

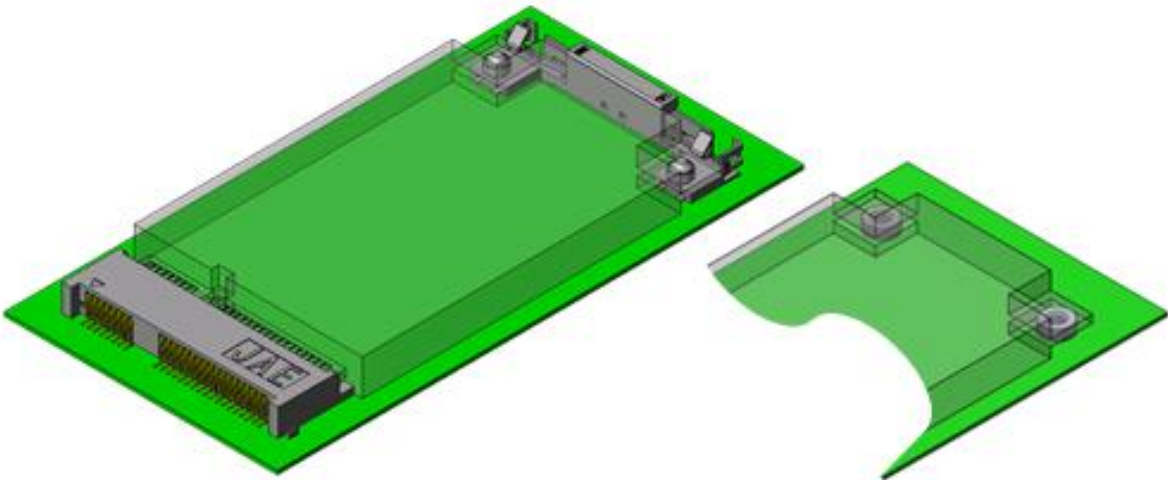
Compatible With PCI Express Mini Card CONNECTOR

# MM60 Series

MB-0147-7

Sep.2024

**RoHS Compliant**



The MM60 Series is a module socket compatible with the specifications defined by the PCI-SIG.

Application  
notebook PCs, other devices

**Features**

- Compatible with the PCI Express Mini Card Electromechanical Specification and can be used for connecting with modules with PCI Express and USB communication.
- Retention latch part available to fix module to connector.  
Latch has mechanisms on both sides for module ejection.
- Two types of module mounting heights are available.  
Stand-off type allows components of under 1.8mm height to be placed below the module.
- Connector and latch are compatible with automatic mounting.  
Embossed tape packaging.

General Specifications

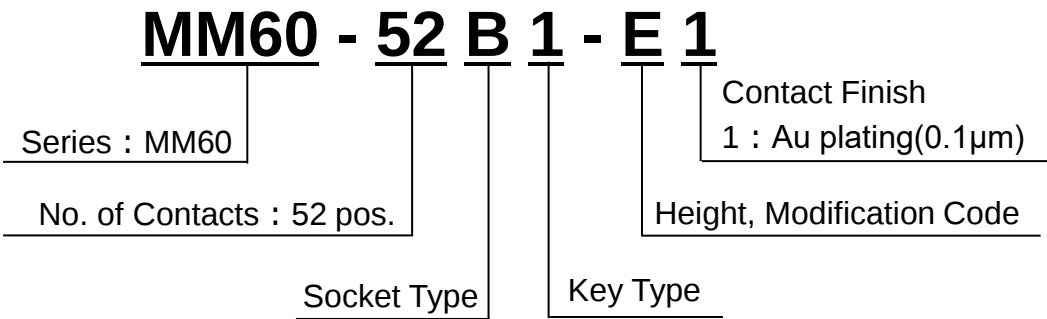
|                                 |                                                                     |
|---------------------------------|---------------------------------------------------------------------|
| Number of Contacts              | 52 pos.                                                             |
| Contact Resistance              | 60mΩ max. (initial)                                                 |
| Dielectric Withstanding Voltage | AC300Vr.m.s. (per minute)                                           |
| Durability                      | 50 times                                                            |
| Operating Temperature Range     | -40 deg. C to +85 deg. C                                            |
| Rated Current                   | 0.5A/pos.                                                           |
| Insertion Loss                  | -1dB min. (1.25GHz max.) / -5dB min.(3.75GHz max.)                  |
| Return Loss                     | -12dB max.(1.3GHz max.) / -7dB max.(2GHz max.) / -4dB(3.75GHz max.) |
| Crosstalk (Near End)            | -32dB max.(1.25GHz max.) / -26dB max.(3.75GHz max.)                 |

