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**Part Number:** [0431605304](#)  
**Status:** **Active**  
**Description:** 7.50mm (.295") Pitch Sabre™ Header, Single Row, Right Angle, 4 Circuits, PC Tail Length 5.33mm (.210"), with Snap-In Metal Pins, Tin (Sn) Plating, 46 Nylon 94V-0, Black, Glow Wire Compatible

**Documents:**  
[3D Model](#)  
[Drawing \(PDF\)](#)  
[Packaging Specification \(PDF\)](#)  
[Product Specification PSX-44441-9999 \(PDF\)](#)  
[RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

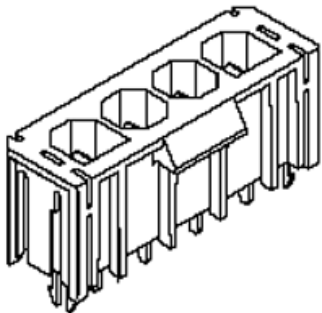
|     |         |
|-----|---------|
| CSA | LR19980 |
| UL  | E29179  |

**General**

|                             |                       |
|-----------------------------|-----------------------|
| Product Family              | PCB Headers           |
| Series                      | <a href="#">43160</a> |
| Application                 | Wire-to-Board         |
| Comments                    | Fully Polarized       |
| Product Literature Order No | USA-113               |
| Product Name                | Sabre™                |

**Physical**

|                                |                                |
|--------------------------------|--------------------------------|
| Breakaway                      | No                             |
| Circuits (Loaded)              | 4                              |
| Circuits (maximum)             | 4                              |
| Color - Resin                  | Black                          |
| Durability (mating cycles max) | 25                             |
| First Mate / Last Break        | No                             |
| Flammability                   | 94V-0                          |
| Glow-Wire Compliant            | Yes                            |
| Guide to Mating Part           | No                             |
| Keying to Mating Part          | None                           |
| Lock to Mating Part            | Yes                            |
| Material - Metal               | Brass                          |
| Material - Plating Mating      | Tin                            |
| Material - Plating Termination | Tin                            |
| Material - Resin               | High Temperature Thermoplastic |
| Number of Rows                 | 1                              |
| Orientation                    | Right Angle                    |
| PC Tail Length (in)            | 0.210 In                       |
| PC Tail Length (mm)            | 5.33 mm                        |
| PCB Locator                    | Yes                            |
| PCB Retention                  | Yes                            |
| PCB Thickness Recommended (in) | 0.093 In                       |
| PCB Thickness Recommended (mm) | 2.40 mm                        |
| Packaging Type                 | Tray                           |
| Pitch - Mating Interface (in)  | 0.295 In                       |
| Pitch - Mating Interface (mm)  | 7.50 mm                        |
| Plating min: Mating (µin)      | 80                             |
| Plating min: Mating (µm)       | 2                              |
| Plating min: Termination (µin) | 80                             |
| Plating min: Termination (µm)  | 2                              |
| Polarized to Mating Part       | Yes                            |
| Polarized to PCB               | Yes                            |



*Series  
image - Reference only*

|                                                                                                                                                                               |                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| <b>EU RoHS</b><br><b>ELV and RoHS</b><br><b>Compliant</b><br><b>REACH SVHC</b><br><b>Contains SVHC: No</b><br><b>Halogen-Free</b><br><b>Status</b><br><b>Not Halogen-Free</b> | <b>China RoHS</b><br> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|

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

Email [productcompliance@molex.com](mailto: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**  
[43160Series](#)

**Mates With**  
[44441-2004](#)

|                                |                |
|--------------------------------|----------------|
| Shrouded                       | Fully          |
| Stackable                      | No             |
| Surface Mount Compatible (SMC) | No             |
| Temperature Range - Operating  | -40°C to +75°C |
| Termination Interface: Style   | Through Hole   |

**Electrical**

|                               |      |
|-------------------------------|------|
| Current - Maximum per Contact | 18A  |
| 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**

