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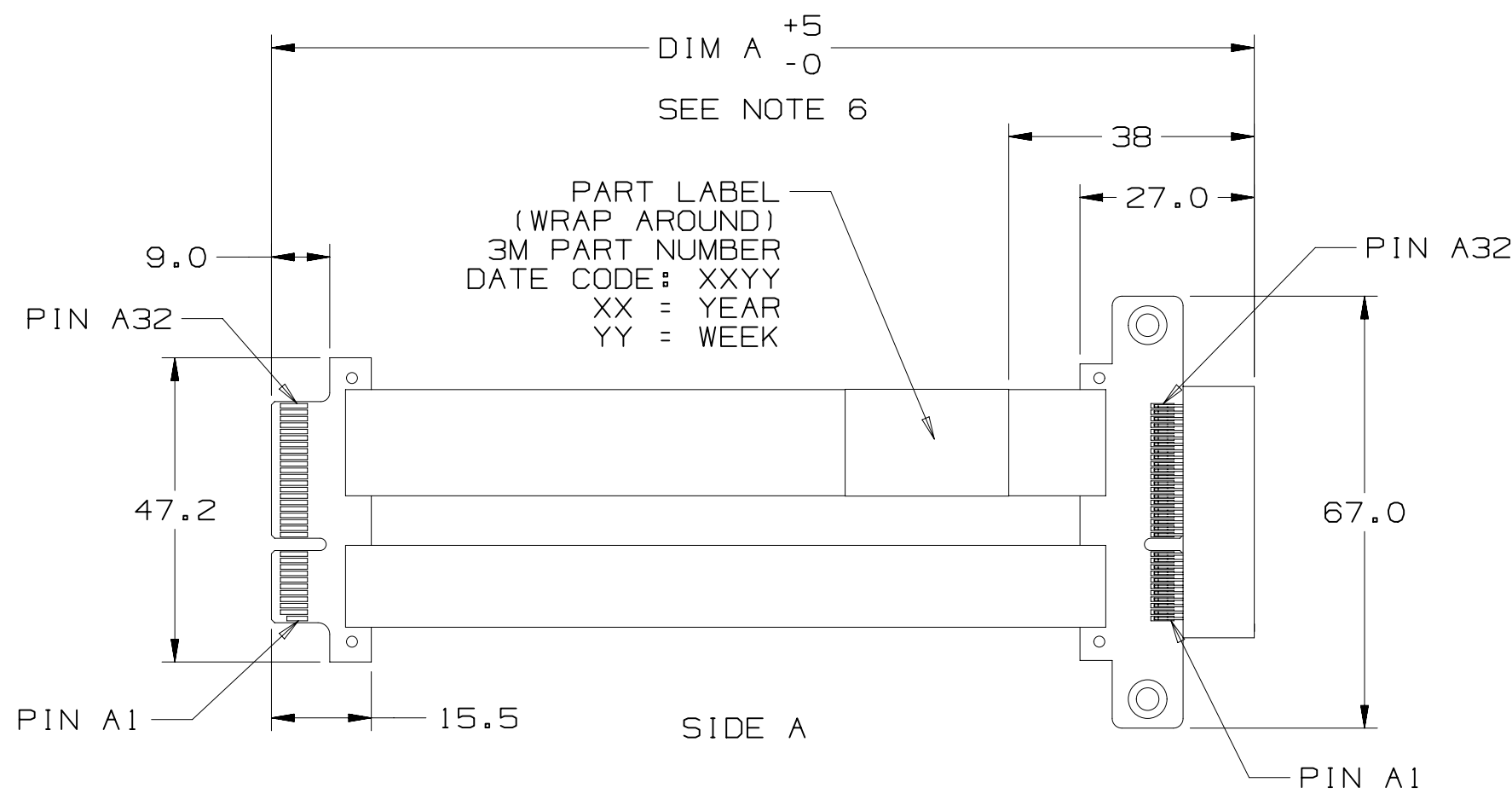
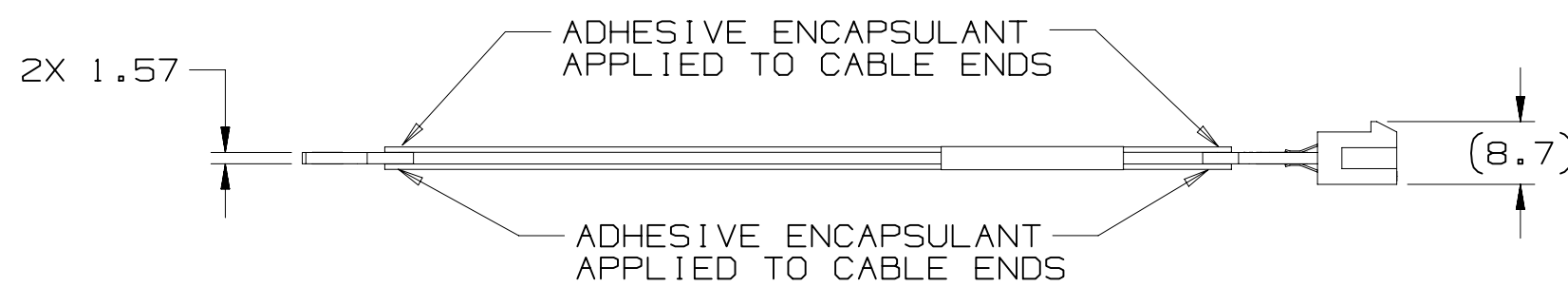
