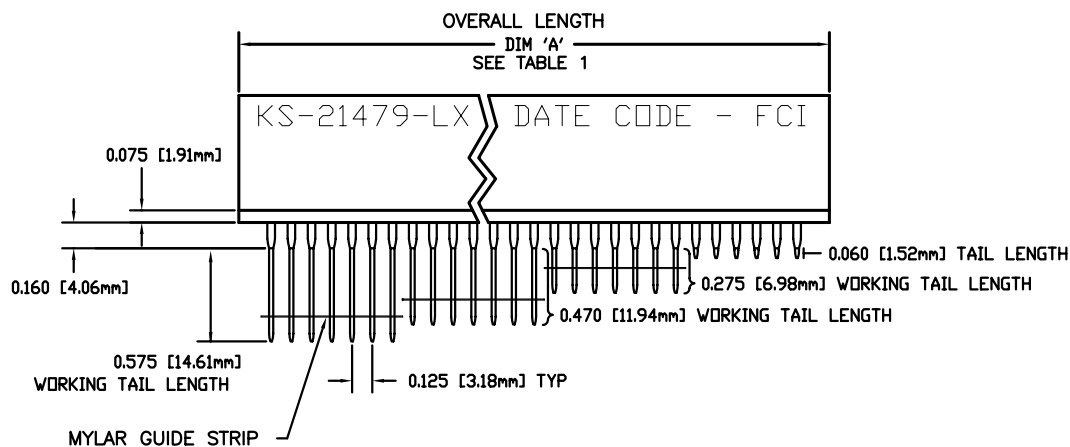
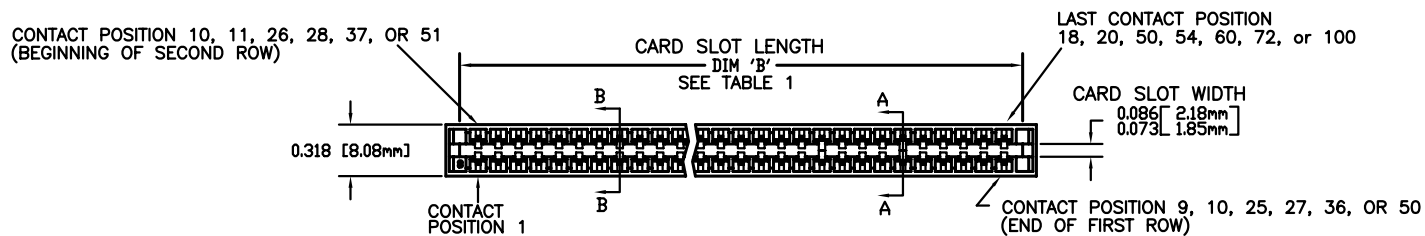


PRODUCT NUMBER  
SEE SHEET 3

1203 TYPE SINGLE DENSITY EDGE CARD CONNECTORS  
PRESS-FIT CONTACTS ON .125" CENTERS  
18 TO 100 POSITIONS AVAILABLE IN EARLY MAKE, LATE MAKE, AND SHORTING CONTACTS  
CONTACTS AVAILABLE IN 4 TAIL LENGTHS (.0025" SQUARE) WITH GOLD OR SOLDER PLATING



| mat'l. code |          |     |            | surface    |            | tolerance  |            | projection | product family           |                   |
|-------------|----------|-----|------------|------------|------------|------------|------------|------------|--------------------------|-------------------|
| ltr         | ecn no   | dr  | date       | ASME Y14.5 | ASME Y14.5 | ASME Y14.5 | ASME Y14.5 |            | FASTECH                  |                   |
| A           | V12880   | CGD | 1/25/02    | angles     | fe         |            |            | INCH/MM    | title                    |                   |
| B           | V03-0687 | HTB | 6/18/03    |            |            |            |            | scale N/A  | SINGLE DENSITY EDGE CARD |                   |
| C           | V05-0151 | HTB | 3/2/05     |            |            |            |            |            | 1203 TYPE CONNECTORS     |                   |
| D           | V05-0609 | HTB | 6/23/05    | dr         | R. CONRAD  | 5/27/99    |            | FCI        | dwg no                   | sheet 1 of 6 size |
| E           | V05-0904 | HTB | 9/21/05    | engr       | R. CONRAD  | 5/27/99    |            |            | A89KC4205                | A4                |
| F           | V06-0719 | JRV | 2006-07-26 | chr        | R. CONRAD  | 5/27/99    |            |            | type CUSTOMER Drawing    |                   |
| G           | V06-0985 | HTB | 2006-09-25 | appd       | R. CONRAD  | 5/27/99    |            |            |                          |                   |
| sheet       | revision | G   | G          | G          | G          | G          | G          |            |                          |                   |
| index       | sheet    | 1   | 2          | 3          | 4          | 5          | 6          |            |                          |                   |



PRODUCT NUMBER  
SEE SHEET 3

# SINGLE DENSITY EDGE CARD TECHNICAL DATA

CONNECTOR INSTALLATION FORCE: 30 LBS/CONTACT TYPICAL, 65 LBS MAX.

