

Compact Waterproof Automotive Connectors

MX47 Series

CONNECTOR
MB-0216-2
Sep.2021

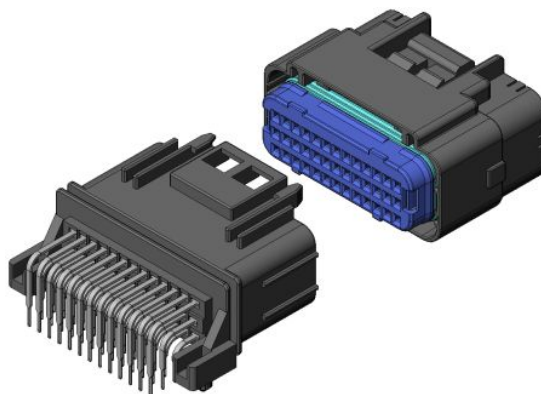
RoHS Compliant

Abstract

JAE has developed the MX47 Series compact, high-density waterproof connector for automotive applications.

MX47 Series utilizes a structure similar to the existing MX23A Series waterproof connector, but is more compact while maintaining a low height. The applicable cable and performance is equivalent or higher than MX23A, there is a guide key for secure mating, and pin terminals have Pb-free compliant complete plating.

Superior vibration resistance makes the connector ideally suited for use in harsh environments such as the engine areas of both 2 and 4-wheeled vehicles.



Applications: Waterproof ECU for Automotive use

Feature

- 2.5mm horizontal pitch, 3.6mm vertical pitch, 3 row board to wire connector.
- 39 position, different keying available.
- Guide key for secure mating.
- Dowels on both side of connector for light press-fit to board for temporary holding.
- Socket terminal is a compact box type which is strong against external force.
- Retainer is a simple structure front cap type which is easy to attach.
- Pin terminal press-fit structure to prevent leakage of potting material.
- Slim type pin terminal with 0.5mm thickness and 1.0mm width.

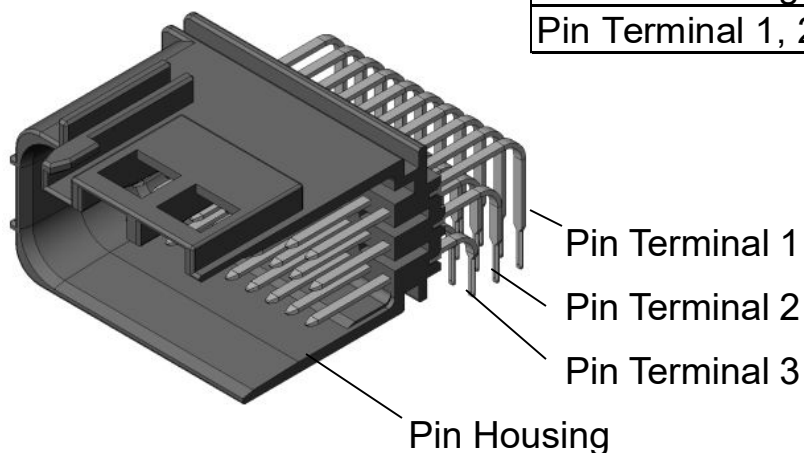
General Specifications

Number of terminals	39 positions (Different keying available)
Operating Temperature	-40°C ~ +125 °C
Terminal Resistance	Initial:5m Ω max., After test:10m Ω max.
Rated Current	3A
Connector Insertion Force	100N max.
Waterproof	98 kPa min. (initial)
Vibration Resistance	20G (50 to 1000Hz) each pole / 9 hours
Applicable Cable	AVSS 0.3 to 1.25sq