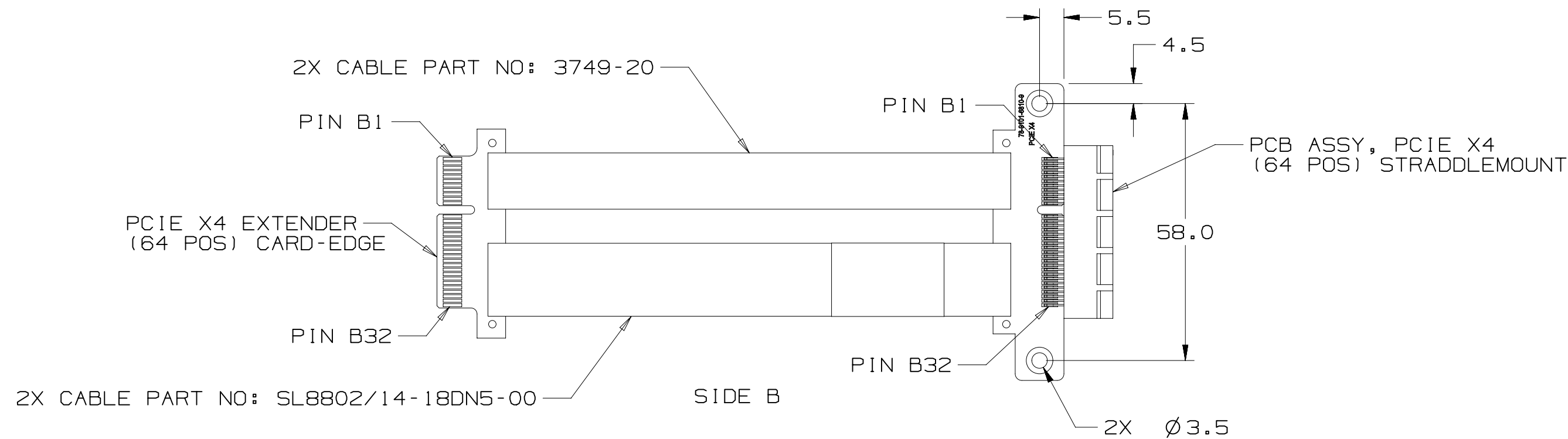
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# 3M™ TWIN AXIAL CABLE ASSEMBLY FOR PCIe X4 EXTENDER CARD APPLICATIONS