CONNECTOR RETENTION FORCE: 10 LBS/CONTACT MINIMUM

CIRCUIT CARD INSERTION FORCE: EARLY AND LATE MAKE CONTACT - 0.5 LBS/CONTACT TYPICAL

SHORTING CONTACT - 1 LB/CONTACT TYPICAL

DURABILITY: 200 CYCLES.

LONG TERM OPERATING TEMPERATURE: -55 to 70 C.

SHORT TERM OPERATING TEMPERATURE: -55 to 85 C.

WITHSTANDING VOLTAGE: 1000VAC RMS

CONTACT AREA PLATING: 75u" Au (MIN) OVER 100u" Ni (MIN).

CONTACT NORMAL FORCE: 100 GRAMS MINIMUM.

CONTACT RESISTANCE: 9 MILLIOHMS TYPICAL.

MAX CONTACT CURRENT: 1.0 AMPS PER CONTACT.

INSULATOR MATERIAL: PPA, GLASS REINFORCED

FLAMMABILITY RATING: UL-94 V0.

TABLE 1

| CONNECTOR SIZE<br>(TOTAL CONTACTS) | SPACES<br>"N" | OVERALL LENGTH<br>DIM "A" | CARD SLOT LENGTH<br>DIM "B" | CIRCUIT CARD WIDTH<br>DIM "C" | FCI INSERTION<br>TOOL |
|------------------------------------|---------------|---------------------------|-----------------------------|-------------------------------|-----------------------|
| 18 (2 X 9)                         | 8             | 1.400 [35.56mm]           | 1.230 [31.24mm]             | 1.220 [30.99mm]               | 413656-001            |
| 20 (2 X 10)                        | 9             | 1.525 [38.74mm]           | 1.355 [34.42mm]             | 1.345 [34.16mm]               |                       |
| 50 (2 X 25)                        | 24            | 3.400 [86.36mm]           | 3.230 [82.04mm]             | 3.220 [81.79mm]               | 413697-001            |
| 54 (2 X 27)                        | 26            | 3.650 [92.71mm]           | 3.480 [88.39mm]             | 3.470 [88.14mm]               | 413692-001            |
| 60 (2 X 30)                        | 29            | 4.025 [102.24mm]          | 3.855 [97.92mm]             | 3.845 [97.66mm]               | 413680-001            |
| 72 (2 X 36)                        | 35            | 4.775 [121.29mm]          | 4.605 [116.97mm]            | 4.595 [116.71mm]              |                       |
| 100 (2 X 50)                       | 49            | 6.525 [165.74mm]          | 6.355 [161.42mm]            | 6.345 [161.16mm]              | 413688-001            |

|             |          |    |      |                                       |           |                         |  |                |  |                                                           |  |
|-------------|----------|----|------|---------------------------------------|-----------|-------------------------|--|----------------|--|-----------------------------------------------------------|--|
| mat'l. code |          |    |      | surface<br>ASME Y14.5                 |           | tolerance<br>ASME Y14.5 |  | projection<br> |  | product family<br>FASTECH                                 |  |
| ltr         | ecr no   | dr | date | tolerances unless otherwise specified |           |                         |  |                |  | title<br>SINGLE DENSITY EDGE CARD<br>1203 TYPE CONNECTORS |  |
| g           |          |    |      | angles                                | fe        |                         |  | scale N/A      |  | dwg no                                                    |  |
|             |          |    |      |                                       |           |                         |  |                |  | sheet 2 of 6                                              |  |
|             |          |    |      | dr                                    | R. CONRAD | 5/27/99                 |  |                |  | size<br>A4                                                |  |
|             |          |    |      | engr                                  | R. CONRAD | 5/27/99                 |  |                |  | type<br>CUSTOMER Drawing                                  |  |
|             |          |    |      | chr                                   | R. CONRAD | 5/27/99                 |  |                |  |                                                           |  |
|             |          |    |      | appd                                  | R. CONRAD | 5/27/99                 |  |                |  |                                                           |  |
| sheet       | revision |    |      |                                       |           |                         |  |                |  |                                                           |  |
| index       | sheet    |    |      |                                       |           |                         |  |                |  |                                                           |  |