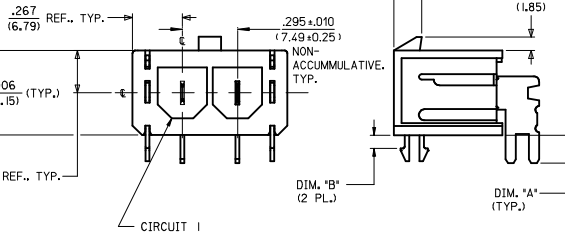
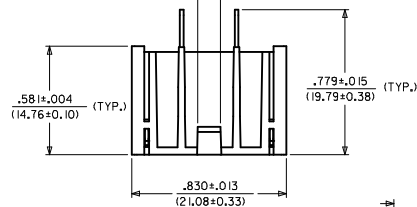
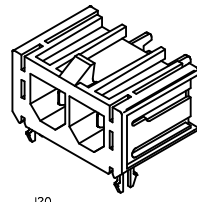
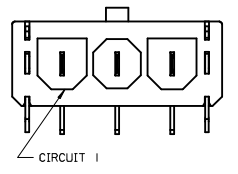
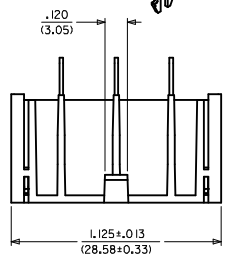
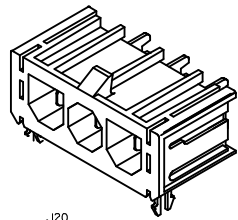
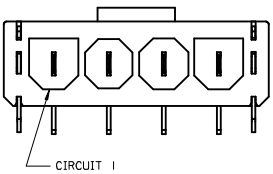
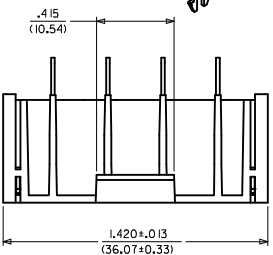
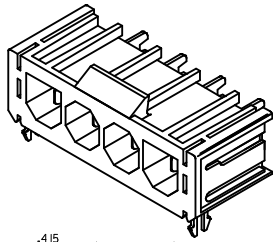
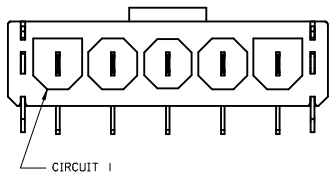
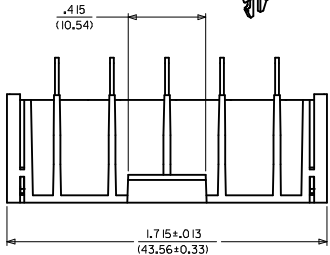
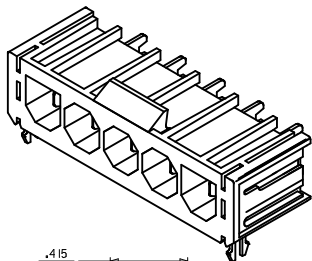
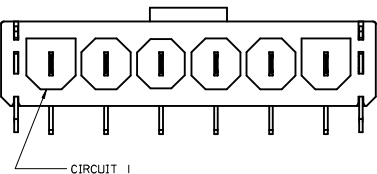
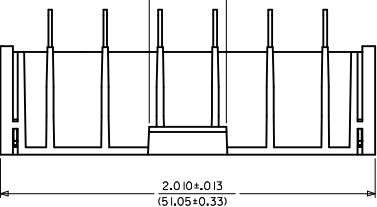
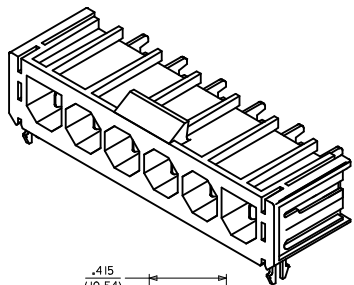
**Reference - Drawing Numbers**

|                       |                |
|-----------------------|----------------|
| Product Specification | PSX-44441-9999 |
| Sales Drawing         | SDA-43160-**** |

