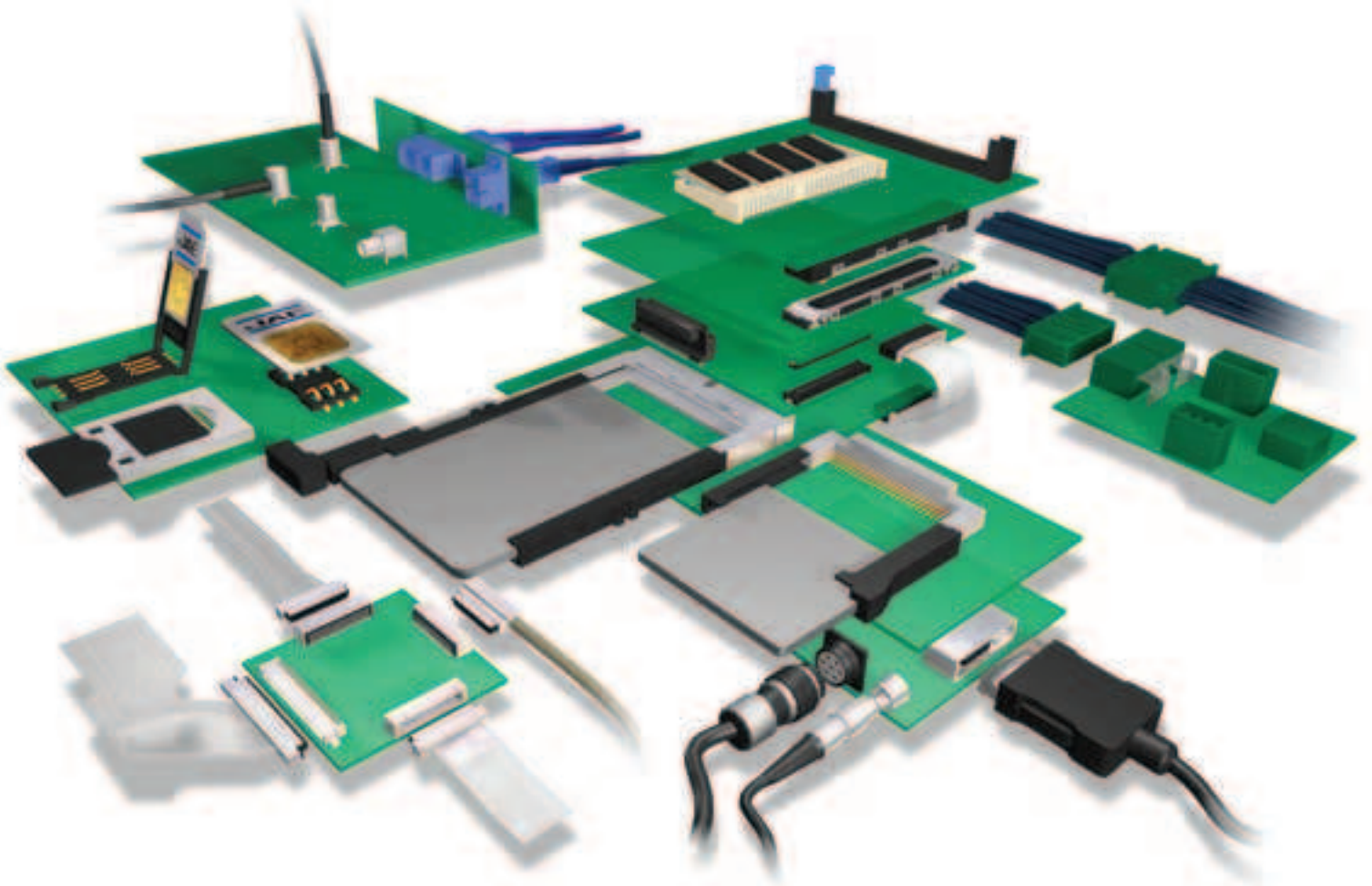


Technology to Inspire Innovation

**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**

|                |                     |         |
|----------------|---------------------|---------|
| BOARD-TO-BOARD |                     |         |
| 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      |

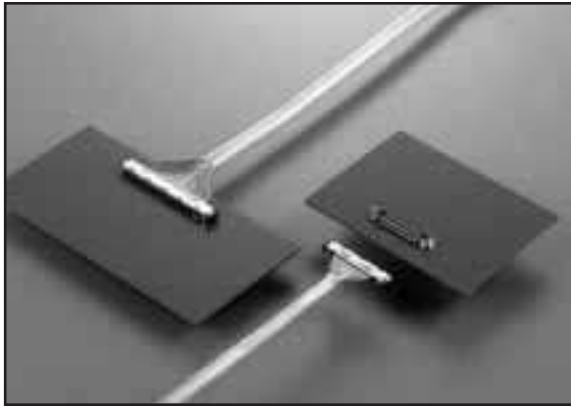
## Table of Contents

| <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.

