

## Configuration of Customer Documents List

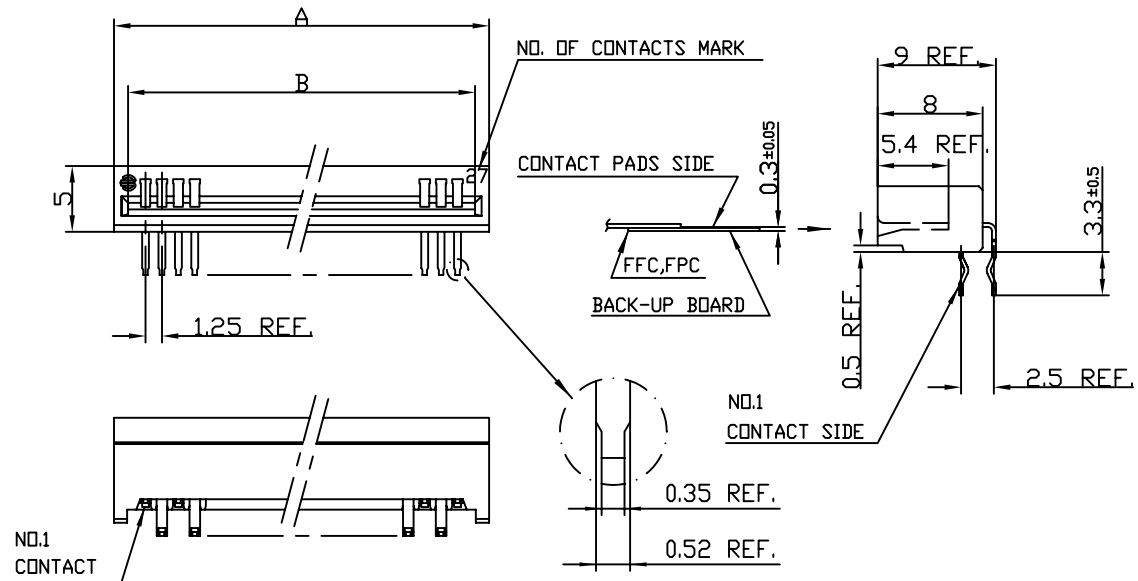
| P/N                             | Documents     | No.                     | Title                                                |
|---------------------------------|---------------|-------------------------|------------------------------------------------------|
| HLEM_R/S-1                      | Specification | SC-HLEM 01              |                                                      |
|                                 | Dwg.          | JSA93270                | 1.25mm Spacing Connector for FPC/FFC (HLEM_R/S- )    |
|                                 |               | JSA93271                | 1.25mm Spacing Connector for FPC/FFC (HLEM_S-1 )     |
|                                 | Cable Manual  | JSA28789<br>BJM-HLEM101 | Recommended cable and P.C. board (HLEM_R/S- )        |
| HLEM_R/S-2                      | Specification | SC-HLEM 01              |                                                      |
|                                 | Dwg.          | JSC29055                | 1.25mm Spacing Connector for FPC/FFC (HLEM_R-2 )     |
|                                 |               | JSC29054                | 1.25mm Spacing Connector for FPC/FFC (HLEM_S-2 )     |
|                                 | Cable Manual  | JSA28789<br>BJM-HLEM101 | Recommended cable and P.C. board (HLEM_R/S- )        |
| HLEM_R/S-1RLF<br>(See Note ②③)  | Specification | SC-HLEM 01              |                                                      |
|                                 | Dwg.          | JSA94071                | 1.25mm Spacing Connector for FPC/FFC (HLEM_R-1RLF )  |
|                                 |               | JSA94072                | 1.25mm Spacing Connector for FPC/FFC (HLEM_S-1RLF )  |
|                                 | Cable Manual  | JSA28789<br>BJM-HLEM101 | Recommended cable and P.C. board (HLEM_R/S- )        |
| HLEM_R/S-1RFLF<br>(See Note ②③) | Specification | SC-HLEM 01              |                                                      |
|                                 | Dwg.          | JSA94073                | 1.25mm Spacing Connector for FPC/FFC (HLEM_R-1RFLF ) |
|                                 |               | JSA94074                | 1.25mm Spacing Connector for FPC/FFC (HLEM_S-1RFLF ) |
|                                 | Cable Manual  | JSA28789<br>BJM-HLEM101 | Recommended cable and P.C. board (HLEM_R/S- )        |
| HLEM_R/S-2RLF<br>(See Note ②③)  | Specification | SC-HLEM 01              |                                                      |
|                                 | Dwg.          | JSA96132                | 1.25mm Spacing Connector for FPC/FFC (HLEM_R-2RLF )  |
|                                 |               | JSA96133                | 1.25mm Spacing Connector for FPC/FFC (HLEM_S-2RLF )  |
|                                 | Cable Manual  | JSA28789<br>BJM-HLEM101 | Recommended cable and P.C. board (HLEM_R/S- )        |
| HLEM_R/S-2RFLF<br>(See Note ②③) | Specification | SC-HLEM 01              |                                                      |
|                                 | Dwg.          | JSA96134                | 1.25mm Spacing Connector for FPC/FFC (HLEM_R-2RFLF ) |
|                                 |               | JSA96135                | 1.25mm Spacing Connector for FPC/FFC (HLEM_S-2RFLF ) |
|                                 | Cable Manual  | JSA28789<br>BJM-HLEM101 | Recommended cable and P.C. board (HLEM_R/S- )        |