Materials and Finishes

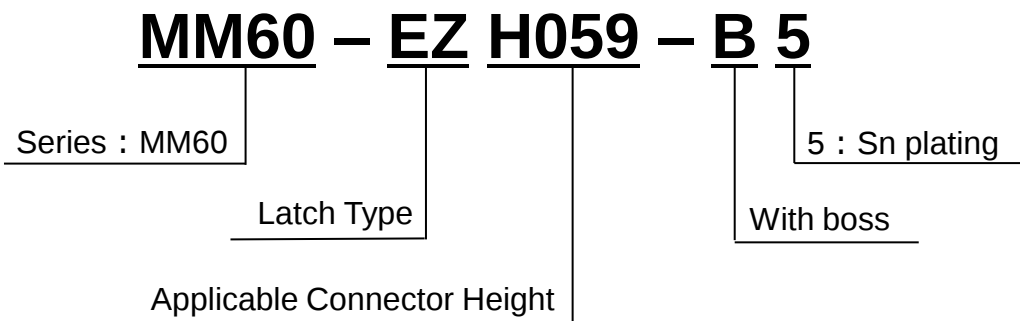
| Component | Materials                         | Finishes                                                                      |
|-----------|-----------------------------------|-------------------------------------------------------------------------------|
| Connector |                                   |                                                                               |
| Contact   | Copper alloy                      | Au plating over Ni (contact area)<br>Au flash plating over Ni (terminal area) |
| Insulator | Heat resistant material (UL94V-0) |                                                                               |
| Hold down | Copper alloy                      | Sn plating                                                                    |
| Latch     |                                   |                                                                               |
| Contact   | Stainless steel                   | Sn plating                                                                    |
| Insulator | Heat resistant material (UL94V-0) |                                                                               |
| Nut       |                                   |                                                                               |
| Nut       | Brass                             | Sn plating                                                                    |

Ordering Information

【Connector】



【Latch】

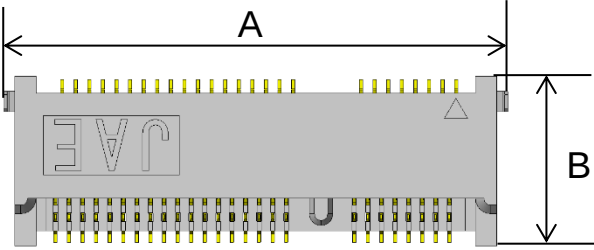


Combination

|          | Connector    | Latch          | Nut |
|----------|--------------|----------------|-----|
| Height 1 | MM60-52B1-B1 | MM60-EZH039-B5 | NT1 |
|          | MM60-52B1-G1 |                |     |
| Height 2 | MM60-52B1-E1 | MM60-EZH059-B5 | NT4 |

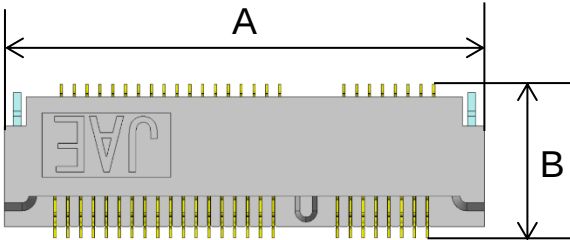
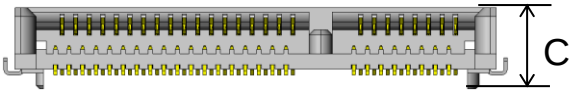
Outer Dimensions

【Connector】

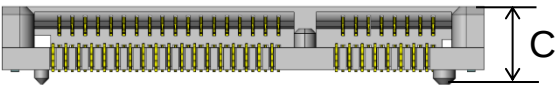


Unit : mm

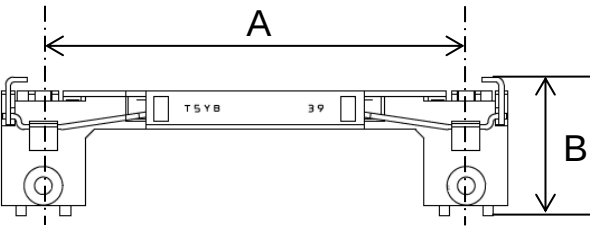
| Part Number  | A    | B    | C   |
|--------------|------|------|-----|
| MM60-52B1-B1 | 29.7 | 10.0 | 4.7 |
| MM60-52B1-E1 | 29.7 | 10.0 | 6.7 |



| Part Number  | A    | B   | C   |
|--------------|------|-----|-----|
| MM60-52B1-G1 | 29.9 | 9.6 | 4.8 |