Structure, Materials and Finishes

■ Pin Connector

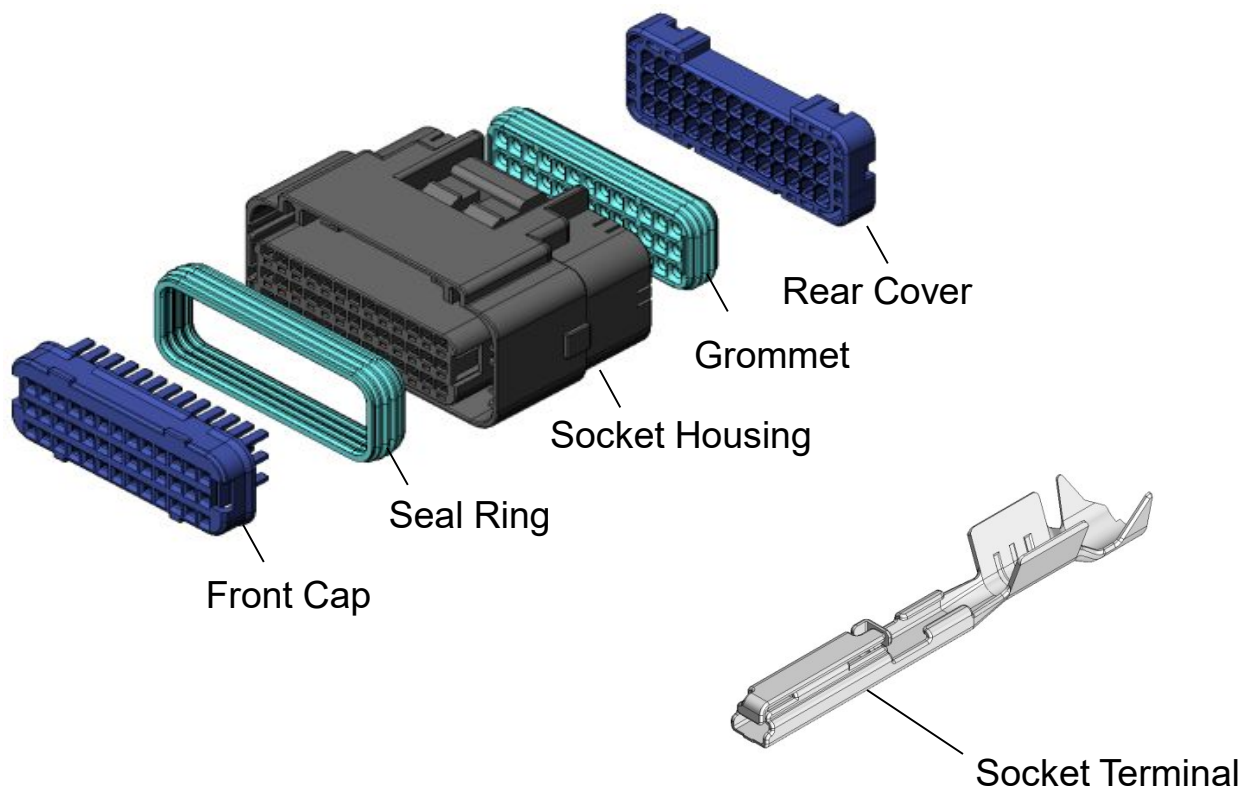
Component	Material / Finish
Pin Housing	30% GF PBT
Pin Terminal 1, 2, 3	Brass / Tin plating



■ Socket Connector

Front Cap
Socket Terminal

Component	Material / Finish
Socket Housing	30%GF PBT
Seal Ring	Silicone Rubber
Grommet	Silicone Rubber
Rear Cover	30%GF PBT
Front Cap	30%GF PBT
Socket Terminal	Brass / Tin plating