## NOTES

- THE HOUSING WILL WITHSTAND EXPOSURE TO 260 DEGREE PEAK TEMPERATURE FOR 10 SECONDS IN A WAVE SOLDER APPLICATION WITH A 1.57MM MINIMUM THICK CIRCUIT BOARD.
- THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.
- PART NUMBERS ENDING IN "LF" MEANS FOR NOTE ② LEAD FREE IDENTIFICATION.  
HLEMxxR/S-1/2R(F)LF IS EQUIVALENT TO PREVIOUS P/N HLEMxxR/S-1/2R(F).

|             |          |                       |                         |                                                                                                     |                               |
|-------------|----------|-----------------------|-------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------|
| mat'l. code |          | surface<br>ASME Y14.5 | tolerance<br>ASME Y14.5 | projection<br> | product family<br>58KF        |
| ltr         | ecn no   | dr                    | date                    | tolerances unless otherwise specified                                                               | title                         |
| A           | J04-0253 | H.T                   | 2004-08-03              | angles                                                                                              | 1.25mm Spacing Connector      |
| B           | J05-0014 | H.T                   | 2005-01-13              | radius                                                                                              | (Customer documents list)     |
| C           | S05-0145 | D.T                   | 2005-06-15              | 0'±2'                                                                                               | scale -                       |
| D           | S05-0290 | D.T                   | 2005-10-14              | dr                                                                                                  | sheet 1 of 1 size             |
| E           | S06-0252 | P.C                   | 2006-07-28              | engr                                                                                                | JSA96023                      |
|             |          |                       |                         | chr                                                                                                 | type Product Customer Drawing |
|             |          |                       |                         | app                                                                                                 |                               |
| sheet index | revision | E                     |                         |                                                                                                     |                               |
|             | sheet    | 1                     |                         |                                                                                                     |                               |

TOLERANCES  
UNLESS OTHERWISE SPECIFIED :  $\pm 0.2$



MATERIAL : INSULATOR : PBT RESIN GLASS REINFORCED (UL94V-0)  
COLOR : BLACK  
CONTACT : PHOSPHOR BRONZE (TIN PLATED ; THICKNESS: 1 micron)

| NO. OF CONTACTS | (See Note 3)<br>CAT. NO. | DIMENSIONS  |             |    |              |       |       |
|-----------------|--------------------------|-------------|-------------|----|--------------|-------|-------|
|                 |                          | A $\pm 0.3$ | B $\pm 0.1$ |    |              |       |       |
| 3               | HLEM 3R-1RLF             | 7.30        | 5.16        | 21 | HLEM21R-1RLF | 29.80 | 27.66 |
| 4               | HLEM 4R-1RLF             | 8.55        | 6.41        | 22 | HLEM22R-1RLF | 31.05 | 28.91 |
| 5               | HLEM 5R-1RLF             | 9.80        | 7.66        | 23 | HLEM23R-1RLF | 32.30 | 30.16 |
| 6               | HLEM 6R-1RLF             | 11.05       | 8.91        | 24 | HLEM24R-1RLF | 33.55 | 31.41 |
| 7               | HLEM 7R-1RLF             | 12.30       | 10.16       | 25 | HLEM25R-1RLF | 34.80 | 32.66 |
| 8               | HLEM 8R-1RLF             | 13.55       | 11.41       | 26 | HLEM26R-1RLF | 36.05 | 33.91 |
| 9               | HLEM 9R-1RLF             | 14.80       | 12.66       | 27 | HLEM27R-1RLF | 37.30 | 35.16 |
| 10              | HLEM10R-1RLF             | 16.05       | 13.91       | 28 | HLEM28R-1RLF | 38.55 | 36.41 |
| 11              | HLEM11R-1RLF             | 17.30       | 15.16       | 29 | HLEM29R-1RLF | 39.80 | 37.66 |
| 12              | HLEM12R-1RLF             | 18.55       | 16.41       | 30 | HLEM30R-1RLF | 41.05 | 38.91 |
| 13              | HLEM13R-1RLF             | 19.80       | 17.66       | 31 | HLEM31R-1RLF | 42.30 | 40.16 |
| 14              | HLEM14R-1RLF             | 21.05       | 18.91       | 32 | HLEM32R-1RLF | 43.55 | 41.41 |
| 15              | HLEM15R-1RLF             | 22.30       | 20.16       | 33 | HLEM33R-1RLF | 44.80 | 42.66 |
| 16              | HLEM16R-1RLF             | 23.55       | 21.41       | 34 | HLEM34R-1RLF | 46.05 | 43.91 |
| 17              | HLEM17R-1RLF             | 24.80       | 22.66       | 35 | HLEM35R-1RLF | 47.30 | 45.16 |
| 18              | HLEM18R-1RLF             | 26.05       | 23.91       | 36 | HLEM36R-1RLF | 48.55 | 46.41 |
| 19              | HLEM19R-1RLF             | 27.30       | 25.16       | 37 | HLEM37R-1RLF | 49.80 | 47.66 |
| 20              | HLEM20R-1RLF             | 28.55       | 26.41       | 38 | HLEM38R-1RLF | 51.05 | 48.91 |
|                 |                          |             |             | 39 | HLEM39R-1RLF | 52.30 | 50.16 |
|                 |                          |             |             | 40 | HLEM40R-1RLF | 53.55 | 51.41 |