# FI-J SERIES CONNECTORS

## 0.40mm (0.15") Contact Spacing, PCB-to-Cable/FPC Connector



### FEATURES

- Smallest 0.40mm (0.05") mounting board space in the industry
- 2.5mm (0.10") depth 1.58mm (0.06") height and 40 pin version has 21.7mm (0.85") pitch direction
- Stable connection with 0.40mm (0.15") contact length
- Highly reliable structure with supported contact points
- Gold-plated ground contact points ensure low contact resistance between plug and receptacle, plus a stable connection
- Features a mis-mating prevention structure
- Compatible with AWG 42 and AWG 44 cables
- Receptacle side available on embossed tape for automatic mounting
- Receptacle side of connector features a solder migration prevention structure, with Nickel barrier on receptacle plug
- Plug side of connector features a small hinge that can be passed through after harness assembly



The FI-J Series connectors are compatible with AWG #42 and #44 cables for mobile phones. They feature the smallest board mounting space in the industry compared with other 0.40mm (0.15") pitch connectors with a 2.5mm (0.10") depth and 1.58mm (0.06") height. The connectors also feature a mis-mating prevention structure and the small hinge on the plug side can be passed through after harness processing. The connector receptacle side is available on embossed tape for automatic mounting and ensures high mounting performance with an absorption cap.

### GENERAL SPECIFICATIONS

|                                 |                                 |
|---------------------------------|---------------------------------|
| Number of Contacts              | 20, 25, 30, 35, 40 pos.         |
| Contact Spacing                 | 0.40mm (0.15")                  |
| Operating Temperature           | -40°C to +85°C                  |
| Contact Resistance              | 40 milliohm max.                |
| Lifetime                        | 30 times                        |
| Rated Current                   | AC, DC each 0.3A per pos.       |
| Rated Voltage                   | AC, DC each 50V per pos.        |
| Insulation Resistance           | 100 megohms min.                |
| Dielectric Withstanding Voltage | 250 VAC r.m.s. (for one minute) |
| Applicable Cable                | AWG#42 to 44                    |

### MATERIALS AND FINISHES

| Description          | Materials/Finishes                                                                   |
|----------------------|--------------------------------------------------------------------------------------|
| <b>• Receptacle</b>  |                                                                                      |
| Contact              | Copper Alloy<br>Contact portion, Terminal portion:<br>Gold flash plating over Nickel |
| Hold Down            | Copper Alloy<br>Contact Portion, Terminal portion:<br>Gold flash plating over Nickel |
| Insulator            | Heat resistant plastic (UL94V-0)                                                     |
| Adsorption Insulator | Heat resistant plastic (UL94V-0)                                                     |
| <b>• Plug</b>        |                                                                                      |
| Contact              | Copper Alloy<br>Contact portion, Terminal portion:<br>Gold flash plating over Nickel |
| Insulator            | Heat resistant plastic (UL94V-0)                                                     |
| Shell                | Stainless Steel/ Gold plating over Nickel                                            |

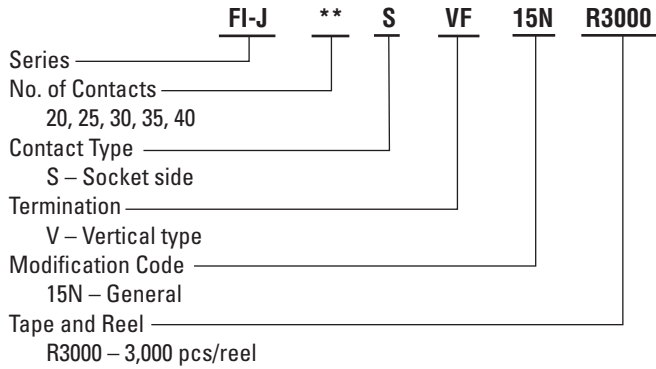
Dimensions and specifications subject to change without notice.

