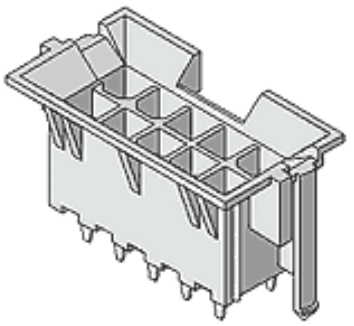
This document was generated on 03/25/2010

# PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

**Part Number:** 0444741841

**Status:** Active

**Description:** 4.20mm (.165") Pitch Mini-Fit HCS™ Header, Dual Row, Vertical, Blind Mating, with Snap-in Plastic Peg PCB Lock, 18 Circuits, PA Polyamide Nylon 6/6 94V-0, with Drain Holes



*Series image - Reference only*

**Documents:**

3D Model
Drawing (PDF)
Product Specification PS-44476-001 (PDF)
RoHS Certificate of Compliance (PDF)

## Agency Certification

| | |
|---|---|
| CSA | LR19980 |
| UL | E29179 |

## General

| | |
|---|---|
| Product Family | PCB Headers |
| Series | 44474 |
| Application | Board-to-Board, Wire-to-Board |
| Comments | Square Pin\|Solder Type |
| Product Name | Mini-Fit HCS™ |

## Physical

| | |
|---|---|
| Breakaway | No |
| Circuits (Loaded) | 18 |
| Circuits (maximum) | 18 |
| Color - Resin | Natural (White) |
| Durability (mating cycles max) | 30 |
| Flammability | 94V-0 |
| Glow-Wire Compliant | No |
| Material - Metal | High Performance Alloy (HPA) |
| Material - Plating Mating | Tin |
| Material - Plating Termination | Tin |
| Material - Resin | Nylon |
| Number of Rows | 2 |
| Orientation | Vertical |
| PC Tail Length (in) | 0.138 In |
| PC Tail Length (mm) | 3.50 mm |
| PCB Locator | Yes |
| PCB Retention | Yes |
| PCB Thickness Recommended (in) | 0.070 In |
| PCB Thickness Recommended (mm) | 1.80 mm |
| Packaging Type | Tray |
| Pitch - Mating Interface (in) | 0.165 In |
| Pitch - Mating Interface (mm) | 4.20 mm |
| Plating min: Mating (µin) | 100 |
| Plating min: Mating (µm) | 2.50 |
| Plating min: Termination (µin) | 100 |
| Plating min: Termination (µm) | 2.50 |
| Polarized to PCB | Yes |
| Shrouded | Fully |
| Stackable | No |
| Surface Mount Compatible (SMC) | No |
| Temperature Range - Operating | -40°C to +105°C |
| Termination Interface: Style | Through Hole |

## Electrical

**EU RoHS**
**ELV and RoHS Compliant**
**REACH SVHC**
Not Reviewed
**Halogen-Free Status**
**Not Reviewed**

**China RoHS**

**Need more information on product environmental compliance?**

Email productcompliance@molex.com
For a multiple part number RoHS Certificate of Compliance, click here

Please visit the Contact Us section for any non-product compliance questions.

**Search Parts in this Series**
44474Series

**Mates With**
42474 , 44475 , 44516 , 5557d

| | |
|---|---|
| Current - Maximum per Contact | 11A |
| Voltage - Maximum | 600V |

## Solder Process Data

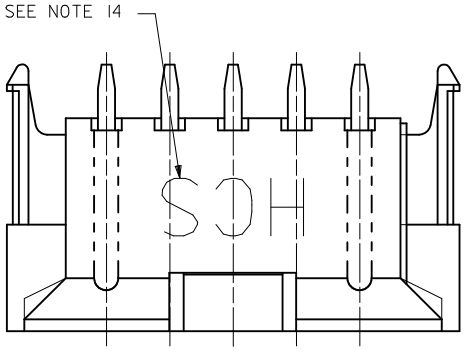
| | |
|---|---|
| Duration at Max. Process Temperature (seconds) | 5 |
| Lead-free Process Capability | Wave Capable (TH only) |
| Max. Cycles at Max. Process Temperature | 1 |
| Process Temperature max. C | 260 |