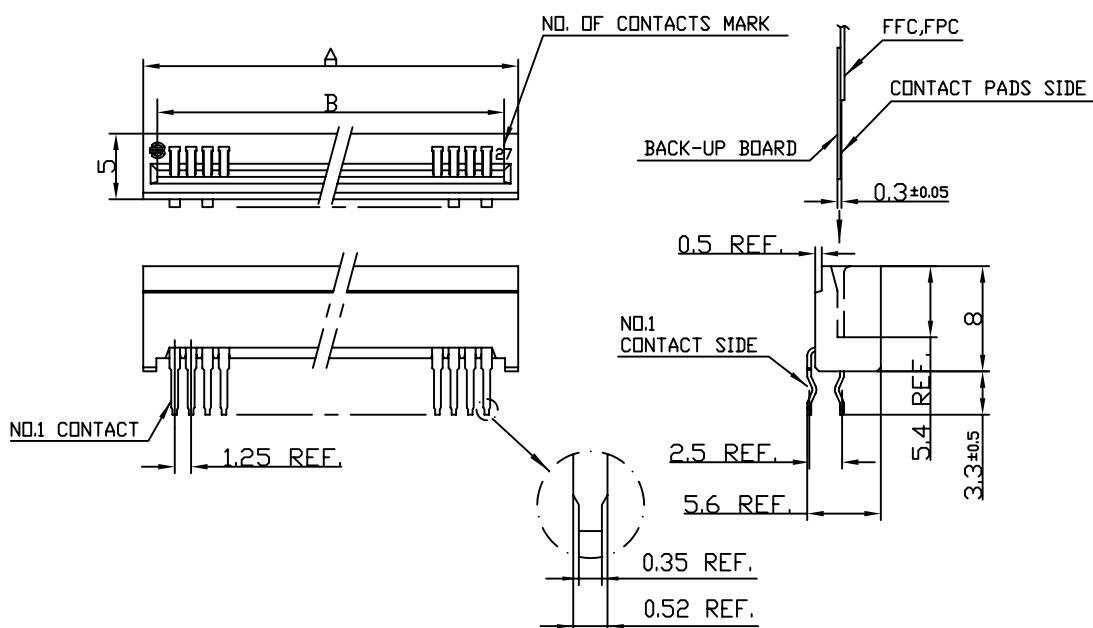
NOTES

1. THE HOUSING WILL WITHSTAND EXPOSURE TO 260 DEGREE PEAK TEMPERATURE FOR 10 SECONDS IN A WAVE SOLDER APPLICATION WITH A 1.57MM MINIMUM THICK CIRCUIT BOARD.
2. THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.
3. PART NUMBERS ENDING IN 'LF' MEANS FOR NOTE 2 LEAD FREE IDENTIFICATION.  
HLEMxxR/S-1RLF IS EQUIVALENT TO PREVIOUS P/N HLEMxxR/S-1R.

Cat. No. HLEM\_R-1RLF (See Note 3)

|             |          |          |            |                                                      |  |                                                       |  |                                                    |  |                                      |  |  |  |
|-------------|----------|----------|------------|------------------------------------------------------|--|-------------------------------------------------------|--|----------------------------------------------------|--|--------------------------------------|--|--|--|
| mat'l. code |          |          |            | surface <input checked="" type="checkbox"/> ISO 1302 |  | tolerance <input checked="" type="checkbox"/> ISO 406 |  | projection <input checked="" type="checkbox"/> 101 |  | product family                       |  |  |  |
|             |          |          |            |                                                      |  |                                                       |  |                                                    |  | 58KF                                 |  |  |  |
| ltr         | ecn no   | dr       | date       | tolerances unless otherwise specified                |  | mm                                                    |  | mm                                                 |  | title                                |  |  |  |
| AA          | J04-0253 | H.T      | 2004-08-03 |                                                      |  |                                                       |  |                                                    |  | 1.25mm Spacing Connector for FPC/FFC |  |  |  |
| AB          | S05-0145 | D.T      | 2005-06-24 |                                                      |  |                                                       |  |                                                    |  |                                      |  |  |  |
| AC          | S06-0252 | P.C      | 2006-07-28 |                                                      |  |                                                       |  |                                                    |  |                                      |  |  |  |
|             |          |          |            | dr                                                   |  | M.Itsuka                                              |  | 1997-02-13                                         |  | dwg no                               |  |  |  |
|             |          |          |            | enrg                                                 |  | S.Ito                                                 |  | 1997-02-13                                         |  | sheet 1 of 1                         |  |  |  |
|             |          |          |            | chr                                                  |  | Patrick Chua                                          |  | 2006-07-28                                         |  | JSA 94071                            |  |  |  |
|             |          |          |            | appd                                                 |  | Joey Ng                                               |  | 2006-07-28                                         |  | A4                                   |  |  |  |
|             |          |          |            |                                                      |  |                                                       |  |                                                    |  | type                                 |  |  |  |
|             |          |          |            |                                                      |  |                                                       |  |                                                    |  | Product Customer Drawing             |  |  |  |
| sheet index |          | revision |            | AC                                                   |  |                                                       |  |                                                    |  |                                      |  |  |  |
|             |          | sheet    |            | 1                                                    |  |                                                       |  |                                                    |  |                                      |  |  |  |

