
|      |      |             |      |       | SCALE    | ∞  | 1mm SPACING SURFACE MOUNT FPC/FFC CONNECTOR   |     |
|      |      |             |      |       | DIM. IN  | mm | CAT NO.   |     |
|      |      |             |      |       | DESIGNED |    | HFW__S-2ST__  |     |
|      |      |             |      |       | DRAWN    |    | DRAWING NO  | REV |
|      |      |             |      |       | CHECKED  |    | JSA 93585   |     |
|      |      |             |      |       | APPROVED |    |  DF-136<br>REV.B |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |    |   |     |



| PT. NO. | PARTS NAME              | CAT. NO.     | MATERIAL          | Q'TY | NOTE                 |
|---------|-------------------------|--------------|-------------------|------|----------------------|
| 1       | REEL                    | _____        | CARDBOARD         | 1    | COLOR : GRAY         |
| 2       | PLASTIC (EMBOSSED) TAPE | _____        | PET               | —    | COLOR : TRANSPARENCY |
| 3       | COVER                   | _____        | POLYESTER         | —    | COLOR : TRANSPARENCY |
| 4       | CONNECTOR               | HFW__S-2ST__ | SEE ATTACHED DWG. | 1000 | _____                |

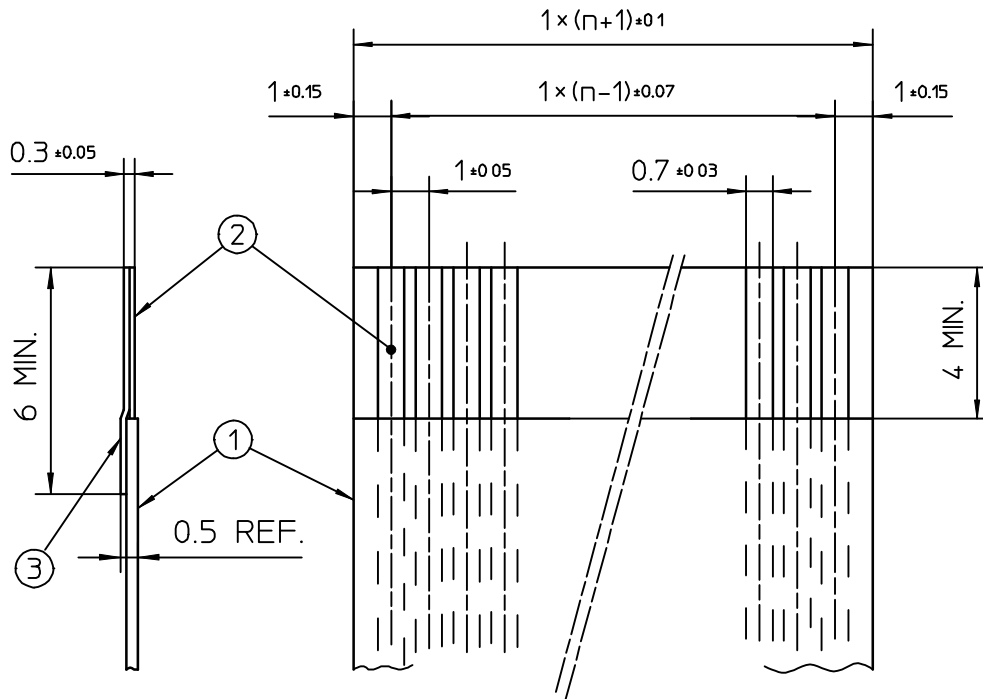
NOTES

1. THIS IS PLASTIC TAPE PACKAGED CONNECTOR USED FOR FPC/FFC AND COPES WITH AUTOMATIC MOUNTING (SMT).
2. SEE JIS C 0806 (PACKING OF ELECTRONIC COMPONENTS ON CONTINUOUS TAPES (SURFACE MOUNTING DEVICES)) FOR SHAPE AND DIMENSIONS OF PLASTIC (EMBOSSED) TAPE AND REEL.
3. F DIMENSION IS PORTION OF THE CORE.

|      |      |             |      |       |          |    |   |     |
|------|------|-------------|------|-------|----------|----|---|-----|
|      |      |             |      |       | SCALE    | ∕  | PLASTIC TAPE PACKAGED<br>1mm SPACING SMT CONNECTOR  |     |
|      |      |             |      |       | DIM. IN  | mm | CAT NO.   |     |
|      |      |             |      |       | DESIGNED |    | HFW__S-2STE1  |     |
|      |      |             |      |       | DRAWN    |    | DRAWING NO  | REV |
|      |      |             |      |       | CHECKED  |    | JSA 93583   |     |
|      |      |             |      |       | APPROVED |    | <span style="float: right;">DF-136<br/>REV.B</span> |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |    |   |     |

RECOMMENDED CABLE (FFC)


n : NO. OF CONDUCTOR



| PT. NO. | DESCRIPTION     | MATERIAL                                | NOTE                                |
|---------|-----------------|---|-------------------------------------|
| 1       | INSULATOR       | FLAME RESISTING POLYESTER OR EQUIVALENT | _____                               |
| 2       | CONDUCTOR       | COPPER FOIL                             | PLATING : TIN OR SOLDER<br>1μm MIN. |
| 3       | SUPPORTING TAPE | FLAME RESISTING POLYESTER OR EQUIVALENT | _____                               |