# FI-J SERIES CONNECTORS

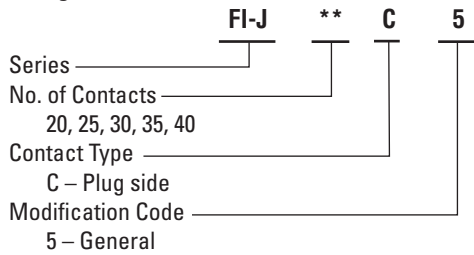
## 0.40mm (0.15") Contact Spacing, PCB-to-Cable/FPC Connector

### ORDERING INFORMATION

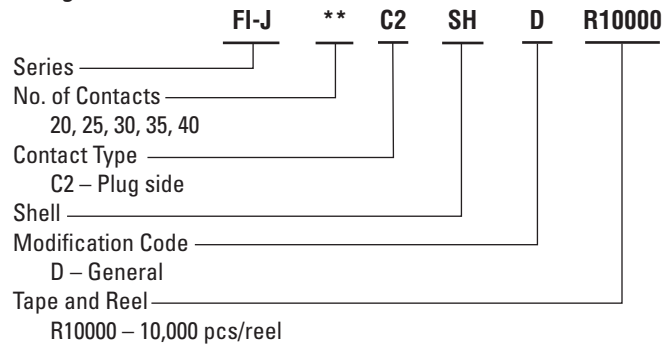
#### • Receptacle Side



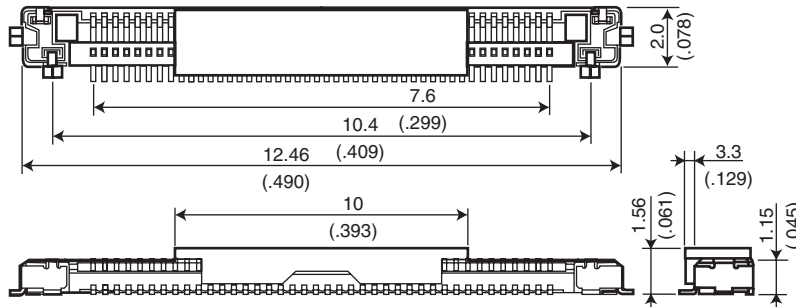
#### • Plug Side: Insulator



#### • Plug Side: Shell



Connector Profile (Ref.)