| BILL OF MATERIALS |   |             |  |
|-------------------|---|-------------|--|
| ITEM              | DESCRIPTION   | QTY         |  |
| 1.0               | PBA PCB ASSY, PADDLECARD, PCIe X4                                 | 1           |  |
| 1.1               | PCB PCIe X4 (64 POS) STRADDLEMOUNT<br>3M P/N: 78-9101-6810-9      | 1           |  |
| 1.2               | CONN CONNECTOR, PCIe 64 POSITION, FEMALE SOCKET                   | 1           |  |
| 2.0               | PCB PCIe X4 EXTENDER (64 POS) CARD-EDGE<br>3M P/N: 78-9101-6809-1 | 1           |  |
| 3.0               | CABLE RIBBON TWIN AX CABLE<br>3M P/N: SL8802/14-18DN5-00          | 2           |  |
| 4.0               | CABLE RIBBON CABLE, 20 POSITION<br>3M P/N: 3749-20                | 2           |  |
| 5.0               | STRAIN RELIEF ADHESIVE  | AS REQUIRED |  |

| DESIGN REFERENCE                |   | NEXT ASSEMBLY                |  |
|---------------------------------|---|------------------------------|--|
| DISTRIBUTION CODES              |   |                              |  |
| DRFT                            | L SCHMIDT                                       | DATE                         | APR 09, 2012                           |
| CHKO                            |   | DATE                         |  |
| ECO                             |   | DATE                         |  |
| ISSUE DATE AND DESCRIPTION      | DRFT  | CHKO                         |  |
|                                 |   |                              |  |
| DIVISION                        |   | DIVISION CODE                |  |
| DO NOT SCALE DRAWING            | SCALE 1/1                                       | TOLERANCES EXCEPT AS NOTED   |  |
| THIRD ANGLE PROJECTION          |   | INCHES                       |  |
| INTERPRET PER ASME Y14.5 - 1994 |   | MILLIMETERS                  |  |
| MAX SURFACE ROUGHNESS           |   | ANGLES ±1°                   |  |
| 125                             | <input type="checkbox"/> ALL SURFACES           |                              |  |
|                                 | <input checked="" type="checkbox"/> MARKED ONLY |                              |  |
| CAGE NUMBER                     |   | SIZE                         | DRAWING NO.                            |
| 78-5100-2521-2                  |   | C                            | 78-5100-2521-2                         |
| MODEL                           |   | REV.                         | B                                      |
| DET. LISTS                      |   | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO |
| SHT 1 OF 2                      |   |                              |  |

- NOTES
- DIMENSIONS ARE IN MILLIMETERS.
  - 3M™ RIBBON TWINAX DESCRIPTION:  
30 AWG, SILVER PLATED SIGNAL WIRE  
IMPEDANCE: 85 ±5 OHM  
OVERALL RIBBON WIDTH: 24.90 MM  
OVERALL RIBBON THICKNESS: 0.75 MM
  - ROHS COMPLIANT. SEE REGULATORY INFORMATION APPENDIX IN "ROHS COMPLIANCE" SECTION AT WWW.3MCONNECTORS.COM (E1 & C1 APPLY)
  - THIS CABLE CONSTRUCTION HAS A THIN ALUMINUM INNER LAYER EXPOSED AT EACH EDGE. USERS SHOULD ASSESS WHETHER THE EXPOSED EDGE PRESENTS A SHORTING RISK IN THEIR SPECIFIC APPLICATION. INSULATING TAPE MAY BE APPLIED AT THE CABLE ASSEMBLY LEVEL, AS NEEDED, TO COVER THE EXPOSED EDGE IN RISK AREAS.
  - APPLICABLE SPECIFICATIONS:  
PRODUCT SPECIFICATION NUMBER:
  - ORDER BY APPLICABLE 3M PART NUMBER: 8KJ1-0727-XXXX  
  
XXXX = DIM 'A' IN MILLIMETERS (1000 = 1 METER)  
  
STANDARD LENGTH (DIM 'A')  
8KJ1-0727-0250 (250 MM)  
8KJ1-0727-0500 (500 MM)  
  