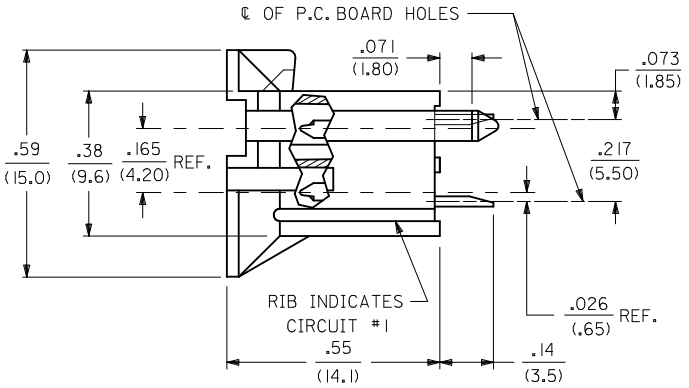
## Material Info

## Reference - Drawing Numbers

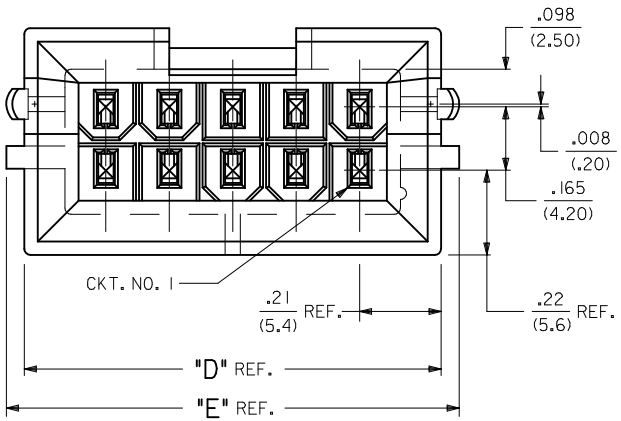
| | |
|---|---|
| Product Specification | PS-44476-001, RPS-44476-001 |
| Sales Drawing | SDA-44474-**** |

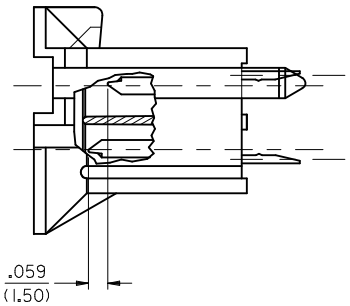
This document was generated on 03/25/2010
**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**



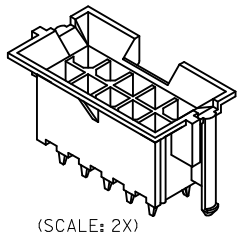




| CIRCUIT SIZE | DIM. "A" | DIM. "B" | DIM. "C" | DIM. "D" | DIM. "E" |
|---|---|---|---|---|---|
| 2 | —— | .21 (5.4) | .370 (9.40) | .425 (10.80) | .520 (13.20) |
| 4 | .17 (4.2) | .38 (9.6) | .535 (13.60) | .590 (15.00) | .685 (17.40) |
| 6 | .33 (8.4) | .54 (13.8) | .701 (17.80) | .756 (19.20) | .850 (21.60) |
| 8 | .50 (12.6) | .71 (18.0) | .866 (22.00) | .921 (23.40) | 1.016 (25.80) |
| 10 | .66 (16.8) | .87 (22.2) | 1.031 (26.20) | 1.087 (27.60) | 1.181 (30.00) |
| 12 | .83 (21.0) | 1.04 (26.4) | 1.197 (30.40) | 1.252 (31.80) | 1.346 (34.20) |
| 14 | .99 (25.2) | 1.20 (30.6) | 1.362 (34.60) | 1.417 (36.00) | 1.512 (38.40) |
| 16 | 1.16 (29.4) | 1.37 (34.8) | 1.528 (38.80) | 1.583 (40.20) | 1.677 (42.60) |
| 18 | 1.32 (33.6) | 1.54 (39.0) | 1.693 (43.00) | 1.748 (44.40) | 1.843 (46.80) |
| 20 | 1.49 (37.8) | 1.70 (43.2) | 1.858 (47.20) | 1.913 (48.60) | 2.008 (51.00) |
| 22 | 1.65 (42.0) | 1.87 (47.4) | 2.024 (51.40) | 2.079 (52.80) | 2.173 (55.20) |
| 24 | 1.82 (46.2) | 2.03 (51.6) | 2.189 (55.60) | 2.244 (57.00) | 2.339 (59.40) |

