

Technology to Inspire Innovation

# ***Preferred Connector Products***

# **JAE**



***JAE Electronics, Inc.***

***For Additional Information Visit [www.jae-connector.com](http://www.jae-connector.com)***

**J**apan Aviation Electronics Industry, Ltd. (JAE) is an international manufacturer and supplier of electronic components and systems. For over four decades, JAE has provided the electronics industry with solutions to complex design requirements. Since its founding, the Company has strived to contribute to society through market-driven, technology-based global business operations under the philosophy: "Technology to Inspire Innovation."

With worldwide and world-class manufacturing certified to ISO 9001 and QS 9000, JAE has made the commitment to meet the global requirements of our customer. In addition to a network of state of the art manufacturing facilities, JAE has technical service offices located around the world, staffed with experts in connector design and application.

This catalog contains a select overview of JAE Connector Products. For in-depth information on our complete product line, and information on new developments, visit JAE's online catalog at [www.jae-connector.com](http://www.jae-connector.com).

Innovative design, quality oriented manufacturing, commitment to our customers and sensitivity to the environment assures JAE's leadership position in the 21<sup>st</sup> century.

## Table of Contents

| Product Series                 | Contact Spacing                      | Pages   |
|--------------------------------|--------------------------------------|---------|
| <b>SOCKETS/MEMORY PRODUCTS</b> |                                      |         |
| PCMCIA                         |                                      |         |
| JC22.....                      | 1.27mm (.050").....                  | 5       |
| COMPACT FLASH                  |                                      |         |
| JC26C2.....                    | 1.27mm (.050").....                  | 6 - 7   |
| JC26E.....                     | 1.27mm (.050").....                  | 8       |
| JC26F.....                     | 1.27mm (.050").....                  | 9       |
| PCI EXPRESS MINI CARD          |                                      |         |
| MM60.....                      | 0.8mm (.031").....                   | 10      |
| EXPRESSCARD                    |                                      |         |
| PX10/11.....                   | 1.0mm (.039").....                   | 11 - 12 |
| PX20/22.....                   | 1.0mm (.039") / 0.635mm (.025")..... | 13 - 14 |
| SMART/SIM CARD                 |                                      |         |
| SF2.....                       | 2.54mm (.100").....                  | 15      |
| SF3.....                       | 2.54mm (.100").....                  | 16      |
| SF6.....                       | 2.54mm (.100").....                  | 17      |
| SF7.....                       | 2.54mm (.100").....                  | 18      |
| SF7 (Slim).....                | 2.54mm (.100").....                  | 19      |
| SF9.....                       | 2.54mm (.100").....                  | 20      |
| SECURE DIGITAL CARD            |                                      |         |
| SG5.....                       | 2.50mm (.098").....                  | 21      |
| MINI SECURE DIGITAL CARD (SD)  |                                      |         |
| ST4.....                       | 1.1mm (.043").....                   | 22      |
| SC1.....                       | 2.50mm (.098").....                  | 23      |
| MICRO SD/TRANSFLASH™           |                                      |         |
| ST1.....                       | 1.1mm (.043").....                   | 24      |
| ST2.....                       | 1.1mm (.043").....                   | 25      |

## **BOARD-TO-BOARD CONNECTOR PRODUCTS**

|                       |                     |         |
|-----------------------|---------------------|---------|
| <b>BOARD-TO-BOARD</b> |                     |         |
| AA03.....             | 0.40mm (.020")..... | 26      |
| WA6.....              | 0.40mm (.020")..... | 27      |
| WH1.....              | 0.40mm (.020")..... | 28      |
| AA01A.....            | 0.50mm (.020")..... | 29      |
| IL-312.....           | 0.50mm (.020")..... | 30      |
| WR.....               | 0.50mm (.020")..... | 31 - 32 |
| WB3.....              | 0.50mm (.020")..... | 33      |
| IL-WX.....            | 0.80mm (.031")..... | 34      |
| KX14/15.....          | 0.80mm (.031")..... | 35 - 36 |
| PM1.....              | 0.80mm (.031")..... | 37      |
| WM1.....              | 1.00mm (.039")..... | 38      |
| WM2.....              | 1.00mm (.039")..... | 39      |
| TX24/TX25.....        | 1.27mm (.050")..... | 40      |