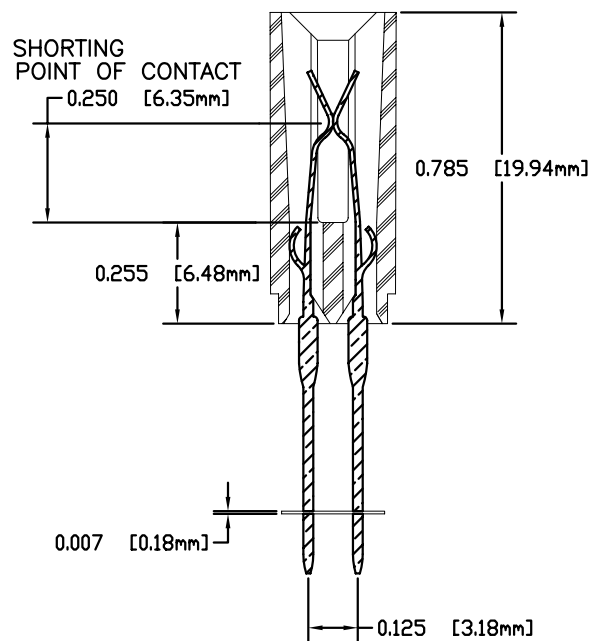
| FCI PART NUMBER | 1203 CODE | KS-21479 LIST # | SIZE | EARLY | LATE | SHORTING | TAIL LENGTH | TAIL PLATING | EARLY MAKE POSITIONS | LATE MAKE POSITIONS | SHORTING POSITIONS |
|-----------------|-----------|-----------------|------|-------|------|----------|-------------|--------------|----------------------|---------------------|--------------------|
| 1203-L01        | A01       | 1               |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L13        | A02       | 13              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L27        | A03       | 27              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L31        | A04       | 31              | 100  | 100   | -    | -        | 0.470       | SnPb         | 1-100                |                     |                    |
| 1203-L39        | A05       | 39              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L41        | A06       | 41              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L43        | A07       | 43              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L47        | A08       | 47              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L02        | B01       | 2               |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L14        | B02       | 14              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L15        | B03       | 15              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L16        | B04       | 16              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L17        | B05       | 17              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L26        | B06       | 26              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L29        | B07       | 29              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L04        | C01       | 4               |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L23        | C02       | 23              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L24        | C03       | 24              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L28        | C04       | 28              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L30        | C05       | 30              | 50   | 50    | -    | -        | 0.470       | SnPb         | 1-50                 |                     |                    |
| 1203-L32        | C06       | 32              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L33        | C07       | 33              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L40        | C08       | 40              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L42        | C09       | 42              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L46        | C10       | 46              | 50   | 50    | -    | -        | 0.060       | SnPb         | 1-50                 |                     |                    |
| 1203-L06        | D01       | 6               | 54   | 27    | 27   | -        | 0.470       | SnPb         | 1-27                 | 28-54               |                    |
| 1203-L07        | D02       | 7               | 54   | 25    | 25   | 4        | 0.470       | SnPb         | 1-17, 19-21, 23-27   | 28-44, 46-48, 50-54 | 18, 22, 45, 49     |
| 1203-L08        | D03       | 8               |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L09        | D04       | 9               |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L10        | D05       | 10              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L11        | D06       | 11              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L12        | D07       | 12              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L19        | D08       | 19              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L20        | D09       | 20              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L21        | D10       | 21              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L22        | D11       | 22              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L25        | D12       | 25              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L35        | D13       | 35              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L36        | D14       | 36              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L37        | D15       | 37              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L38        | D16       | 38              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-D17        | D17       | -               |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-D18        | D18       | -               |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L34        | E01       | 34              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L05        | F01       | 5               |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L44        | G01       | 44              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |
| 1203-L45        | G02       | 45              |      |       |      |          |             | NOT          | AVAILABLE            |                     |                    |

\* 1203-D03 (L08) HAS HEAVY GOLD PLATING  
(300 MICROINCHES) ON THE CONTACT SURFACE.