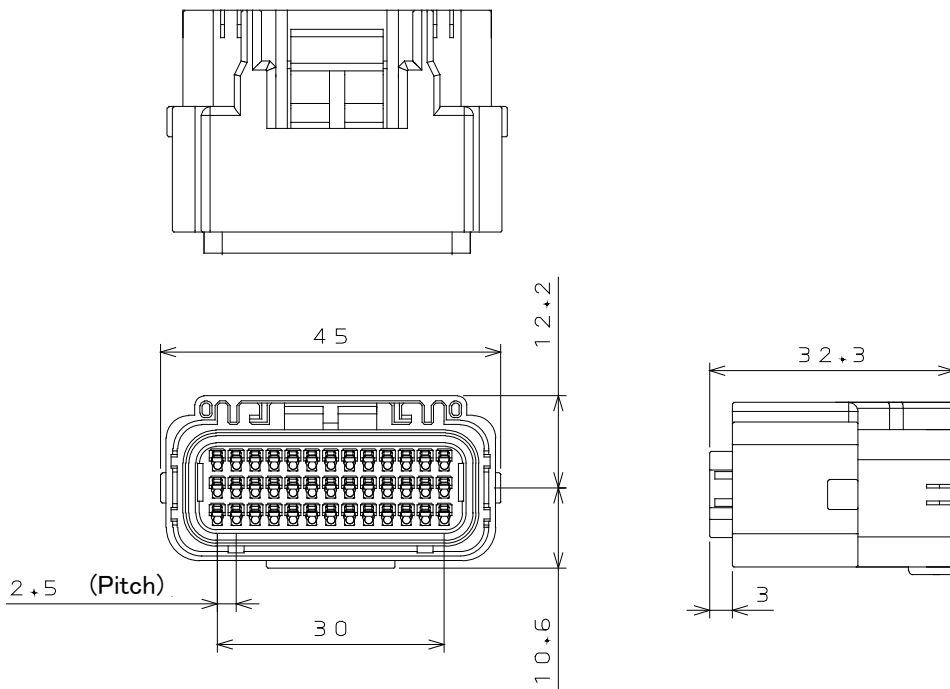


Product Drawing

■ Socket Housing (Available with different keying)

Part Number: MX47039SF1

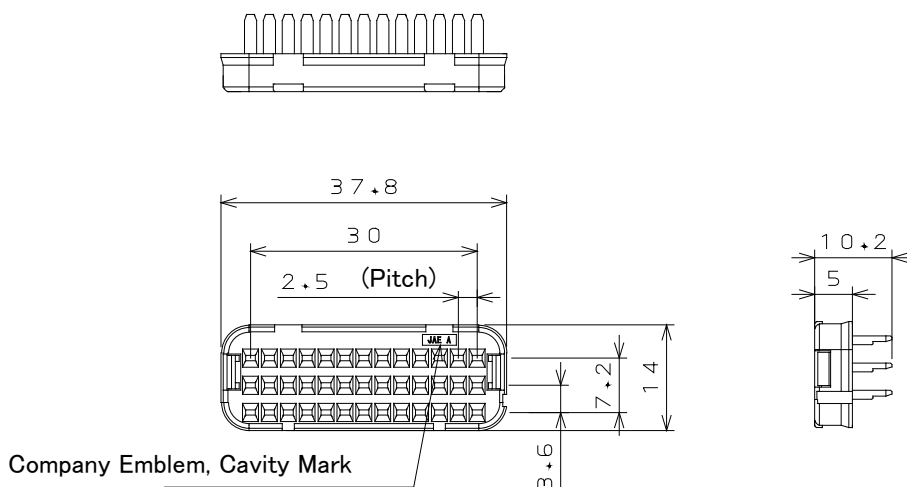
SJ Drawing: SJ109556



■ Front Cap (Same for different keying product)