## Table of Contents

| Product Series                           | Contact Spacing      | Pages   |
|--|----------------------|---------|
| <b>BOARD-TO-BOARD CONNECTOR PRODUCTS</b> |                      |         |
| WIRE-TO-BOARD                            |                      |         |
| PCB-TO-FPC/FFC                           |                      |         |
| FB3.....                                 | 0.30mm (.012").....  | 41      |
| FB5.....                                 | 0.30mm (.012").....  | 42      |
| FB6.....                                 | 0.30mm (.012").....  | 43      |
| FF02.....                                | 0.30mm (.012").....  | 44      |
| FF02S.....                               | 0.30mm (.012").....  | 45      |
| FB8.....                                 | 0.30mm (.012").....  | 46      |
| FA5.....                                 | 0.50mm (.020").....  | 47      |
| FF03.....                                | 0.50mm (.020").....  | 48      |
| IL-FPR.....                              | 0.50mm (.020").....  | 49      |
|  |                      |         |
| PCB-TO-CABLE/FPC                         |                      |         |
| FI-J.....                                | 0.40mm (.016").....  | 50 - 51 |
| FI-R.....                                | 0.50mm (.020").....  | 52 - 53 |
| FI-X.....                                | 1.00mm (.039").....  | 54 - 55 |
| FI.....                                  | 1.25mm (.049").....  | 56 - 58 |
|  |                      |         |
| PCB-TO-CABLE                             |                      |         |
| DX2/3.....                               | 0.80mm (.031").....  | 59      |
| FI-E.....                                | 1.00mm (.039").....  | 60 - 61 |
| CN10.....                                |                      | 62 - 63 |
| CV10.....                                |                      | 64      |
| IL-Z.....                                | 1.25mm (.049").....  | 65 - 66 |
| IL-S.....                                | 2.00mm (.079").....  | 67 - 68 |
| LY.....                                  | 2.00mm (.079").....  | 69      |
| KD10/20.....                             | 2.00mm (.079").....  | 70      |
| IL-G.....                                | 2.50mm (.098").....  | 71      |
|  |                      |         |
| <b>INPUT/OUTPUT CONNECTOR PRODUCTS</b>   |                      |         |
| PCB-TO-CABLE                             |                      |         |
| DD1.....                                 | 0.50mm (.020").....  | 72 - 73 |
| DD2.....                                 | 0.50mm (.020").....  | 74 - 75 |
| DG1.....                                 | 0.50mm (.020").....  | 76      |
| RA1.....                                 | 0.50mm (.020").....  | 77      |
| RC1.....                                 | 0.50mm (.020").....  | 78      |
| DA1.....                                 | 0.60mm (.024").....  | 79      |
| DE1.....                                 | 1.27mm (.050").....  | 80      |
| TX20A.....                               | 1.27mm (.050").....  | 81      |
| DV2.....                                 | 1.905mm (.075")..... | 82 - 84 |
|  |                      |         |
| CIRCULAR                                 |                      |         |
| JN1.....                                 |                      | 85 - 86 |
| JN2.....                                 |                      | 87 - 88 |
| JB5.....                                 |                      | 89      |