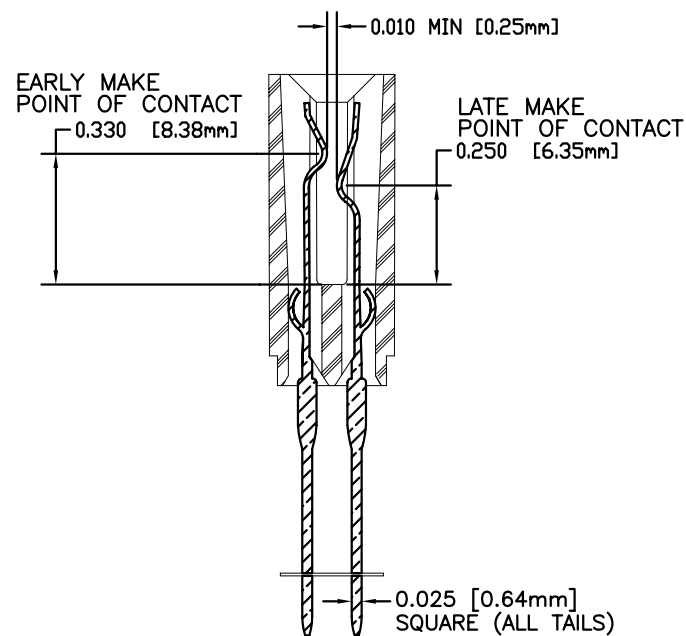
TABLE 2  
SINGLE DENSITY EDGE CARD CONNECTOR  
INFORMATION CHART

|             |          |    |      |                                       |  |                         |  |                       |  |                                                           |  |
|-------------|----------|----|------|---------------------------------------|--|-------------------------|--|-----------------------|--|-----------------------------------------------------------|--|
| mat'l. code |          |    |      | surface<br>ASME Y14.5                 |  | tolerance<br>ASME Y14.5 |  | projection<br>INCH/MM |  | product family<br>FASTECH                                 |  |
| ltr         | ecr no   | dr | date | tolerances unless otherwise specified |  | angles                  |  | scale N/A             |  | title<br>SINGLE DENSITY EDGE CARD<br>1203 TYPE CONNECTORS |  |
| g           |          |    |      |                                       |  |                         |  |                       |  | dwg no<br>A89KC4205                                       |  |
|             |          |    |      |                                       |  |                         |  |                       |  | sheet 3 of 6                                              |  |
|             |          |    |      |                                       |  |                         |  |                       |  | size<br>A4                                                |  |
|             |          |    |      |                                       |  |                         |  |                       |  | type<br>CUSTOMER Drawing                                  |  |
| sheet       | revision |    |      |                                       |  |                         |  |                       |  |                                                           |  |
| index       | sheet    |    |      |                                       |  |                         |  |                       |  |                                                           |  |