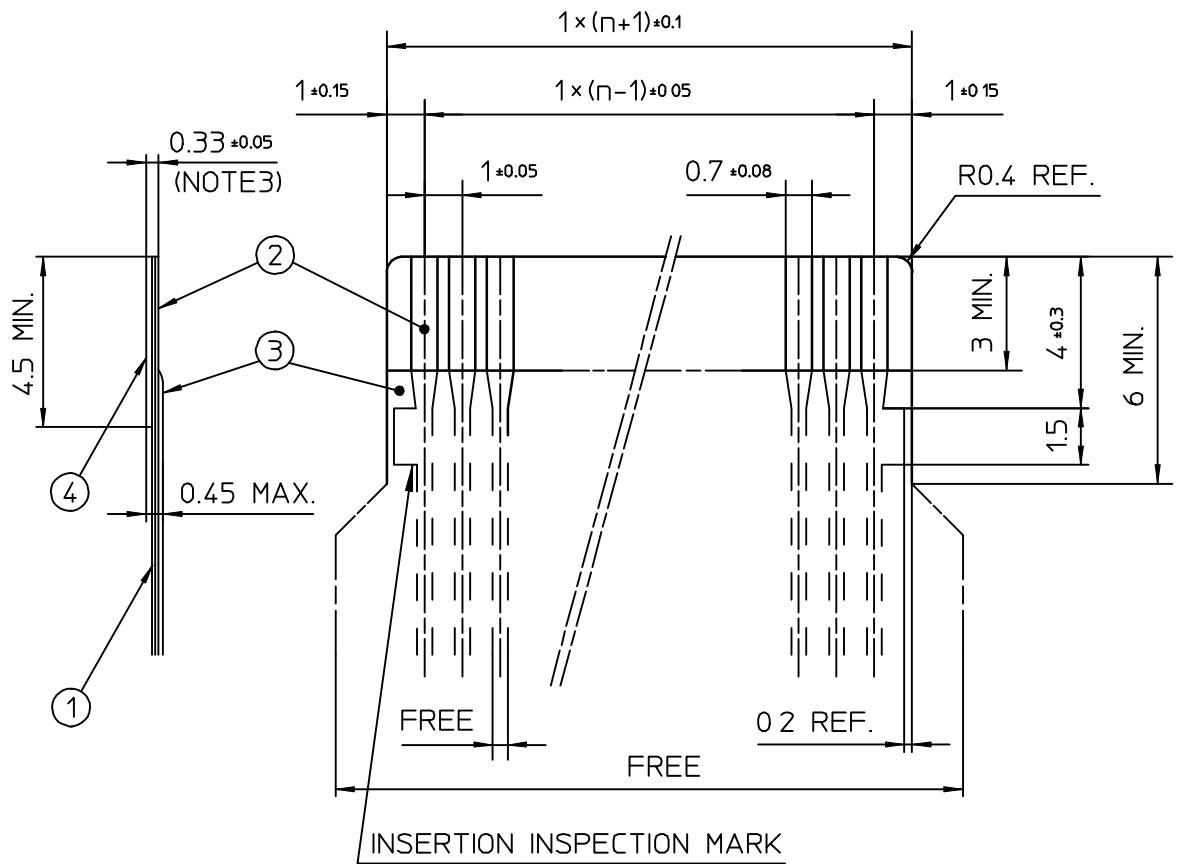
NOTES

1. NO BURR AT EACH PORTION.
2. NO PEELING IN COMMON USE.

|      |      |             |      |       |          |    |   |     |
|------|------|-------------|------|-------|----------|----|---|-----|
|      |      |             |      |       | SCALE    | ∞  | RECOMMENDED CABLE   |     |
|      |      |             |      |       | DIM. IN  | mm | CAT NO.   |     |
|      |      |             |      |       | DESIGNED |    | HFW__S-2ST__  |     |
|      |      |             |      |       | DRAWN    |    | DRAWING NO  | REV |
|      |      |             |      |       | CHECKED  |    | JSA 93588   |     |
|      |      |             |      |       | APPROVED |    |   |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |    |  DF-136<br>REV.B |     |

RECOMMENDED CABLE (FPC)


n : NO. OF CONDUCTORS



| PT. NO. | DISCRIPTION     | MATERIAL                               | THICKNESS (μm) |
|---------|-----------------|--|----------------|
| 1       | BASE FILM       | POLYIMIDE OR POLYESTER OR EQUIVALENT   | 25             |
| 2       | CONDUCTOR       | COPPER FOIL(PLATING : SOLDER 1μm MIN.) | 35             |
| 3       | OVERLAY         | POLYIMIDE OR POLYESTER OR EQUIVALENT   | —              |
| 4       | SUPPORTING TAPE | POLYESTER OR POLYIMIDE OR EQUIVALENT   | 188            |

NOTES

- 1 NO BURR AT EACH PORTION
2. NO PEELING IN COMMON USE.
3. TOTAL THICKNESS LIMIT OF EACH MATERIAL (INCLUDING ADHESIVE AGENT) IS SPECIFIED.

|      |      |             |      |       |          |    |   |     |
|------|------|-------------|------|-------|----------|----|---|-----|
|      |      |             |      |       | SCALE    | ∞  | RECOMMENDED CABLE   |     |
|      |      |             |      |       | DIM. IN  | mm | CAT NO.   |     |
|      |      |             |      |       | DESIGNED |    | HFW__S-2ST__  |     |
|      |      |             |      |       | DRAWN    |    | DRAWING NO  | REV |
|      |      |             |      |       | CHECKED  |    | JSA 93587   |     |
|      |      |             |      |       | APPROVED |    |  DF-136<br>REV.B |     |
| REV. | DATE | DESCRIPTION | DWN. | APPD. | DATE     |    |   |     |