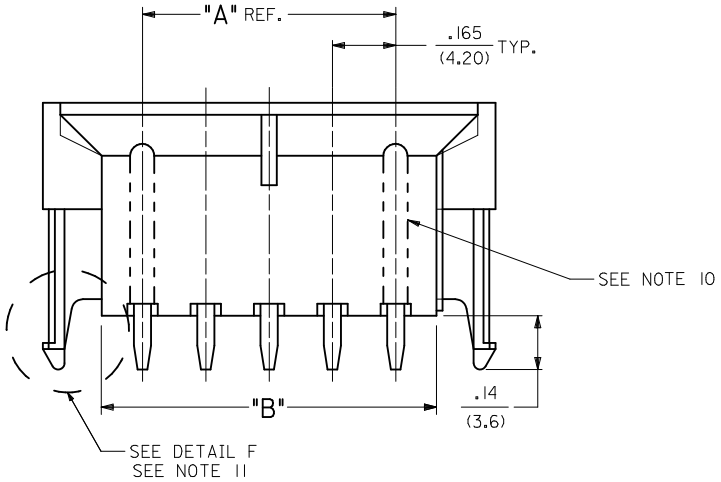


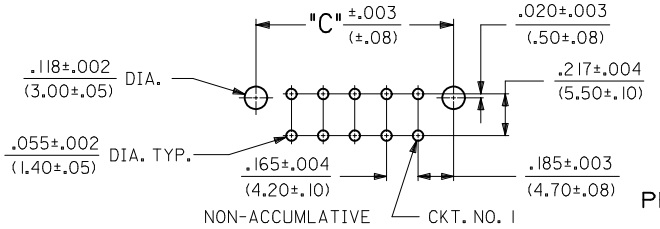



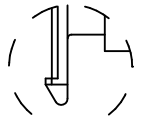

MATE-FIRST/BREAK-LAST DETAIL
(SEE NOTE 12)



(SCALE: 2X)



DETAIL "F "
PEG DESIGN
PRIOR TO 8/11/97

**RECOMMENDED HOLE LAYOUT FOR .070/(1.78) MAX. THICK P.C. BOARD**

(SEE NOTE 5)
(SCALE: 2X)

| | |
|---|---|
| 6 | G |
| 5 | G |
| 4 | G1 |
| 3 | G |
| 2 | D1 |
| 1 | G1 |

MODIFIED SHT 4
EC NO: UCP2010-0472 2009/11/11
DRWN: JJAGUILAR 2009/12/01
CH'KD: JBELL 2009/12/01
APPR: FSMITH 2009/12/01
DESCRIPTION
G1
REV

QUALITY SYMBOLS
▼=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

| | mm | INCH |
|---|---|---|
| 4 PLACES | ± --- | ± --- |
| 3 PLACES | ± --- | ± .010 |
| 2 PLACES | ± 0.25 | ± .015 |
| 1 PLACE | ± 0.38 | ± --- |
| ANGULAR ±1/2° | | |

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: IN/MM
SCALE: 1:1
DESIGN UNITS: INCH
THIRD ANGLE PROJECTION

DRAWN BY: GEP DATE:
CHECKED BY: RJF DATE:
APPROVED BY: RJF DATE:
MATERIAL NO.: SEE CHARTS

TITLE: VERTICAL HEADER ASSEMBLY MINI-FIT HCS SERIES

molex MOLEX INCORPORATED

DOCUMENT NO.: SDA-44474-****
SHEET NO.: 1 OF 6

SIZE: C

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

NOTES:

1) HOUSING MAT'L. & OPTIONS:
   1 = NYLON 6/6, U.L. 94V-2, COLOR: NATURAL, WITHOUT DRAIN HOLES.
   2 = NYLON 6/6, U.L. 94V-0, COLOR: NATURAL, WITHOUT DRAIN HOLES.
   3 = NYLON 6/6, U.L. 94V-2, COLOR: NATURAL, WITH DRAIN HOLES.
   4 = NYLON 6/6, U.L. 94V-0, COLOR: NATURAL, WITH DRAIN HOLES.

2) TERMINAL MAT'L.: C197 ALLOY.

3) 6-24 CKT. PARTS MATE WITH MINI-FIT JR. RECEPT.#5557, H.C.S. VERT. HEADER #44475 AND B.M.I. HEADER #42474. 2 & 4 CKT. PARTS MATE WITH HEADERS ONLY.

4) PART ALLOWS FOR UP TO .100/(2.54) MISALIGNMENT WITH MATING RECEPTACLE IN ANY DIRECTION. SEE MATING CONNECTOR DRAWINGS FOR SPECIFIC ALLOWANCES.

5) PART IS DESIGNED IN METRIC.

6) TERMINAL PLATING:
   *1 = POSTPLATE .000100/(.00254) MIN. BRIGHT TIN OVER .000050/(.00127) MIN. NICKEL.
   2 = POSTPLATE .000100/(.00254) MIN. BRIGHT TIN OVER .000050/(.00127) MIN. NICKEL.

   *THE PRIMARY SHIPPING CARTON WILL BE LABELED "COMPLIANT TO RoHS DIRECTIVE 2002/95/EC AND ELV ANNEX II OF DIRECTIVE 2002/53/EC". CARTONS WITHOUT THIS LABEL MAY CONTAIN PRODUCT WITH TIN-LEAD PLATING.

7) PRODUCT SPECIFICATION AND PROCESSING PARAMETERS: SEE PS-44476-001.

8) CONNECTOR ASSEMBLIES ARE NOT TO BE MATED OR UNMATED WHILE CIRCUITS ARE LIVE.

9) ITEM NUMBERS PRECEEDED BY AN "X" IN THE CHARTS ON THE FOLLOWING SHEETS ARE NOT AVAILABLE.

10) OPTIONAL RIBS MAY BE FOUND ON PARTS MANUFACTURED AFTER 08/11/97.

11) PARTS MANUFACTURED AFTER 8/15/97 MAY HAVE REVISED LOCK PEG.

12) CIRCUITS SHOWN PROVIDE CUSTOM MATE-FIRST/BREAK-LAST FEATURE. SEE CHART ON SHEET SIX FOR ASSEMBLIES WITH ADDITIONAL CUSTOM OPTIONS.

13) PACKAGING:
   1 = TRAY PER PK-42440-001.
   2 = TUBE PER PK-40873-0151.

14) PARTS PRODUCED AFTER JULY 1, 2004 WILL HAVE "HCS" MARKING INSTEAD OF BLACK STRIPE.

SEE SHEET 1
EC NO: UCP2005-1986 2005/03/17
DRWN: JSCHAFER 2005/03/21
CHKD:
APPR: YMARGULI 2005/03/22
DESCRIPTION
G
REV

QUALITY SYMBOLS
▼=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

| | mm | INCH |
|---|---|---|
| 4 PLACES | ± --- | ± --- |
| 3 PLACES | ± --- | ± --- |
| 2 PLACES | ± --- | ± --- |
| 1 PLACE | ± --- | ± --- |

ANGULAR ±1/2°

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: IN/MM
SCALE: 1:1
DESIGN UNITS: INCH
THIRD ANGLE PROJECTION

DRAWN BY: GEP DATE:
CHECKED BY: RJF DATE:
APPROVED BY: RJF DATE:

TITLE: VERTICAL HEADER ASSEMBLY MINI-FIT HCS SERIES

molex MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SDA-44474-****
SHEET NO.: 3 OF 6