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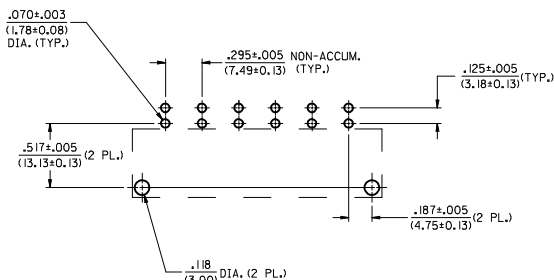
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1



SEE SHEET 5 AND 6 FOR ITEM NUMBER CHART

### RECOMMENDED P.C. BOARD LAYOUT FOR RIGHT ANGLE HEADERS

SCALE 2:1



6 CIRCUIT LAYOUT SHOWN

#### NOTES:

- INSULATOR MATERIAL (SEE CHART)  
A = 30% GLASS-FILLED 46 NYLON, 94V-0, COLOR: BLACK  
TERMINAL MATERIAL: C26000 BRASS
- TERMINAL FINISH: 35 MICROINCH (0.88 MICROMETER) MINIMUM TIN OVER  
20 MICROINCH (0.50 MICROMETER) MINIMUM COPPER.  
\* THE PRIMARY SHIPPING CARTON WILL BE LABELED  
'COMPLIANT TO RoHS DIRECTIVE 2002/95/EC  
AND ELV ANNEX II OF DIRECTIVE 2000/53/EC.'  
CARTONS WITHOUT THIS LABEL MAY CONTAIN  
PRODUCT WITH TIN-LEAD IN THE PC TAILS.
- PRODUCT SPECIFICATION: PSX-44441-9999.
- PACKAGING: SEE CHART.
- THESE HEADERS MATE WITH 43179, 43335, OR 44441 RECEPTACLE HOUSINGS.
- SEE SHEETS 1, 2 AND 3 FOR VERTICAL HEADER ASSEMBLIES AND THEIR  
RESPECTIVE PART NUMBERS.
- SEE SHEETS 4, 5 AND 6 FOR RIGHT ANGLE HEADER ASSEMBLIES AND  
THEIR RESPECTIVE PART NUMBERS.
- DIMENSIONS ARE FOR REFERENCE ONLY UNLESS INDICATED OTHERWISE.

| SOLDER TAIL | DIM. 'A' ±.011/(0.28) |
|-------------|-----------------------|
| SHORT       | .150/(3.81)           |
| LONG        | .210/(5.33)           |

| BOARD LOCK | DIM. 'B' ±.004/(0.10) |
|------------|-----------------------|
| .062       | .070/(1.78)           |
| .094       | .102/(2.59)           |
| .125       | .133/(3.38)           |