TOLERANCES  
UNLESS OTHERWISE SPECIFIED :  $\pm 0.2$



MATERIAL: INSULATOR : PBT RESIN GLASS REINFORCED (UL94V-0)  
COLOR : BLACK  
CONTACT : PHOSPHOR BRONZE (TIN PLATED ; THICKNESS: 1 micron)

| NO. OF CONTACTS | (See Note 3)<br>CAT. NO. | DIMENSIONS  |             |    |              |       |       |
|-----------------|--------------------------|-------------|-------------|----|--------------|-------|-------|
|                 |                          | A $\pm 0.3$ | B $\pm 0.1$ |    |              |       |       |
| 3               | HLEM 3S-1RLF             | 7.30        | 5.16        | 21 | HLEM21S-1RLF | 29.80 | 27.66 |
| 4               | HLEM 4S-1RLF             | 8.55        | 6.41        | 22 | HLEM22S-1RLF | 31.05 | 28.91 |
| 5               | HLEM 5S-1RLF             | 9.80        | 7.66        | 23 | HLEM23S-1RLF | 32.30 | 30.16 |
| 6               | HLEM 6S-1RLF             | 11.05       | 8.91        | 24 | HLEM24S-1RLF | 33.55 | 31.41 |
| 7               | HLEM 7S-1RLF             | 12.30       | 10.16       | 25 | HLEM25S-1RLF | 34.80 | 32.66 |
| 8               | HLEM 8S-1RLF             | 13.55       | 11.41       | 26 | HLEM26S-1RLF | 36.05 | 33.91 |
| 9               | HLEM 9S-1RLF             | 14.80       | 12.66       | 27 | HLEM27S-1RLF | 37.30 | 35.16 |
| 10              | HLEM10S-1RLF             | 16.05       | 13.91       | 28 | HLEM28S-1RLF | 38.55 | 36.41 |
| 11              | HLEM 11S-1RLF            | 17.30       | 15.16       | 29 | HLEM29S-1RLF | 39.80 | 37.66 |
| 12              | HLEM12S-1RLF             | 18.55       | 16.41       | 30 | HLEM30S-1RLF | 41.05 | 38.91 |
| 13              | HLEM13S-1RLF             | 19.80       | 17.66       | 31 | HLEM31S-1RLF | 42.30 | 40.16 |
| 14              | HLEM14S-1RLF             | 21.05       | 18.91       | 32 | HLEM32S-1RLF | 43.55 | 41.41 |
| 15              | HLEM15S-1RLF             | 22.30       | 20.16       | 33 | HLEM33S-1RLF | 44.80 | 42.66 |
| 16              | HLEM16S-1RLF             | 23.55       | 21.41       | 34 | HLEM34S-1RLF | 46.05 | 43.91 |
| 17              | HLEM17S-1RLF             | 24.80       | 22.66       | 35 | HLEM35S-1RLF | 47.30 | 45.16 |
| 18              | HLEM18S-1RLF             | 26.05       | 23.91       | 36 | HLEM36S-1RLF | 48.55 | 46.41 |
| 19              | HLEM19S-1RLF             | 27.30       | 25.16       | 37 | HLEM37S-1RLF | 49.80 | 47.66 |
| 20              | HLEM20S-1RLF             | 28.55       | 26.41       | 38 | HLEM38S-1RLF | 51.05 | 48.91 |
|                 |                          |             |             | 39 | HLEM39S-1RLF | 52.30 | 50.16 |
|                 |                          |             |             | 40 | HLEM40S-1RLF | 53.55 | 51.41 |

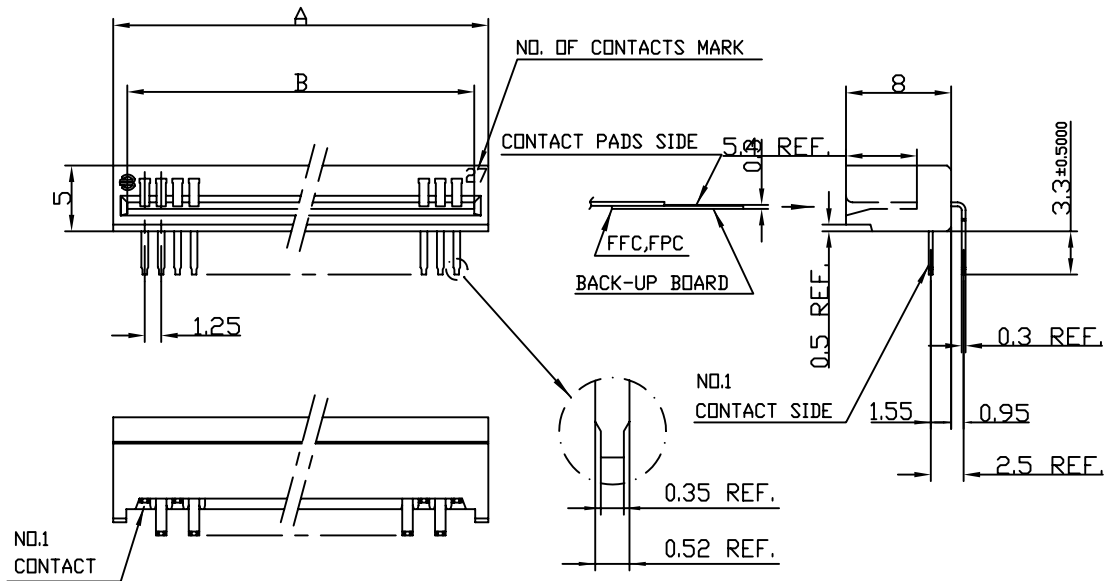
# NOTES

1. THE HOUSING WILL WITHSTAND EXPOSURE TO 260 DEGREE PEAK TEMPERATURE FOR 10 SECONDS IN A WAVE SOLDER APPLICATION WITH A 1.57MM MINIMUM THICK CIRCUIT BOARD.
2. THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.
3. PART NUMBERS ENDING IN "LF" MEANS FOR NOTE 2 LEAD FREE IDENTIFICATION.  
HLEMxxR/S-1RLF IS EQUIVALENT TO PREVIOUS P/N HLEMxxR/S-1R.