【Latch】

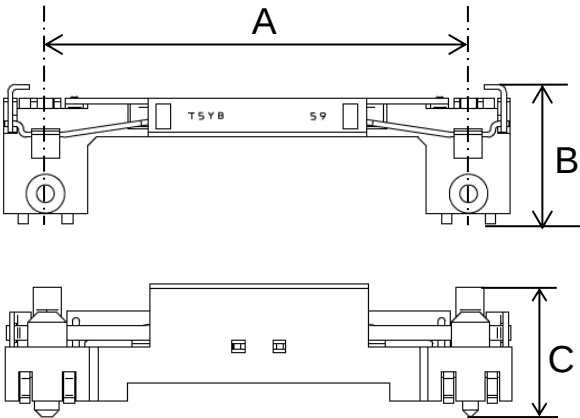


| Product name   | A    | B   | C   |
|----------------|------|-----|-----|
| MM60-EZH039-B5 | 24.2 | 7.9 | 5.6 |



Outer Dimensions

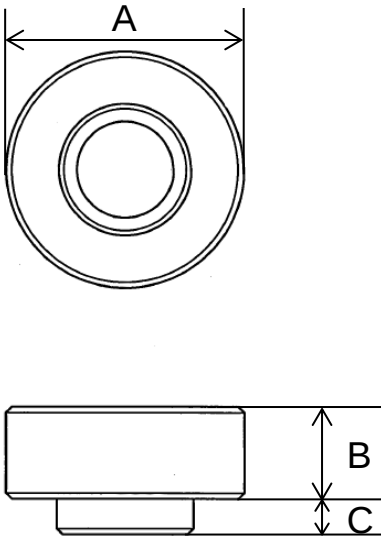
【Latch】



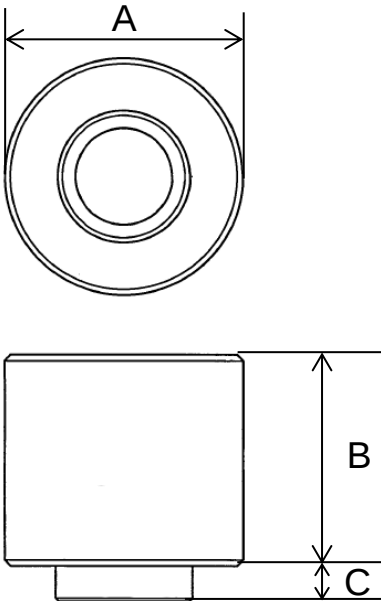
Unit : mm

| Part Number    | A    | B   | C   |
|----------------|------|-----|-----|
| MM60-EZH059-B5 | 24.2 | 7.9 | 7.6 |

【Nut】



| Part Number | A  | B    | C   |
|-------------|----|------|-----|
| NT1         | Φ4 | 1.55 | 0.6 |



| Part Number | A  | B    | C   |
|-------------|----|------|-----|
| NT4         | Φ4 | 3.55 | 0.6 |

Part Numbers and Product Drawings

| Part Number         | Drawing Number                   | Specifications | Handling Instructions |
|---------------------|----------------------------------|----------------|-----------------------|
| MM60-52B1-B1        | SJ105215<br>(Individual Product) | JACS-10313     | JAHL-10313            |
| MM60-52B1-B1-R850   | SJ105216<br>(Reeled Product)     |                |                       |
| MM60-52B1-E1        | SJ105219<br>(Individual Product) |                |                       |
| MM60-52B1-E1-R650   | SJ105220<br>(Reeled Product)     |                |                       |
| MM60-52B1-G1        | SJ110608<br>(Individual Product) | JACS-10706     |                       |
| MM60-52B1-G1-R850   | SJ110634<br>(Reeled Product)     |                |                       |
| MM60-EZH039-B5      | SJ105217<br>(Individual Product) | JACS-10313     |                       |
| MM60-EZH039-B5-R850 | SJ105218<br>(Reeled Product)     |                |                       |
| MM60-EZH059-B5      | SJ105221<br>(Individual Product) |                |                       |
| MM60-EZH059-B5-R650 | SJ105222<br>(Reeled Product)     |                |                       |
| NT1                 | SJ109548<br>(Individual Product) | -              | -                     |
| NT1R3000            | SJ109575<br>(Reeled Product)     |                |                       |
| NT4                 | SJ110869<br>(Individual Product) | -              | -                     |
| NT4R1600            | SJ110870<br>(Reeled Product)     |                |                       |

Notice:

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For purchase, a product specification must be agreed upon.
2. Users are requested to provide protection circuits and redundancy circuits to ensure safety of the equipment, and sufficiently review the suitability of JAE's products to the equipment.
3. The products presented in this brochure are designed for the uses recommended below.  
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(1) Applications that require consultation:  
(i) Please contact us if you are considering use involving a quality assurance program that you specify or that is peculiar to the industry, such as:  
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(ii) We may separately give you our support with a quality assurance program that you specify, when you think of a use such as :  
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Japan Aviation Electronics Industry, Limited

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