SIZE C

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

| PLATING: | I (SEE NOTE 6) | | PLATING: | I (SEE NOTE 6) | | PLATING: | I (SEE NOTE 6) | | PLATING: | I (SEE NOTE 6) | | PLATING: | I (SEE NOTE 6) | | PLATING: | I (SEE NOTE 6) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DRAINS: | WITHOUT DRAIN HOLES | | DRAINS: | WITHOUT DRAIN HOLES | | DRAINS: | WITH DRAIN HOLES | | DRAINS: | WITH DRAIN HOLES | | DRAINS: | WITHOUT DRAIN HOLES | | DRAINS: | WITHOUT DRAIN HOLES | |
| PEGS: | WITH PEGS | | PEGS: | WITH PEGS | | PEGS: | WITH PEGS | | PEGS: | WITH PEGS | | PEGS: | WITH PEGS | | PEGS: | WITH PEGS | |
| MAT'L: | 94V-2 [NATURAL] | | MAT'L: | 94V-0 [NATURAL] | | MAT'L: | 94V-2 [NATURAL] | | MAT'L: | 94V-0 [NATURAL] | | MAT'L: | 94V-2 [NATURAL] | | MAT'L: | 94V-0 [NATURAL] | |
| PACKAGING: | TRAY (SEE NOTE 13) | | PACKAGING: | TRAY (SEE NOTE 13) | | PACKAGING: | TRAY (SEE NOTE 13) | | PACKAGING: | TRAY (SEE NOTE 13) | | PACKAGING: | TUBE (SEE NOTE 13) | | PACKAGING: | TUBE (SEE NOTE 13) | |
| | ITEM NO. | CKTS | | ITEM NO. | CKTS | | ITEM NO. | CKTS | | ITEM NO. | CKTS | | ITEM NO. | CKTS | | ITEM NO. | CKTS |
| X | 44474-0211 | 2 | X | 44474-0221 | 2 | X | 44474-0231 | 2 | X | 44474-0241 | 2 | X | - | 2 | X | - | 2 |
| | 44474-0411 | 4 | | 44474-0421 | 4 | | 44474-0431 | 4 | | 44474-0441 | 4 | | 44474-3001 | 4 | | 44474-3013 | 4 |
| | 44474-0611 | 6 | X | 44474-0621 | 6 | O | 44474-0631 | 6 | X | 44474-0641 | 6 | X | - | 6 | X | - | 6 |
| X | 44474-0811 | 8 | X | 44474-0821 | 8 | X | 44474-0831 | 8 | X | 44474-0841 | 8 | X | - | 8 | X | - | 8 |
| | 44474-1011 | 10 | | 44474-1021 | 10 | | 44474-1031 | 10 | | 44474-1041 | 10 | | 44474-3004 | 10 | | 44474-3016 | 10 |
| X | 44474-1211 | 12 | X | 44474-1221 | 12 | X | 44474-1231 | 12 | X | 44474-1241 | 12 | X | - | 12 | X | - | 12 |
| | 44474-1411 | 14 | | 44474-1421 | 14 | | 44474-1431 | 14 | | 44474-1441 | 14 | | 44474-3006 | 14 | | 44474-3018 | 14 |
| X | 44474-1611 | 16 | X | 44474-1621 | 16 | X | 44474-1631 | 16 | X | 44474-1641 | 16 | X | - | 16 | X | - | 16 |
| | 44474-1811 | 18 | | 44474-1821 | 18 | | 44474-1831 | 18 | | 44474-1841 | 18 | | 44474-3008 | 18 | | 44474-3020 | 18 |
| X | 44474-2011 | 20 | X | 44474-2021 | 20 | X | 44474-2031 | 20 | X | 44474-2041 | 20 | X | - | 20 | X | - | 20 |
| X | 44474-2211 | 22 | X | 44474-2221 | 22 | X | 44474-2231 | 22 | X | 44474-2241 | 22 | X | - | 22 | X | - | 22 |
| | 44474-2411 | 24 | | 44474-2421 | 24 | | 44474-2431 | 24 | | 44474-2441 | 24 | | 44474-3011 | 24 | | 44474-3023 | 24 |