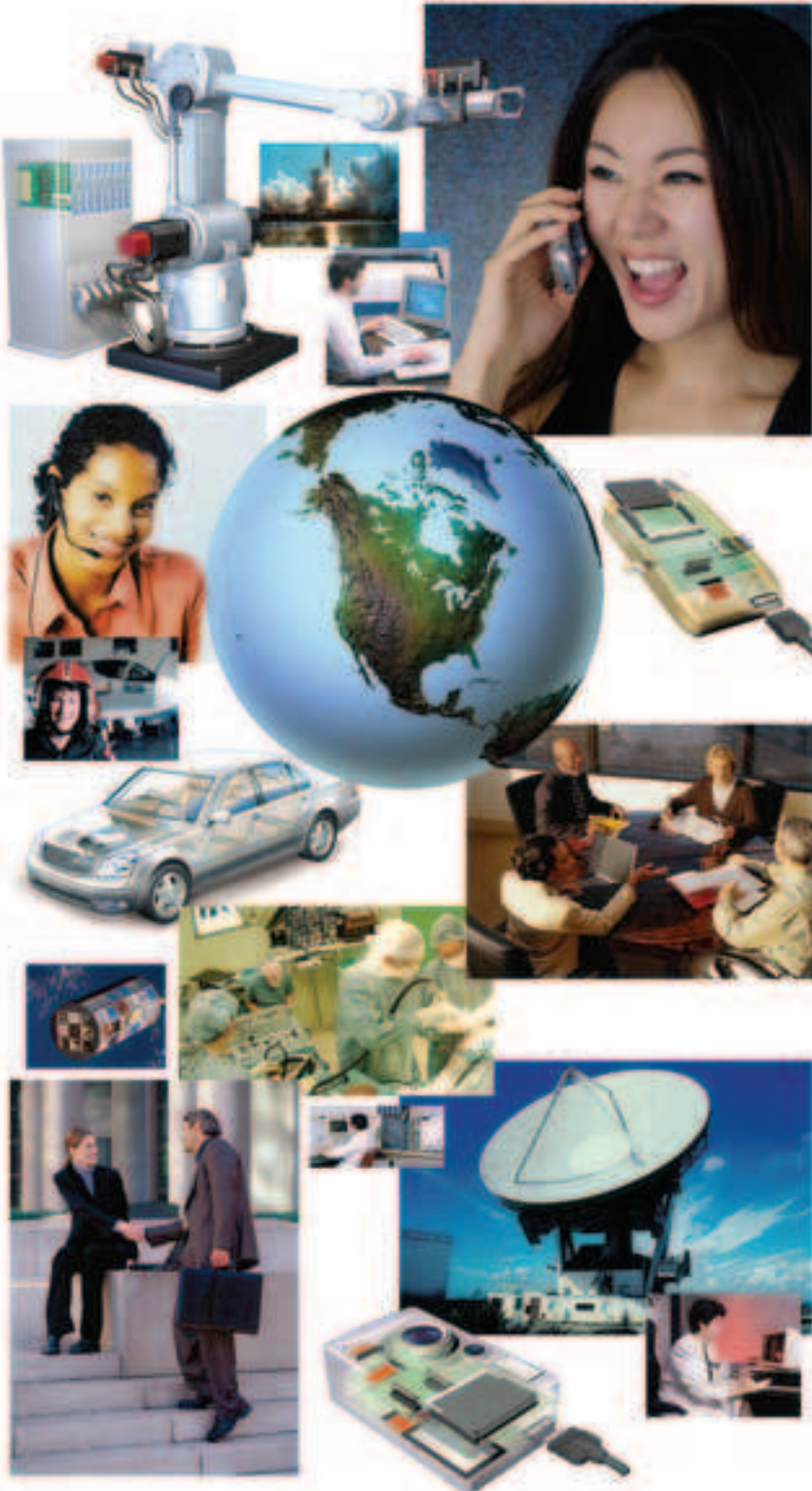


Dimensions in mm (inches).

Technology to Inspire Innovation

# JAE

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



## **Japan Aviation Electronics Industry, Limited**

1-19, Aobadai 3-chome, Meguro-ku  
Tokyo 153-8539, Japan  
Telephone: 03-3780-2736  
Fax: 03-3780-2883

## **JAE Electronics, Inc.**

142 Technology Drive, Suite 100  
Irvine, California 92618-2430, U.S.A.  
Telephone: 949-753-2600  
Fax: 949-753-2699  
800-523-7278 Toll free in the U.S.A.

## **JAE Europe**

Coliseum Business Centre  
Riverside Way, Camberley  
Surrey, GU15 3YL, England  
Telephone: 44-1276-404000  
Fax: 44-1276-404010

## **JAE Taiwan, Ltd.**

4F-1, No. 88, Chung Hsiao E. Rd.  
Sec. 2, Taipei, Taiwan, R.O.C.  
Telephone: 886-2-2396-7676  
Fax: 886-2-2392-5929

## **JAE Hong Kong, Ltd.**

Suites 1407-11, 14/F, Tower 2, The Gateway,  
25 Canton Road, Tsimshatsui, Kowloon, Hong Kong  
Telephone: 852-2723-7782  
Fax: 852-2723-9028

## **JAE Korea, Inc.**

1602, Korea City Air Tower  
159-9 Samsung-Dong, Kangnam-ku  
Seoul, 135-973, Korea  
Telephone: 82-2-551-8959  
Fax: 82-2-551-8958

## **JAE Philippines, Inc.**

PEZA Zone, Gateway Business Park, Javalera  
General Trias, 4107 Cavite, Philippines  
Telephone: 63-46-433-0285  
Fax: 63-46-433-0287

## **JAE Singapore Pte., Ltd.**

33 Tannery Lane, #02-01 Hoesteel  
Industrial Building  
Singapore 347789  
Telephone: 65-6748-1332  
Fax: 65-6748-2920

## **JAE Shanghai Co., Ltd.**

RM 1407, Shanghai Mart 2299 Yanan Rd.  
West Shanghai 200336 P.R.C.  
Telephone: 86-21-6236-0322  
Fax: 86-21-6236-1292