Part Number: MX47039XF1

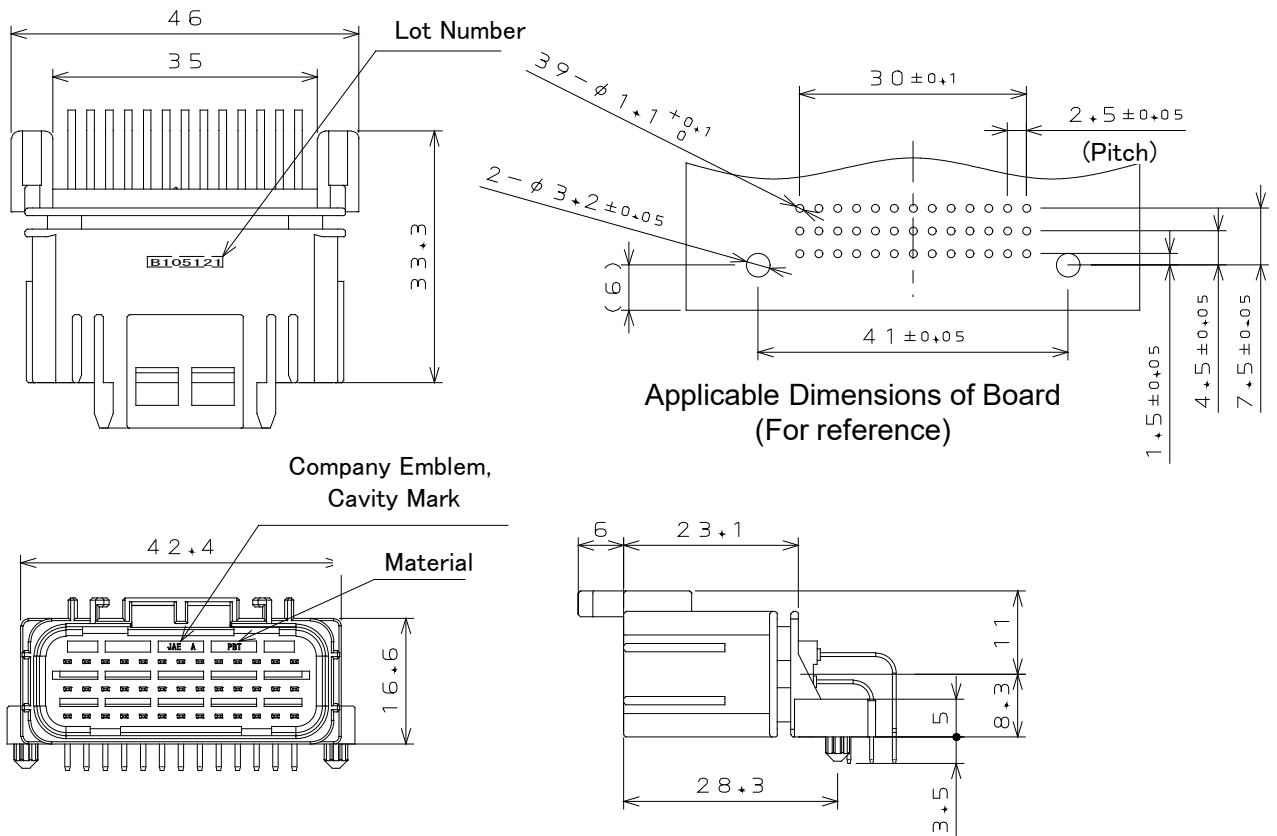
SJ Drawing: SJ109558



■ Pin Connector (Available with different keying)