PRODUCT NUMBER  
SEE SHEET 3



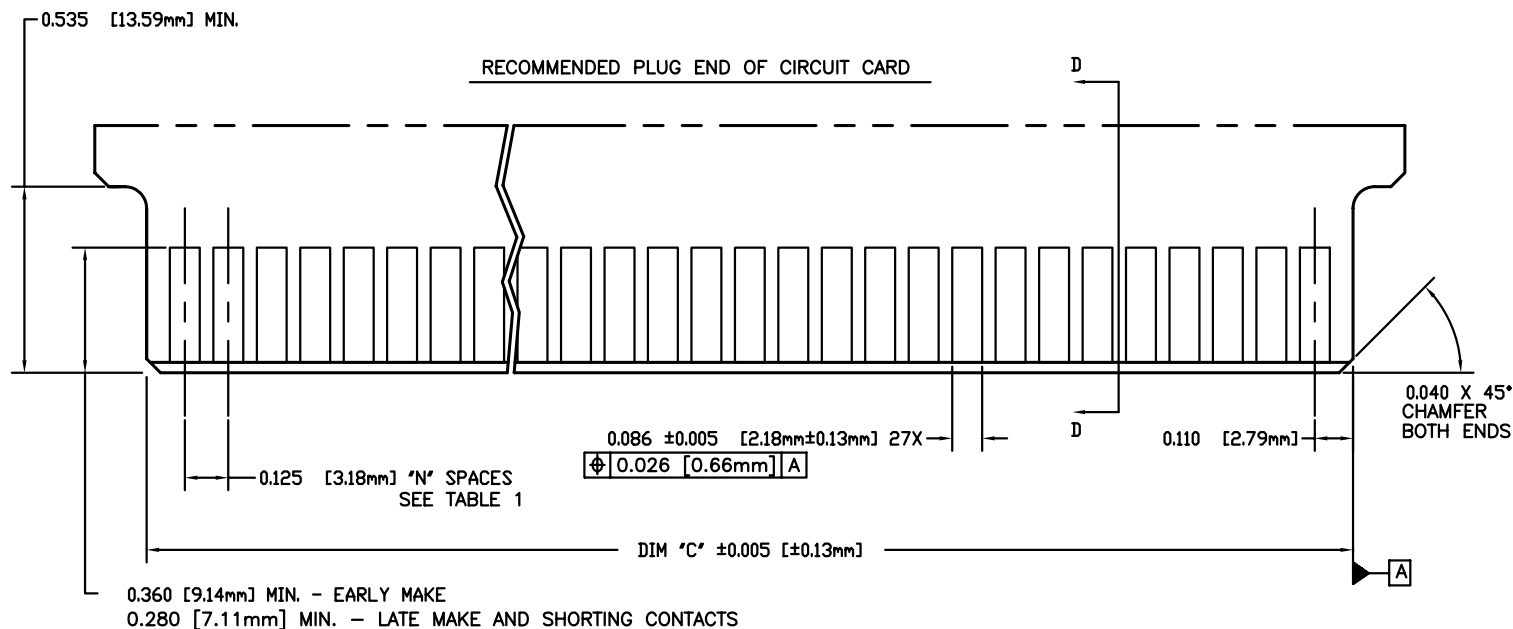
SHORTING CONTACTS  
SECTION A-A



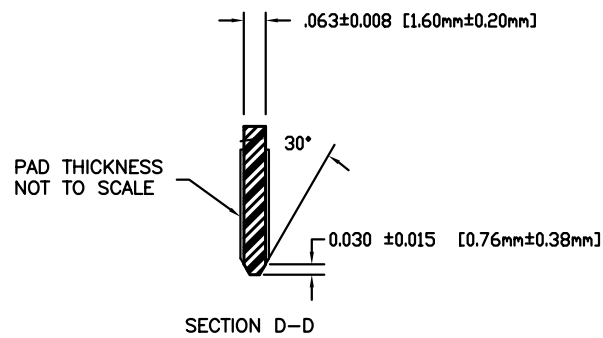
EARLY AND LATE MAKE CONTACTS  
SECTION B-B

|             |                |    |      |                                       |                         |                       |                                                  |
|-------------|----------------|----|------|---------------------------------------|-------------------------|-----------------------|--------------------------------------------------|
| mat'l. code |                |    |      | surface<br>ASME Y14.5                 | tolerance<br>ASME Y14.5 | projection<br>INCH/MM | product family<br>FASTECH                        |
| ltr         | ecr no         | dr | date | tolerances unless otherwise specified |                         | scale 1:1             | title                                            |
| G           |                |    |      | angles                                | line                    |                       | SINGLE DENSITY EDGE CARD<br>1203 TYPE CONNECTORS |
|             |                |    |      | dr                                    | R. CONRAD 5/27/99       | FCI                   | dwg no                                           |
|             |                |    |      | engr                                  | R. CONRAD 5/27/99       |                       | sheet 4 of 6                                     |
|             |                |    |      | chr                                   | R. CONRAD 5/27/99       |                       | size                                             |
|             |                |    |      | appd                                  | R. CONRAD 5/27/99       |                       | A4                                               |
| sheet index | revision sheet |    |      |                                       |                         |                       | type CUSTOMER Drawing                            |