NON-STANDARD LENGTHS AVAILABLE UPON SPECIAL REQUEST. MAY REQUIRE HIGHER MOQS AND LONGER LEAD TIMES. 150 MM MINIMUM LENGTH.
  - FLAMMABILITY RATING:  
TWIN AX CABLE: UL94 HB  
PCBS: UL94V-0  
ADHESIVE STRAIN RELIEF: UL94 HB, (TBV)
  - PADDLECARD FINGER GOLD THICKNESS: 0.76 μm [30 μ"] MIN ELECTROLYTIC HARD GOLD OVER 1.27 μm [50 μ"] MIN ELECTROLYTIC NICKEL.

78-5100-2521-2  
DRAWING NUMBER

B

A

| 3M 3749-20 Cable |                  |
|------------------|------------------|
| Wire #           | Pin Attachment # |
| 01               | Ground Layer     |
| 02               | B01 - B02        |
| 03               | B01 - B02        |
| 04               | B01 - B02        |
| 05               | B01 - B02        |
| 06               | B01 - B02        |
| 07               | B01 - B02        |
| 08               | Ground Layer     |
| 09               | B05              |
| 10               | B06              |
| 11               | Ground Layer     |
| 12               | B08              |
| 13               | B08              |
| 14               | B09              |
| 15               | B10              |
| 16               | B10              |
| 17               | Ground Layer     |
| 18               | B11              |
| 19               | Ground Layer     |
| 20               | B12              |


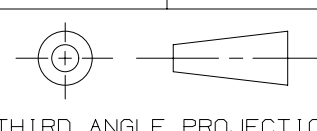
| 3M 3749-20 Cable |        |
|------------------|--------|
| Pin Attachment # | Wire # |
| Ground Layer     | 01     |
| A01              | 02     |
| Ground Layer     | 03     |
| A02 - A03        | 04     |
| A02 - A03        | 05     |
| A02 - A03        | 06     |
| A02 - A03        | 07     |
| Ground Layer     | 08     |
| A05              | 09     |
| A06              | 10     |
| A07              | 11     |
| A08              | 12     |
| Ground Layer     | 13     |
| A09 - A10        | 14     |
| A09 - A10        | 15     |
| A09 - A10        | 16     |
| A09 - A10        | 17     |
| Ground Layer     | 18     |
| Ground Layer     | 19     |
| A11              | 20     |

| PCI-Express X4 Pin-Out |                     |                          |       |
|------------------------|---------------------|--------------------------|-------|
| Pin #                  | Side B Description  | Side A Description       | Pin # |
| B01                    | +12 volt power      | Hot plug presence detect | A01   |
| B02                    | +12 volt power      | +12 volt power           | A02   |
| B03                    | +12 volt power      | +12 volt power           | A03   |
| B04                    | Ground              | Ground                   | A04   |
| B05                    | SMBus clock         | TCK                      | A05   |
| B06                    | SMBus data          | TDI                      | A06   |
| B07                    | Ground              | TD0                      | A07   |
| B08                    | +3.3 volt power     | TMS                      | A08   |
| B09                    | +TRST#              | +3.3 volt power          | A09   |
| B10                    | 3.3v volt power     | +3.3 volt power          | A10   |
| B11                    | Link Reactivation   | Power Good               | A11   |
| Mechanical Key         |                     |                          |       |
| B12                    | Reserved            | Ground                   | A12   |
| B13                    | Ground              | Reference Clock          | A13   |
| B14                    | Transmitter Lane 0, | Differential pair        | A14   |
| B15                    | Differential pair   | Ground                   | A15   |
| B16                    | Ground              | Receiver Lane 0,         | A16   |
| B17                    | Hotplug detect      | Differential pair        | A17   |
| B18                    | Ground              | Ground                   | A18   |
| B19                    | Transmitter Lane 1, | Reserved                 | A19   |
| B20                    | Differential pair   | Ground                   | A20   |
| B21                    | Ground              | Receiver Lane 1,         | A21   |
| B22                    | Ground              | Differential pair        | A22   |
| B23                    | Transmitter Lane 2, | Ground                   | A23   |
| B24                    | Differential pair   | Ground                   | A24   |
| B25                    | Ground              | Receiver Lane 2,         | A25   |
| B26                    | Ground              | Differential pair        | A26   |
| B27                    | Transmitter Lane 3, | Ground                   | A27   |
| B28                    | Differential pair   | Ground                   | A28   |
| B29                    | Ground              | Receiver Lane 3,         | A29   |
| B30                    | Reserved            | Differential pair        | A30   |
| B31                    | Hot plug detect     | Ground                   | A31   |
| B32                    | Ground              | Reserved                 | A32   |