Part Number: MX47039NF1

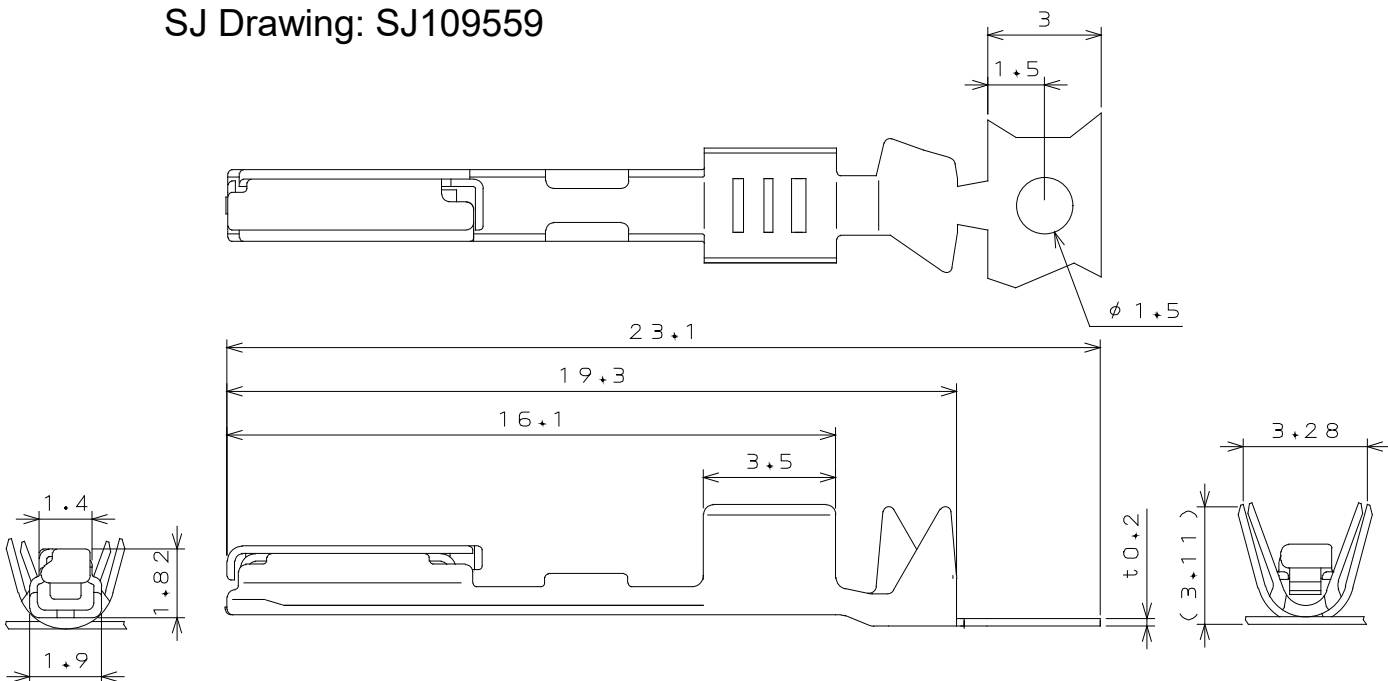
SJ Drawing: SJ109562



■ Socket Terminal (Two other sizes available according to wire size.)

Part Number: M47S65H2FA

SJ Drawing: SJ109559



Part Numbers and Drawing Numbers

	Part Number	SJ Drawing	Remarks
Pin Connector	MX47039NF1	SJ109562	Standard Product
	MX47039NF2	SJ109563	Different Keying Product
Socket Connector	MX47039SF1	SJ109556	Standard Product
	MX47039SF2	SJ109557	Different Keying Product
Front Cap	MX47039XF1	SJ109558	Can be used for both standard and different keying products
Socket Terminal	M47S65H4FA	SJ109561	Refer to below for applicable wire and Tooling.
	M47S65H3FA	SJ109560	
	M47S65H2FA	SJ109559	
Dummy Plug	M120-55780	SJ036379	Same as MX23A Connector

Crimp Tools

Socket Terminal	Applicable Wire	Hand Crimp Tool	Semi-Automatic Applicator
M47S65H4FA	0.3~0.5mm ² , φ1.4~1.6 AVSS 0.3, 0.5 equivalent	CT170-14-MX47	3502-MX47-2
M47S65H3FA	0.75~0.85mm ² , φ1.8 AVSS0.85 equivalent	CT170-14B-MX47	
M47S65H2FA	1.25mm ² , φ2.1 AVSS1.25 equivalent	CT170-14C-MX47	

Terminal Removal Tool : ET-MX47

Specifications : JACS-10621

Handling Instructions : JAHL-10621

Notice:

1. The values specified in this brochure are only for reference. The products and their specifications are subject to change without notice. Contact our sales staff for further information before considering or ordering any of our products. 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.

We strongly suggest you contact our sales staff when considering use of any of the products in any other way than the recommended applications or for a specific use that requires an extremely high reliability.

(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:

Automotive electrical components, train control, telecommunications devices (mainline), traffic light control, electric power, combustion control, fire prevention or security systems, disaster prevention equipment, etc.

(ii) We may separately give you our support with a quality assurance program that

you specify, when you think of a use such as :

Aviation or space equipment, submarine repeaters, nuclear power control systems, medical equipment for life support, etc.

(2) Recommended applications include:

Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment, etc.

Japan Aviation Electronics Industry, Limited

* The specifications in this brochure are subject to change without notice. Please contact JAE for information.