HLEM\_S-1RLF (See Note 3)

|             |          |          |            |                                                      |  |                                                       |  |                                                     |  |                                      |  |  |  |
|-------------|----------|----------|------------|------------------------------------------------------|--|-------------------------------------------------------|--|-----------------------------------------------------|--|--------------------------------------|--|--|--|
| mat'l. code |          |          |            | surface <input checked="" type="checkbox"/> ISO 1302 |  | tolerance <input checked="" type="checkbox"/> ISO 406 |  | projection <input checked="" type="checkbox"/> 1101 |  | product family                       |  |  |  |
|             |          |          |            |                                                      |  |                                                       |  |                                                     |  | 58KF                                 |  |  |  |
| ltr         | ecn no   | dr       | date       | tolerances unless otherwise specified                |  | mm                                                    |  | mm                                                  |  | title                                |  |  |  |
| AA          | J04-0253 | H.T      | 2004-08-03 |                                                      |  |                                                       |  |                                                     |  | 1.25mm Spacing Connector for FPC/FFC |  |  |  |
| AB          | S05-0145 | D.T      | 2005-06-24 |                                                      |  |                                                       |  |                                                     |  |                                      |  |  |  |
| AC          | S06-0252 | P.C      | 2006-07-28 |                                                      |  |                                                       |  |                                                     |  |                                      |  |  |  |
|             |          |          |            | dr                                                   |  | M.Itsuka                                              |  | 1997-02-13                                          |  | dwg no                               |  |  |  |
|             |          |          |            | enrg                                                 |  | S.Ito                                                 |  | 1997-02-13                                          |  | sheet 1 of 1                         |  |  |  |
|             |          |          |            | chr                                                  |  | Patrick Chua                                          |  | 2006-07-28                                          |  | size                                 |  |  |  |
|             |          |          |            | appd                                                 |  | Joey Ng                                               |  | 2006-07-28                                          |  | A4                                   |  |  |  |
|             |          |          |            |                                                      |  |                                                       |  |                                                     |  | type                                 |  |  |  |
|             |          |          |            |                                                      |  |                                                       |  |                                                     |  | Product Customer Drawing             |  |  |  |
| sheet index |          | revision |            | AC                                                   |  |                                                       |  |                                                     |  |                                      |  |  |  |
|             |          | sheet    |            | 1                                                    |  |                                                       |  |                                                     |  |                                      |  |  |  |

## TOLERANCES

UNLESS OTHERWISE SPECIFIED :  $\pm 0.2$ 

MATERIAL: INSULATOR : PBT RESIN GLASS REINFORCED (UL94V-0)

COLOR : BLACK

CONTACT : PHOSPHOR BRONZE (TIN PLATED); THICKNESS: 1 micron

| NO. OF CONTACTS | CAT. NO.    | DIMENSIONS  |             |    |            |       |       |
|-----------------|-------------|-------------|-------------|----|------------|-------|-------|
|                 |             | A $\pm 0.3$ | B $\pm 0.1$ |    |            |       |       |
| 3               | HLEM 3R-2R  | 7.30        | 5.16        | 21 | HLEM21R-2R | 29.80 | 27.66 |
| 4               | HLEM 4R-2R  | 8.55        | 6.41        | 22 | HLEM22R-2R | 31.05 | 28.91 |
| 5               | HLEM 5R-2R  | 9.80        | 7.66        | 23 | HLEM23R-2R | 32.30 | 30.16 |
| 6               | HLEM 6R-2R  | 11.05       | 8.91        | 24 | HLEM24R-2R | 33.55 | 31.41 |
| 7               | HLEM 7R-2R  | 12.30       | 10.16       | 25 | HLEM25R-2R | 34.80 | 32.66 |
| 8               | HLEM 8R-2R  | 13.55       | 11.41       | 26 | HLEM26R-2R | 36.05 | 33.91 |
| 9               | HLEM 9R-2R  | 14.80       | 12.66       | 27 | HLEM27R-2R | 37.30 | 35.16 |
| 10              | HLEM 10R-2R | 16.05       | 13.91       | 28 | HLEM28R-2R | 38.55 | 36.41 |
| 11              | HLEM 11R-2R | 17.30       | 15.16       | 29 | HLEM29R-2R | 39.80 | 37.66 |
| 12              | HLEM 12R-2R | 18.55       | 16.41       | 30 | HLEM30R-2R | 41.05 | 38.91 |
| 13              | HLEM 13R-2R | 19.80       | 17.66       | 31 | HLEM31R-2R | 42.30 | 40.16 |
| 14              | HLEM 14R-2R | 21.05       | 18.91       | 32 | HLEM32R-2R | 43.55 | 41.41 |
| 15              | HLEM 15R-2R | 22.30       | 20.16       | 33 | HLEM33R-2R | 44.80 | 42.66 |
| 16              | HLEM 16R-2R | 23.55       | 21.41       | 34 | HLEM34R-2R | 46.05 | 43.91 |
| 17              | HLEM 17R-2R | 24.80       | 22.66       | 35 | HLEM35R-2R | 47.30 | 45.16 |
| 18              | HLEM 18R-2R | 26.05       | 23.91       | 36 | HLEM36R-2R | 48.55 | 46.41 |
| 19              | HLEM 19R-2R | 27.30       | 25.16       | 37 | HLEM37R-2R | 49.80 | 47.66 |
| 20              | HLEM 20R-2R | 28.55       | 26.41       | 38 | HLEM38R-2R | 51.05 | 48.91 |
|                 |             |             |             | 39 | HLEM39R-2R | 52.30 | 50.16 |
|                 |             |             |             | 40 | HLEM40R-2R | 53.55 | 51.41 |