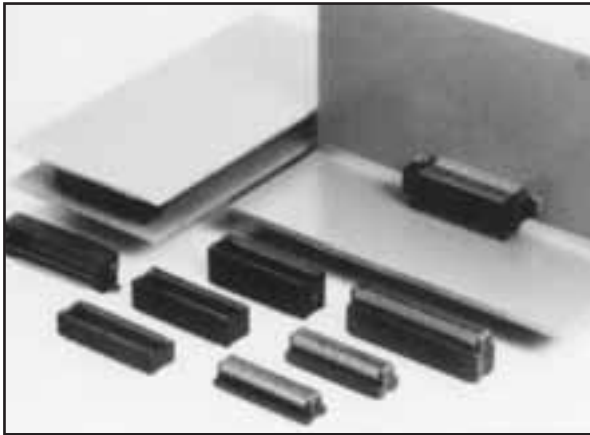
## Table of Contents

| <i>Product Series</i>                      | <i>Contact Spacing</i> | <i>Pages</i> |
|--|------------------------|--------------|
| <br><b>INPUT/OUTPUT CONNECTOR PRODUCTS</b> |                        |              |
| <b>CIRCULAR</b>                            |                        |              |
| JL04V .....                                |                        | 90 - 91      |
| JL05 .....                                 |                        | 92 - 93      |
| JB1 .....                                  |                        | 94 - 95      |
| SRCN .....                                 |                        | 96 - 97      |
| N/MS .....                                 |                        | 98 - 99      |
| <br><b>FIBER OPTIC PRODUCTS</b>            |                        |              |
| FO-FC .....                                |                        | 100          |
| FO-EX .....                                |                        | 101          |
| <br><b>AUTOMOTIVE CONNECTOR PRODUCTS</b>   |                        |              |
| <b>PCB-TO-CABLE</b>                        |                        |              |
| MX34 .....                                 | 1.1mm (.043") .....    | 102          |
| MX7 .....                                  | 2.30mm (.091") .....   | 103          |
| IL-AG7 .....                               | 2.50mm (.098") .....   | 104          |
| MX17 .....                                 | 2.50mm (.098") .....   | 105 - 106    |
| MX23A .....                                | 2.50mm (.098") .....   | 107 - 108    |
| MX10 .....                                 | 2.50mm (.098") .....   | 109          |
| MX5 .....                                  | 3.00mm (.118") .....   | 110          |
| <br><b>PCB-TO-CABLE/CABLE-TO-CABLE</b>     |                        |              |
| IL-AG5 .....                               | 2.50mm (.098") .....   | 111          |
| IL-AG6 .....                               | 2.50mm (.098") .....   | 112          |
| MX9 .....                                  | 3.50mm (.138") .....   | 113          |
| MX25 .....                                 | 6.7mm (2.64") .....    | 114          |
| MX36 .....                                 | 2.50mm (.098") .....   | 115          |
| <br><b>CABLE-TO-CABLE</b>                  |                        |              |
| IL-AG9 .....                               | 2.50mm (.098") .....   | 116 - 118    |
| MX19 .....                                 | 2.50mm (.098") .....   | 119          |

- All JAE connector products shown in this catalog are lead free.
- We reserve the right to modify designs in order to improve quality, keep pace with technological advancements or meet particular requirements in production.
- Products shown in this catalog are made for the applications specified. However, if the above-mentioned products are to be used in aerospace devices, marine cable-connection devices, atomic power control systems, medical equipment for life-support systems, or any other specific application requiring extremely high reliability, please contact JAE for further information. Recommended Applications: Computers, Office Machines, Measuring Devices, Telecommunications Devices (Terminals, Mobile Devices) AV Devices, Household Applications, FA Devices, etc.
- Refer to end of catalog for alphabetical index of products.

# WR SERIES CONNECTORS

## 0.50mm (.020") Contact Spacing, PCB-to-PCB SMT Connectors



### FEATURES

- Ribbon contact design (surface contact)
- Right Angle/Parallel Board-to-Board Connections
- Nine varieties 4 to 9mm (.157 to .354") of parallel board-to-board distance
- Three straight type insulator heights
- Metal hold-downs on both ends of right angle type prevent floating up during automatic mounting
- PCB area beneath insulator may be used for circuit traces
- Available in embossed tape for automatic SMT mounting
- Contact terminal length permits image recognition



The WR Series are SMT-type connectors for PCB-to-PCB applications. These subminiature, low profile connectors keep the required space and height on the PCB to a minimum. High density, ribbon-type contacts are on 0.5mm (.020") centers.

Applications include camcorders, notebook PCs, cellular telephones and other electronic equipment requiring high density packaging.

### GENERAL SPECIFICATIONS

|                                 |   |
|---------------------------------|---|
| Number of Contacts              | Straight: 20, 22, 28, 30, 40, 50, 60, 70, 80, 100, 120, 160<br>Right Angle: 20, 30, 40, 50, 60, 70, 80, 120 |
| Contact Spacing                 | 0.50mm (.020")  |
| Current Rating                  | 0.3 Amp per contact   |
| Dielectric Withstanding Voltage | 500 VAC r.m.s. (for one minute)   |
| Insulation Resistance           | 100 megohms min.  |
| Contact Resistance              | 50 milliohms max.<br>(Vertical: 70 milliohms max.)  |
| Operating Temperature           | -40°C to +85°C  |