|                                                                                                                                    |                                                            |                                       |                                       |              |                          |                       |               |                      |                                                                                                                 |                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------|---------------------------------------|--------------|--------------------------|-----------------------|---------------|----------------------|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| REMOVE 94V-2 P/NS<br>EC NO: UCP2009-0067<br>DRAWN: KLOSTERMEIER 2009/03/05<br>CHKD: AELHAG 2009/03/05<br>APPROV: FSW/TH 2009/03/05 | DESCRIPTION                                                | QUALITY SYMBOLS<br><br>▽=0<br><br>▽=0 | GENERAL TOLERANCES (UNLESS SPECIFIED) |              | DIMENSION STYLE<br>IN/MM |                       | SCALE<br>3:1  | DESIGN UNITS<br>INCH |  THIRD ANGLE<br>PROJECTION |                                                                                                                |
|                                                                                                                                    |                                                            |                                       | mm                                    |              | INCH                     |                       | DRAWN BY DATE |                      |                                                                                                                 | TITLE<br><br>SABRE HEADER ASSY<br>RT. ANGLE, 2-6 & 8 CIR.<br>.125/(3.18)X.020/(0.51)<br><br>MOLEX INCORPORATED |
|                                                                                                                                    |                                                            |                                       | 4 PLACES ± ±                          |              | GC 11/30/95              |                       |               |                      |                                                                                                                 |                                                                                                                |
|                                                                                                                                    |                                                            |                                       | 3 PLACES ± ±                          |              | CHECKED BY DATE          |                       |               |                      |                                                                                                                 |                                                                                                                |
|                                                                                                                                    |                                                            |                                       | 2 PLACES ± ±                          |              | KBP 11/30/95             |                       |               |                      |                                                                                                                 |                                                                                                                |
|                                                                                                                                    |                                                            |                                       | 1 PLACE ± ±                           |              | APPROVED BY DATE         |                       |               |                      |                                                                                                                 |                                                                                                                |
| ANGULAR ± 1/2°                                                                                                                     |                                                            | RAS 11/30/95                          |                                       | MOLEX        |                          |                       |               |                      |                                                                                                                 |                                                                                                                |
| REVISION                                                                                                                           | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS | MATERIAL NO.                          |                                       | DOCUMENT NO. |                          | SHEET NO.             |               |                      |                                                                                                                 |                                                                                                                |
|                                                                                                                                    |                                                            | SIZE D                                |                                       | SEE CHART    |                          | SDA-43160-**** 4 OF 6 |               |                      |                                                                                                                 |                                                                                                                |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION   |                                                            |                                       |                                       |              |                          |                       |               |                      |                                                                                                                 |                                                                                                                |