PRODUCT NUMBER  
SEE SHEET 3



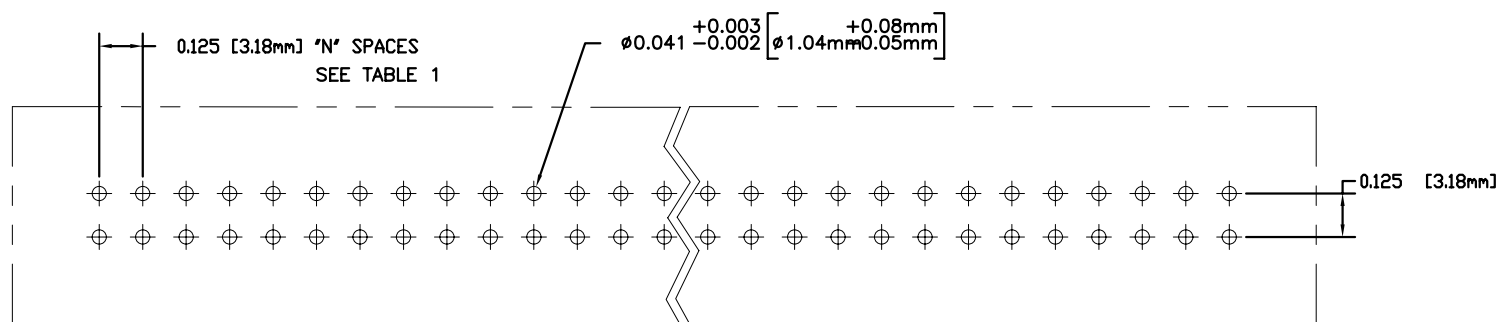
RECOMMENDED CIRCUIT CARD PLATING: 25u" (MIN.) COBALT HARDENED GOLD OVER 200u" (MIN.) NICKEL.



|             |          |    |      |                                       |                         |            |                                                  |
|-------------|----------|----|------|---------------------------------------|-------------------------|------------|--------------------------------------------------|
| mat'l. code |          |    |      | surface<br>ASME Y14.5                 | tolerance<br>ASME Y14.5 | projection | product family<br>FASTECH                        |
| ltr         | ecr no   | dr | date | tolerances unless otherwise specified |                         | INCH/MM    | title                                            |
| G           |          |    |      | angles                                | linear                  |            | SINGLE DENSITY EDGE CARD<br>1203 TYPE CONNECTORS |
|             |          |    |      | dr                                    | R. CONRAD               | 5/27/99    | dwg no                                           |
|             |          |    |      | engr                                  | R. CONRAD               | 5/27/99    | sheet 5 of 6                                     |
|             |          |    |      | chr                                   | R. CONRAD               | 5/27/99    | size                                             |
|             |          |    |      | appd                                  | R. CONRAD               | 5/27/99    | A4                                               |
| sheet       | revision |    |      |                                       |                         |            | type                                             |
| index       | sheet    |    |      |                                       |                         |            | CUSTOMER Drawing                                 |

PRODUCT NUMBER  
SEE SHEET 3

### RECOMMENDED BACKPLANE HOLE LAYOUT



RECOMMENDED DRILL: .0465 [1.18mm]  
BACKPLANE THICKNESS: .086 [2.18mm] MINIMUM.

|             |        |                |      |                                       |                                                                                       |                         |  |                                                                                                     |                                                                                       |                                                           |  |  |  |  |  |
|-------------|--------|----------------|------|---------------------------------------|---------------------------------------------------------------------------------------|-------------------------|--|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------|--|--|--|--|--|
| mat'l. code |        |                |      | surface<br>ASME Y14.5 ✓               |                                                                                       | tolerance<br>ASME Y14.5 |  | projection<br> |                                                                                       | product family<br>FASTECH                                 |  |  |  |  |  |
| ltr         | ecr no | dr             | date | tolerances unless otherwise specified |                                                                                       |                         |  |                                                                                                     | INCH/MM                                                                               | title<br>SINGLE DENSITY EDGE CARD<br>1203 TYPE CONNECTORS |  |  |  |  |  |
| G           |        |                |      | angles                                |  |                         |  |                                                                                                     |                                                                                       |                                                           |  |  |  |  |  |
|             |        |                |      |                                       |                                                                                       |                         |  |                                                                                                     | scale 1:1                                                                             | dwg no<br>A89KC4205<br>sheet 6 of 6<br>size<br>A          |  |  |  |  |  |
|             |        |                |      | dr                                    | R. CONRAD                                                                             | 5/27/99                 |  |                                                                                                     |  |                                                           |  |  |  |  |  |
|             |        |                |      | engr                                  | R. CONRAD                                                                             | 5/27/99                 |  |                                                                                                     |                                                                                       |                                                           |  |  |  |  |  |
|             |        |                |      | chr                                   | R. CONRAD                                                                             | 5/27/99                 |  |                                                                                                     |                                                                                       |                                                           |  |  |  |  |  |
|             |        |                |      | appd                                  | R. CONRAD                                                                             | 5/27/99                 |  |                                                                                                     |                                                                                       |                                                           |  |  |  |  |  |
| sheet index |        | revision sheet |      |                                       |                                                                                       |                         |  |                                                                                                     |                                                                                       | type<br>CUSTOMER Drawing                                  |  |  |  |  |  |