| 3M SL8802 Cable |                  |
|-----------------|------------------|
| Wire #          | Pin Attachment # |
| GND             | Ground Layer     |
| pr_01           | B14              |
| pr_01           | B15              |
| pr_02           | B17              |
| pr_02           | Ground Layer     |
| pr_03           | B19              |
| pr_03           | B20              |
| pr_04           | B23              |
| pr_04           | B24              |
| GND             | Ground Layer     |
| pr_05           | B27              |
| pr_05           | B28              |
| pr_06           | Ground Layer     |
| pr_06           | Ground Layer     |
| pr_07           | B30              |
| pr_07           | B31              |
| GND             | Ground Layer     |

| 3M SL8802 Cable  |        |
|------------------|--------|
| Pin Attachment # | Wire # |
| Ground Layer     | GND    |
| A13              | pr_01  |
| A14              | pr_01  |
| A16              | pr_02  |
| A17              | pr_02  |
| Ground Layer     | pr_03  |
| A19              | pr_03  |
| A21              | pr_04  |
| A22              | pr_04  |
| Ground Layer     | GND    |
| A25              | pr_05  |
| A26              | pr_05  |
| A29              | pr_06  |
| A30              | pr_06  |
| A32              | pr_07  |
| Ground Layer     | pr_07  |
| Ground Layer     | GND    |

|   |       |                 |     |    |
|---|-------|-----------------|-----|----|
| B | 42467 | AUG 06,2012     | LDS | TS |
| A | 40795 | JUN 18,2012     | LDS | TS |
|   |       | REVISED NOTE 6  |     |    |
|   |       | INITIAL RELEASE |     |    |

|  |  |   |      |                            |          |            |
|--|--|---|------|----------------------------|----------|------------|
| DESIGN REFERENCE   | NEXT ASSEMBLY  | REV   | ECO  | ISSUE DATE AND DESCRIPTION | DRFT     | CHKD       |
|  |  | DRFT  |      | DATE                       |          |            |
|  |  | L   |      | APR 09,2012                |          |            |
|  |  | CHKD  |      | DATE                       | APPVL    | DATE       |
|  |  |   |      |                            |          |            |
| DIVISION   | DIVISION CODE  |  3M Center<br>St. Paul,<br>MN 55144  |      |                            |          |            |
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|  THIRD ANGLE PROJECTION | TOLERANCES EXCEPT AS NOTED<br>INCHES<br>.0 ±<br>.00 ±<br>.000 ±<br>.0000 ± | TITLE<br><b>8KJ1-0727-XXXX, CABLE ASSY, PCIE X4 BY PCIE X4 EXTENDER</b>   |      |                            |          |            |
| INTERPRET PER ASME Y14.5 - 1994  | MILLIMETERS<br>0 ±1<br>.0 ±.5<br>.00 ±.05<br>.000 ±.005                    | CAGE NUMBER   | SIZE | DRAWING NO.                | REV.     |            |
| MAX SURFACE ROUGHNESS<br>125<br>☐ ALL SURFACES<br>☒ MARKED ONLY  | ANGLES ±1°   | <b>C</b>  |      | <b>78-5100-2521-2</b>      | <b>B</b> |            |
|  |  | MODEL   |      | DET. LISTS                 | YES      | NO         |
|  |  |   |      |                            |          | SHT 2 OF 2 |

78-5100-2521-2  
DRAWING NUMBER

B  
REVISION

B

A