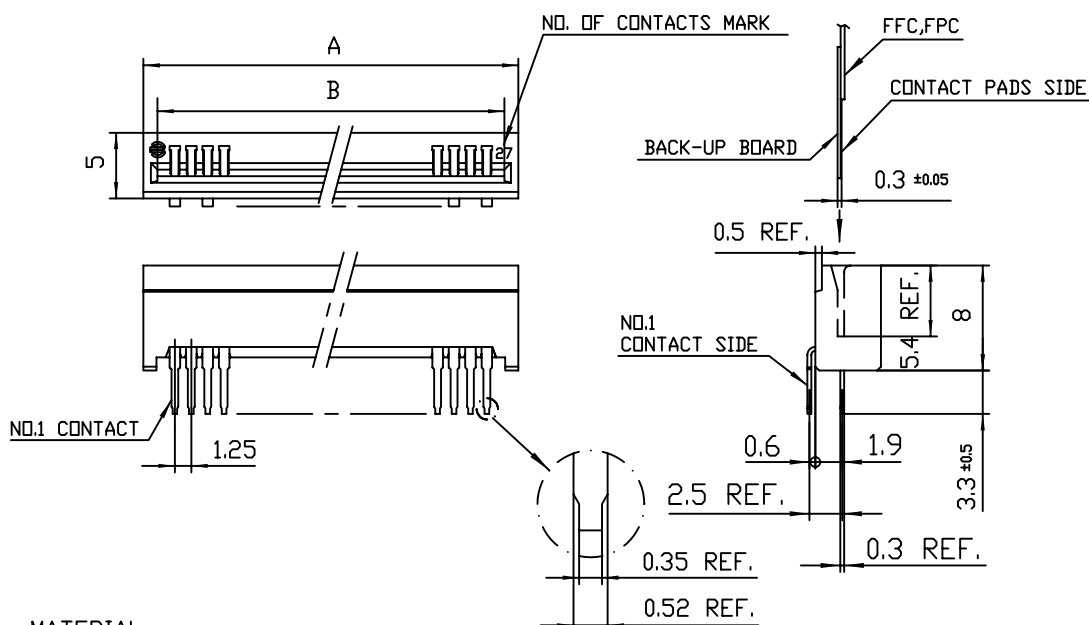
## NOTES

1. THE HOUSING WILL WITHSTAND EXPOSURE TO 260 DEGREE PEAK TEMPERATURE FOR 10 SECONDS IN A WAVE SOLDER APPLICATION WITH A 1.75MM MINIMUM THICK CIRCUIT BOARD.
2. THIS PRODUCT MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATIONS AS DESCRIBED IN GS-22-008.
3. PART NUMBERS ENDING IN "LF" MEANS FOR NOTES 2 LEAD FREE IDENTIFICATION. HLEMxxR-2RLF IS EQUIVALENT TO PREVIOUS P/N HLEMxxR-2R.

(Cat. No. HLEM\_R-2R) (See Note 3)

|             |          |          |            |                                                      |              |                                                       |  |                                                    |  |                                      |           |  |              |      |  |
|-------------|----------|----------|------------|------------------------------------------------------|--------------|-------------------------------------------------------|--|----------------------------------------------------|--|--------------------------------------|-----------|--|--------------|------|--|
| mat'l. code |          |          |            | surface <input checked="" type="checkbox"/> ISO 1302 |              | tolerance <input checked="" type="checkbox"/> ISO 406 |  | projection <input checked="" type="checkbox"/> 101 |  | product family                       |           |  |              |      |  |
|             |          |          |            |                                                      |              |                                                       |  |                                                    |  | 58KF                                 |           |  |              |      |  |
| ltr         | ecn no   | dr       | date       | tolerances unless otherwise specified                |              | mm                                                    |  | mm                                                 |  | title                                |           |  |              |      |  |
| A           | J04-0439 | H.T      | 2004-12-06 |                                                      |              |                                                       |  |                                                    |  | 1.25mm Spacing Connector for FPC/FFC |           |  |              |      |  |
| B           | S05-0176 | D.T      | 2005-06-24 |                                                      |              |                                                       |  |                                                    |  |                                      |           |  |              |      |  |
| C           | S06-0252 | P.C      | 2006-07-28 |                                                      |              |                                                       |  |                                                    |  |                                      |           |  |              |      |  |
|             |          |          |            | dr                                                   | H.Takakura   | 2004-12-06                                            |  |                                                    |  |                                      | dwg no    |  | sheet 1 of 1 | size |  |
|             |          |          |            | engr                                                 | H.Takakura   | 2004-12-06                                            |  |                                                    |  |                                      | JSA 96132 |  | A4           |      |  |
|             |          |          |            | chr                                                  | Patrick Chua | 2006-07-28                                            |  |                                                    |  |                                      |           |  |              |      |  |
|             |          |          |            | appd                                                 | Joey Ng      | 2006-07-28                                            |  |                                                    |  |                                      |           |  |              |      |  |
| sheet index |          | revision | C          |                                                      |              |                                                       |  |                                                    |  |                                      |           |  |              |      |  |
|             |          | sheet    | 1          |                                                      |              |                                                       |  |                                                    |  |                                      |           |  |              |      |  |