### MATERIALS AND FINISHES

| Description | Materials/Finishes   |
|-------------|--|
| Insulator   | Socket side: Glass-filled LCP (UL94V-0, Black)<br>Pin side: Glass-filled PPS (UL94V-0, Black)  |
| Contact     | Copper Alloy<br>Connecting area: Gold Plating 0.1µm (.000004") min. over Nickel<br>Terminal area: Tin Plating over Nickel or Gold flashover Nickel |
| Hold-down   | Copper Alloy/Tin Plating   |

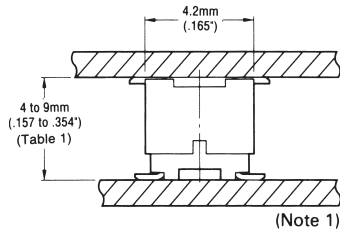
### ORDERING INFORMATION

|                   | <u>WR</u>  | - | <u>**</u> | <u>S</u> | * | - | <u>VF</u> | <u>H05</u> | - | <u>N1</u> |
|-------------------|--|---|-----------|----------|---|---|-----------|------------|---|-----------|
| Series            |  |   |           |          |   |   |           |            |   |           |
| No. of Contacts   | 30, 40, 50, 60, 70, 80, 120  |   |           |          |   |   |           |            |   |           |
| Contact Type      | S – Socket   |   |           |          |   |   |           |            |   |           |
| Polarizing Boss   | Blank – No Boss<br>B – Boss  |   |           |          |   |   |           |            |   |           |
| Termination Style | VF – Straight  |   |           |          |   |   |           |            |   |           |
| Connector Height  | No Letter (standard): 3.25mm (.128")<br>H05: 3.75mm (.148")<br>H30: 6.25mm (.246") |   |           |          |   |   |           |            |   |           |
| Contact Finish    | N1 – Lead Free   |   |           |          |   |   |           |            |   |           |

# WR SERIES CONNECTORS

## 0.50mm (.020") Contact Spacing, PCB-to-PCB SMT Connectors

Connector Profile (Ref.)



**PIN SIDE**  
Straight • Standard Type  
WR-\*\*-P-VF-N1

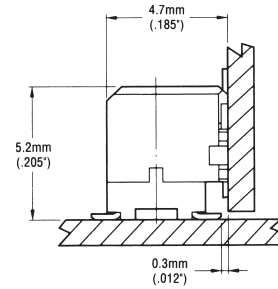
Straight • 50 Type  
WR-\*\*-P-VF50-N1

Straight • 60 Type  
WR-\*\*-P-VF60-N1

**SOCKET SIDE**  
Straight • Standard Type  
WR-\*\*-S-VF-N1

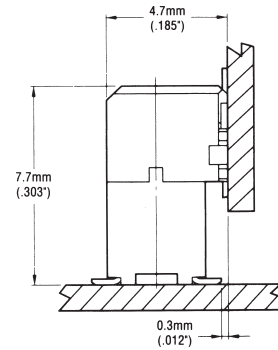
Straight • H05 Type  
WR-\*\*-S-VFH05-N1

Straight • H30 Type  
WR-\*\*-S-VFH30-N1



**PIN SIDE**  
Right Angle Type  
WR-\*\*-P-HF-HD-A1E

**SOCKET SIDE**  
Straight • H05 Type  
WR-\*\*-S-VFH05-N1



**PIN SIDE**  
Right Angle Type  
WR-\*\*-P-HF-HD-A1E

**SOCKET SIDE**  
Straight • H30 Type  
WR-\*\*-S-VFH30-N1

Note 1: 3 connector heights are available for straight type.  
Parallel board-to-board distance can be selected in a range from 4mm (.157") to 9mm (.354") [9 kinds].

Table 1

|          |               | SOCKET SIDE    |               |               |          |
|----------|---------------|----------------|---------------|---------------|----------|
|          |               | Connector type | Standard type | H05 type      | H30 type |
| PIN SIDE | Standard type | 4.0mm (.157")  | 4.5mm (.177") | 7.0mm (.276") |          |
|          | 50 type       | 5.0mm (.197")  | 5.5mm (.217") | 8.0mm (.315") |          |
|          | 60 type       | 6.0mm (.236")  | 6.5mm (.256") | 9.0mm (.354") |          |

Technology to Inspire Innovation

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***“Building Technologies  
to Connect Your World”***



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