|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|---|---------------------------------------------|---------------------------------------------|----------------|---------------|------|-----------------------------|-----------------|----------------------------|----------------|---------------|---------------------------------------------|---------------|-----------------|----------------------------|----------------|---------------------------------------------|------|---------------|---|-----------------------------|--|--|--|--|---|--|--|--|--|--|
|   | 20                                          | 19                                          | 18             | 17            | 16   | 15                          | 14              | 13                         | 12             | 11            | 10                                          | 9             | 8               | 7                          | 6              | 5                                           | 4    | 3             | 2 | 1                           |  |  |  |  |   |  |  |  |  |  |
| M | RT. ANGLE<br>HEADER<br>ASSEMBLY<br>ITEM NO. | PART CHARACTERISTICS FOR RIGHT ANGLE HEADER |                |               |      | PACKAGING<br>SPECIFICATIONS |                 |                            |                |               | RT. ANGLE<br>HEADER<br>ASSEMBLY<br>ITEM NO. |               |                 |                            |                | PART CHARACTERISTICS FOR RIGHT ANGLE HEADER |      |               |   | PACKAGING<br>SPECIFICATIONS |  |  |  |  | M |  |  |  |  |  |
|   | CIRCUIT<br>SIZE                             | HSG. MAT'L<br>(SEE NOTE 1)                  | SOLDER<br>TAIL | BOARD<br>LOCK |      |                             | CIRCUIT<br>SIZE | HSG. MAT'L<br>(SEE NOTE 1) | SOLDER<br>TAIL | BOARD<br>LOCK |                                             |               | CIRCUIT<br>SIZE | HSG. MAT'L<br>(SEE NOTE 1) | SOLDER<br>TAIL | BOARD<br>LOCK                               |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   | 43160-1102                                  | 2                                           | A              | SHORT         | N/A  | PK-43160-0010               | 43160-1104      | 4                          | A              | SHORT         | N/A                                         | PK-43160-0010 | 43160-1106      | 6                          | A              | SHORT                                       | N/A  | PK-43160-0010 |   |                             |  |  |  |  |   |  |  |  |  |  |
|   | 43160-1302                                  | 2                                           | A              | LONG          | N/A  | PK-43789-001                | 43160-1304      | 4                          | A              | LONG          | N/A                                         | PK-43789-001  | 43160-1306      | 6                          | A              | LONG                                        | N/A  | PK-43789-001  |   |                             |  |  |  |  |   |  |  |  |  |  |
| L | 43160-3102                                  | 2                                           | A              | SHORT         | .062 | PK-43789-001                | 43160-3104      | 4                          | A              | SHORT         | .062                                        | PK-43789-001  | 43160-3106      | 6                          | A              | SHORT                                       | .062 | PK-43789-001  |   |                             |  |  |  |  |   |  |  |  |  |  |
|   | 43160-5102                                  | 2                                           | A              | SHORT         | .094 | PK-43789-001                | 43160-5104      | 4                          | A              | SHORT         | .094                                        | PK-43789-001  | 43160-5106      | 6                          | A              | SHORT                                       | .094 | PK-43789-001  |   |                             |  |  |  |  |   |  |  |  |  |  |
|   | 43160-5302                                  | 2                                           | A              | LONG          | .094 | PK-43789-001                | 43160-5304      | 4                          | A              | LONG          | .094                                        | PK-43789-001  | 43160-5306      | 6                          | A              | LONG                                        | .094 | PK-43789-001  |   |                             |  |  |  |  |   |  |  |  |  |  |
|   | 43160-7302                                  | 2                                           | A              | LONG          | .125 | PK-43789-001                | 43160-7304      | 4                          | A              | LONG          | .125                                        | PK-43789-001  | 43160-7306      | 6                          | A              | LONG                                        | .125 | PK-43789-001  |   |                             |  |  |  |  |   |  |  |  |  |  |
| K | 43160-1103                                  | 3                                           | A              | SHORT         | N/A  | PK-43160-0010               | 43160-1105      | 5                          | A              | SHORT         | N/A                                         | PK-43160-0010 | 43160-1305      | 5                          | A              | LONG                                        | N/A  | PK-43789-001  |   |                             |  |  |  |  |   |  |  |  |  |  |
|   | 43160-1303                                  | 3                                           | A              | LONG          | N/A  | PK-43789-001                | 43160-1305      | 5                          | A              | LONG          | N/A                                         | PK-43789-001  | 43160-3105      | 5                          | A              | SHORT                                       | .062 | PK-43789-001  |   |                             |  |  |  |  |   |  |  |  |  |  |
|   | 43160-3103                                  | 3                                           | A              | SHORT         | .062 | PK-43789-001                | 43160-3105      | 5                          | A              | SHORT         | .062                                        | PK-43789-001  | 43160-5105      | 5                          | A              | SHORT                                       | .094 | PK-43789-001  |   |                             |  |  |  |  |   |  |  |  |  |  |
|   | 43160-5103                                  | 3                                           | A              | SHORT         | .094 | PK-43789-001                | 43160-5105      | 5                          | A              | SHORT         | .094                                        | PK-43789-001  | 43160-5305      | 5                          | A              | LONG                                        | .094 | PK-43789-001  |   |                             |  |  |  |  |   |  |  |  |  |  |
| J | 43160-5303                                  | 3                                           | A              | LONG          | .094 | PK-43789-001                | 43160-5305      | 5                          | A              | LONG          | .094                                        | PK-43789-001  | 43160-7305      | 5                          | A              | LONG                                        | .125 | PK-43789-001  |   |                             |  |  |  |  |   |  |  |  |  |  |
|   | 43160-7303                                  | 3                                           | A              | LONG          | .125 | PK-43789-001                |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
| I |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
| H |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
| G |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
| F |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
| E |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
| D |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
| C |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
| B |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
| A |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |
|   |                                             |                                             |                |               |      |                             |                 |                            |                |               |                                             |               |                 |                            |                |                                             |      |               |   |                             |  |  |  |  |   |  |  |  |  |  |