TOLERANCES  
UNLESS OTHERWISE SPECIFIED :  $\pm 0.2$



MATERIAL

INSULATOR : PBT RESIN GLASS REINFORCED (UL94V-0)

COLOR : BLACK

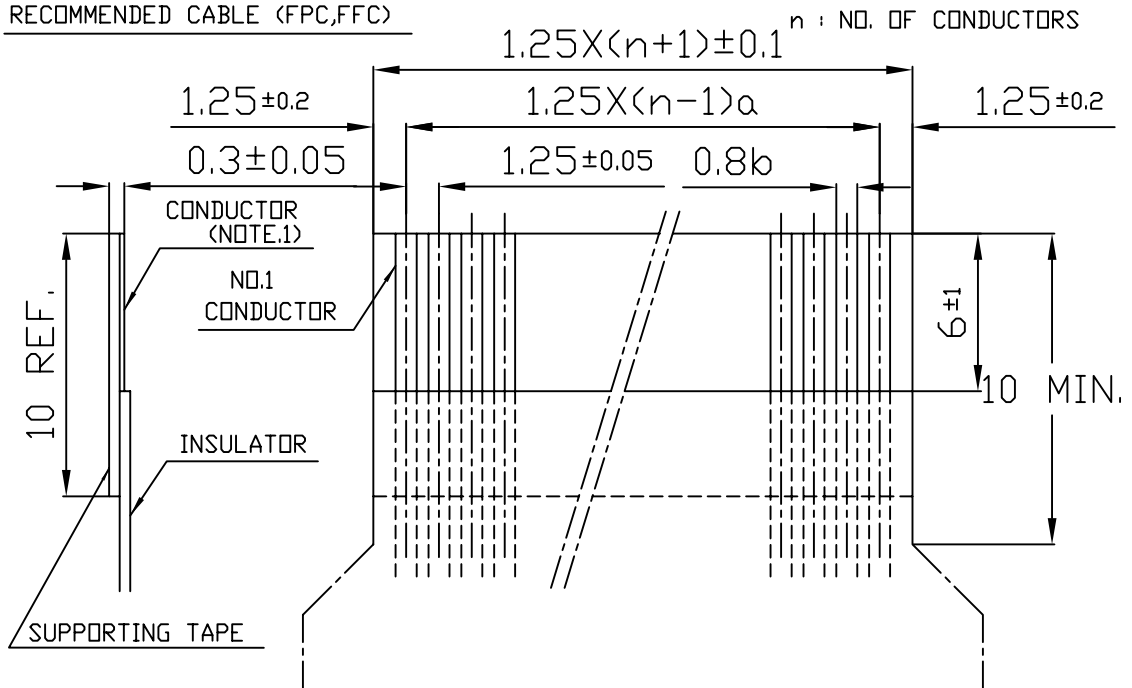
CONTACT : PHOSPHOR BRONZE :TIN PLATED(LEAD FREE)

| NO. OF CONTACTS | CAT. NO.    | DIMENSIONS  |             | 21 | HLEM21S-2R | 29.80 | 27.66 |
|-----------------|-------------|-------------|-------------|----|------------|-------|-------|
|                 |             | A $\pm 0.3$ | B $\pm 0.1$ | 22 | HLEM22S-2R | 31.05 | 28.91 |
| 3               | HLEM 3S-2R  | 7.30        | 5.16        | 23 | HLEM23S-2R | 32.30 | 30.16 |
| 4               | HLEM 4S-2R  | 8.55        | 6.41        | 24 | HLEM24S-2R | 33.55 | 31.41 |
| 5               | HLEM 5S-2R  | 9.80        | 7.66        | 25 | HLEM25S-2R | 34.80 | 32.66 |
| 6               | HLEM 6S-2R  | 11.05       | 8.91        | 26 | HLEM26S-2R | 36.05 | 33.91 |
| 7               | HLEM 7S-2R  | 12.30       | 10.16       | 27 | HLEM27S-2R | 37.30 | 35.16 |
| 8               | HLEM 8S-2R  | 13.55       | 11.41       | 28 | HLEM28S-2R | 38.55 | 36.41 |
| 9               | HLEM 9S-2R  | 14.80       | 12.66       | 29 | HLEM29S-2R | 39.80 | 37.66 |
| 10              | HLEM 10S-2R | 16.05       | 13.91       | 30 | HLEM30S-2R | 41.05 | 38.91 |
| 11              | HLEM 11S-2R | 17.30       | 15.16       | 31 | HLEM31S-2R | 42.30 | 40.16 |
| 12              | HLEM 12S-2R | 18.55       | 16.41       | 32 | HLEM32S-2R | 43.55 | 41.41 |
| 13              | HLEM 13S-2R | 19.80       | 17.66       | 33 | HLEM33S-2R | 44.80 | 42.66 |
| 14              | HLEM 14S-2R | 21.05       | 18.91       | 34 | HLEM34S-2R | 46.05 | 43.91 |
| 15              | HLEM 15S-2R | 22.30       | 20.16       | 35 | HLEM35S-2R | 47.30 | 45.16 |
| 16              | HLEM 16S-2R | 23.55       | 21.41       | 36 | HLEM36S-2R | 48.55 | 46.41 |
| 17              | HLEM 17S-2R | 24.80       | 22.66       | 37 | HLEM37S-2R | 49.80 | 47.66 |
| 18              | HLEM 18S-2R | 26.05       | 23.91       | 38 | HLEM38S-2R | 51.05 | 48.91 |
| 19              | HLEM 19S-2R | 27.30       | 25.16       | 39 | HLEM39S-2R | 52.30 | 50.16 |
| 20              | HLEM 20S-2R | 28.55       | 26.41       | 40 | HLEM40S-2R | 53.55 | 51.41 |