| PLATING: | I (SEE NOTE 6) | | PLATING: | I (SEE NOTE 6) | | PLATING: | | | PLATING: | | | PLATING: | | | PLATING: | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DRAINS: | WITH DRAIN HOLES | | DRAINS: | WITH DRAIN HOLES | | DRAINS: | | | DRAINS: | | | DRAINS: | | | DRAINS: | | |
| PEGS: | WITH PEGS | | PEGS: | WITH PEGS | | PEGS: | | | PEGS: | | | PEGS: | | | PEGS: | | |
| MAT'L: | 94V-2 [NATURAL] | | MAT'L: | 94V-0 [NATURAL] | | MAT'L: | | | MAT'L: | | | MAT'L: | | | MAT'L: | | |
| PACKAGING: | TUBE (SEE NOTE 13) | | PACKAGING: | TUBE (SEE NOTE 13) | | PACKAGING: | | | PACKAGING: | | | PACKAGING: | | | PACKAGING: | | |
| | ITEM NO. | CKTS | | ITEM NO. | CKTS | | ITEM NO. | CKTS | | ITEM NO. | CKTS | | ITEM NO. | CKTS | | ITEM NO. | CKTS |
| X | - | 2 | X | - | 2 | | | 2 | | | 2 | | | 2 | | | 2 |
| | 44474-3025 | 4 | | 44474-3037 | 4 | | | 4 | | | 4 | | | 4 | | | 4 |
| X | - | 6 | X | - | 6 | | | 6 | | | 6 | | | 6 | | | 6 |
| X | - | 8 | X | - | 8 | | | 8 | | | 8 | | | 8 | | | 8 |
| | 44474-3028 | 10 | | 44474-3040 | 10 | | | 10 | | | 10 | | | 10 | | | 10 |
| X | - | 12 | X | - | 12 | | | 12 | | | 12 | | | 12 | | | 12 |
| | 44474-3030 | 14 | | 44474-3042 | 14 | | | 14 | | | 14 | | | 14 | | | 14 |
| X | - | 16 | X | - | 16 | | | 16 | | | 16 | | | 16 | | | 16 |
| | 44474-3032 | 18 | | 44474-3044 | 18 | | | 18 | | | 18 | | | 18 | | | 18 |
| X | - | 20 | X | - | 20 | | | 20 | | | 20 | | | 20 | | | 20 |
| X | - | 22 | X | - | 22 | | | 22 | | | 22 | | | 22 | | | 22 |
| | 44474-3035 | 24 | | 44474-3047 | 24 | | | 24 | | | 24 | | | 24 | | | 24 |
| | | | | | | | | | | | | | | | | | |

* ITEMS PRECEDED BY "X" ARE NOT AVAILABLE
ITEMS ON THIS PAGE ARE STANDARD PRODUCT. REFER TO SHEET SIX FOR PRODUCT WITH CUSTOM OPTIONS.

"O" = OBSOLETE

MODIFIED CHART
EC NO: UCP2010-0472 2009/11/11
DRWN: JJAGUILAR 2009/12/01
CH'KD: JBELL
APPR: FSMITH 2009/12/01
DESCRIPTION
G1
REV

QUALITY SYMBOLS
▼=0
▽C=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

| | mm | INCH |
|---|---|---|
| 4 PLACES | ± --- | ± --- |
| 3 PLACES | ± --- | ± --- |
| 2 PLACES | ± --- | ± --- |
| 1 PLACE | ± --- | ± --- |
| ANGULAR ±1/2° | | |

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: IN/MM
SCALE: 1:1
DESIGN UNITS: INCH
THIRD ANGLE PROJECTION

DRAWN BY: ERH DATE:
CHECKED BY: MB DATE:
APPROVED BY: RE DATE:

TITLE: VERTICAL HEADER ASSEMBLY MINI-FIT HCE SERIES

molex MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SDA-44474-****
SHEET NO.: 4 OF 6

SIZE: C

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