(Cat. No. HLEM\_S-2R)

|             |  |          |  |                                                                                                                                                            |  |              |  |                |  |                          |  |
|-------------|--|----------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------|--|----------------|--|--------------------------|--|
| mat'l. code |  |          |  | surface <input checked="" type="checkbox"/> ISO 1302 <input type="checkbox"/> tolerance <input type="checkbox"/> ISO 406 <input type="checkbox"/> ISO 1101 |  | projection   |  | product family |  |                          |  |
| ltr         |  |          |  | ecn no                                                                                                                                                     |  | dr           |  | date           |  | 58KF                     |  |
| A           |  |          |  | J04-0439                                                                                                                                                   |  | H.T          |  | 2004-12-06     |  | title                    |  |
| B           |  |          |  | S05-0176                                                                                                                                                   |  | D.T          |  | 2005-06-24     |  | 1.25mm Spacing Connector |  |
| C           |  |          |  | S06-0252                                                                                                                                                   |  | P.C          |  | 2006-07-28     |  | for FPC/FFC              |  |
|             |  |          |  | angles                                                                                                                                                     |  | linear       |  | mm             |  | dwg no                   |  |
|             |  |          |  |                                                                                                                                                            |  |              |  |                |  | sheet 1 of 1             |  |
|             |  |          |  | dr                                                                                                                                                         |  |              |  |                |  | size                     |  |
|             |  |          |  | engr                                                                                                                                                       |  |              |  |                |  | A4                       |  |
|             |  |          |  | chr                                                                                                                                                        |  | Patrick Chua |  | 2006-07-28     |  | JSA 96133                |  |
|             |  |          |  | appd                                                                                                                                                       |  | Joey Ng      |  | 2006-07-28     |  | type                     |  |
|             |  |          |  |                                                                                                                                                            |  |              |  |                |  | Product Customer Drawing |  |
| sheet index |  | revision |  | C                                                                                                                                                          |  |              |  |                |  |                          |  |
|             |  | sheet    |  | 1                                                                                                                                                          |  |              |  |                |  |                          |  |

# RECOMMENDED CABLE (FPC,FFC)



## NOTE

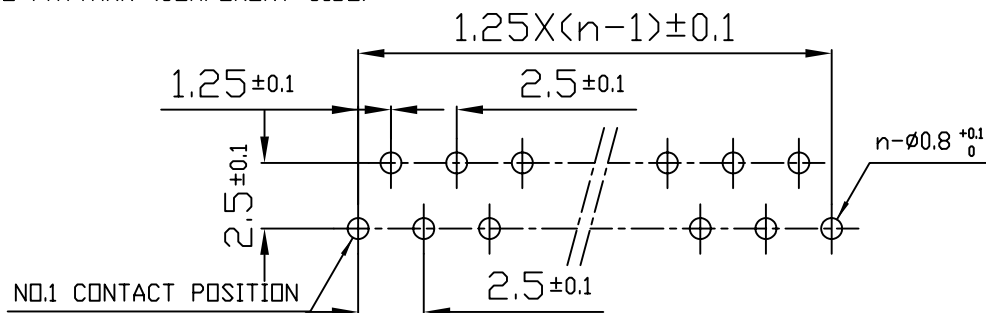
1. FINISH : SOLDER OR TIN PLATED. (1um MIN.)
2. NO BURR AT EACH POSITION.
3. NO PEELING IN COMMON USE.

| TYPE | TOLERANCES |       |
|------|------------|-------|
|      | a          | b     |
| FPC  | ±0.05      | ±0.1  |
| FFC  | ±0.1       | ±0.03 |

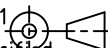
# RECOMMENDED P.C. BOARD

THICKNESS : ±0.9 - 2  
HOLE PATTERN (COMPONENT SIDE)

n : NO. OF CONTACTS



Cat. No. hLEM\_R/S----

|             |          |     |            |                                       |              |                      |  |          |  |                                                                                                   |           |                                              |  |  |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------|----------|-----|------------|---------------------------------------|--------------|----------------------|--|----------|--|---------------------------------------------------------------------------------------------------|-----------|----------------------------------------------|--|--|--|--|--|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| mat'l. code |          |     |            | surface<br>ISO 1302                   |              | tolerance<br>ISO 406 |  | ISO 1101 |  | projection<br> |           | product family<br>58EX                       |  |  |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ltr         | ecn no   | dr  | date       | tolerances unless otherwise specified |              | angles               |  | linear   |  | mm<br>         |           | title<br>RECOMMENDED CABLE<br>AND P.C. BOARD |  |  |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AA          | J04-0253 | H.T | 2004-08-03 |                                       |              |                      |  | .0±.3    |  |                                                                                                   |           |                                              |  |  |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AB          | S06-0252 | P.C | 2006-07-28 |                                       |              |                      |  |          |  |                                                                                                   |           |                                              |  |  |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|             |          |     |            |                                       |              | 0°±2°                |  |          |  | scale -                                                                                           |           |                                              |  |  |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|             |          |     |            | dr                                    |              |                      |  |          |  |                | dwg no    | sheet 1 of 1                                 |  |  |  |  |  | size |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|             |          |     |            | engr                                  |              |                      |  |          |  |                                                                                                   | JSA 28789 | A4                                           |  |  |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|             |          |     |            | chr                                   | Patrick Chua | 2006-07-28           |  |          |  |                                                                                                   |           |                                              |  |  |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |