

# Yamaichi FPS009-4200-0 SD Card Connector for Automobile Infotainment System

In recent years, the automobile infotainment system has become the leading digital device in the automobile market. As a result, mobile memory applications are required to handle tough operating conditions and vibration as a result of the vehicle's movement. In order to address these difficult requirements, Yamaichi has designed our FPS009-4200-0 SD card connector specifically for the automobile infotainment environment. Its Push-Lock design secures the SD card's position and eliminates the possibility of accidental ejection. Furthermore, many of its product design features such as Dual-Bean contacts and Quad-GND pads provide the connector with maximum card connection & signal performance. With these advantages, our FPS009-4200-0 is definitely the best solution for automobile infotainment SD card applications!

## Application: Automobile Infotainment SD Card Connector

### Features:

- One-action Push-Lock feature.
- Dual-Bean Contact for single signal tab connection.
- Quad-GND (4) Pad for EMI/ESD Prevention & Soldering Stability.
- Can withstand over 100G pad impact force for ALL 6 axes of direction. (With Card inserted)

### General Product SPEC:

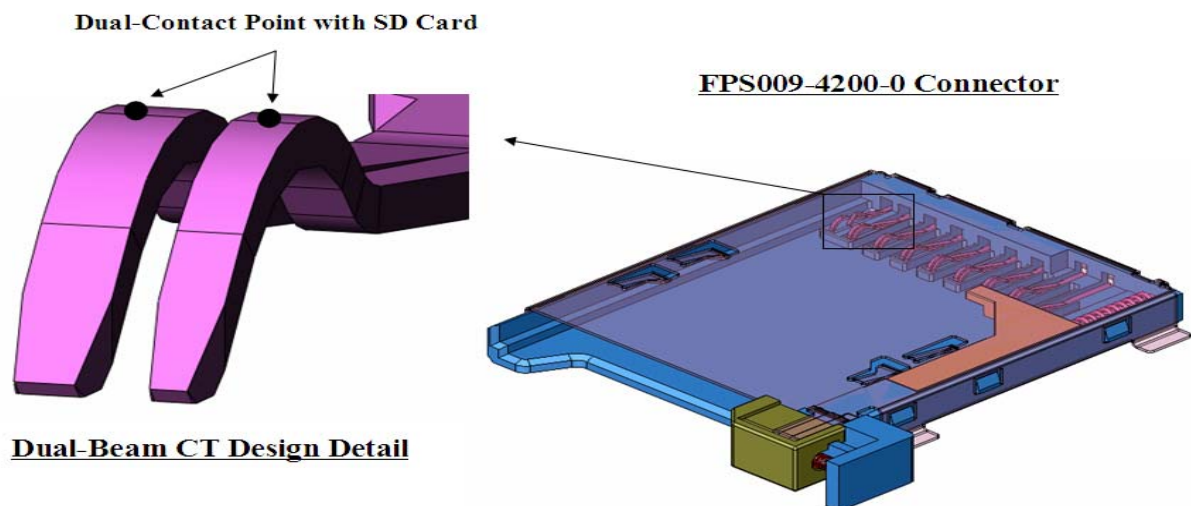
- Current per contact = 0.5A MAX
- Voltage Rating = DC 5V
- Operating Temperature = -25°C ~ +85°C
- Mating Life Cycle: 100 times

### Product Features Graphics and Charts:

- **Duo-Beam CT design**

#### Yamaichi FPS009-4200-0 SD Card connector Duo-beam contact feature

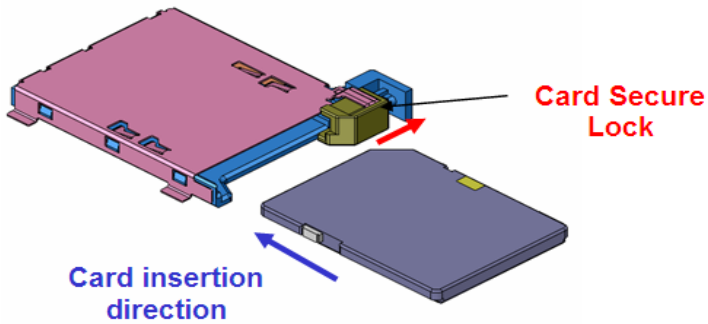
Duo-beam contact can withstand harsh environment and tough mechanical test due to these contacts' contact force and length are different and both of these individual contacts can avoid resonance situation simultaneously. Both contact can stay connected to the SD Card signal PAD.



- **FPS009-4200-0 Automotive SD Card connector**

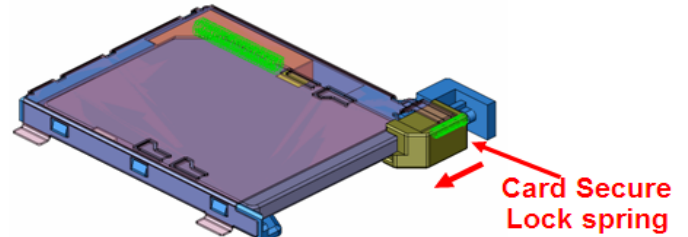
# FPS009-4200-0 SD Card Push-Lock Operation Method

## Step 1: Card Insertion



When SD Card is inserted into the connector, the connector's SD card secure lock slides back for easy card insertion process.

## Step 2: Auto-Lock Engage

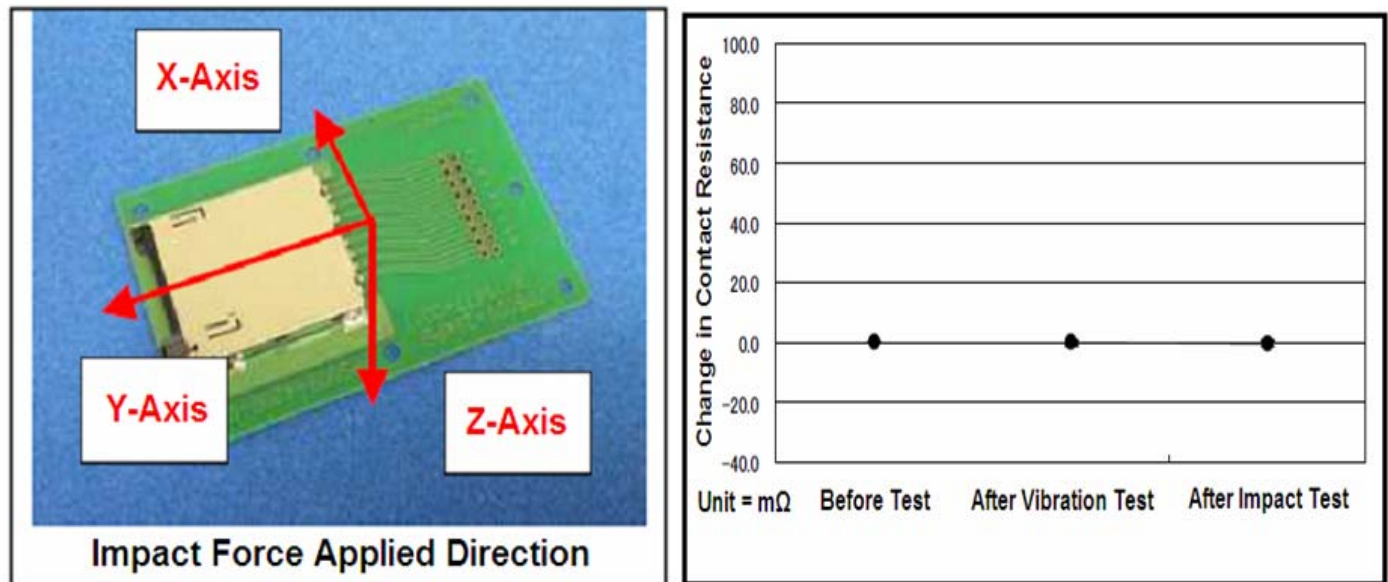


Once SD card is fully inserted, the card secure lock will return automatically to its original position. This auto-function is made possible by the coil spring behind the lock. Once the lock returns to its position, SD card is locked and secured

- FPS009-4200-0 100G Impact Force Test Result

# FPS009-4200-0 Impact & Vibration Test

Connector performed greatly after 100G Force Impact Test and Vibration test; results show the connector can handle tough operation environments such as Automobile Infotainment Systems.



FPS009-4200-0 Impact Force and Vibration Test Criteria		
Test Name	Impact Force	Vibration
Applied Force	100G (980m/s <sup>2</sup> )	arpx. 2.0G (20m/s <sup>2</sup> )
Force Applied Direction	X, Y, Z Axis	X, Y, Z Axis
Test Cycle	3 times in each direction	10Hz - 2,000Hz - 10Hz for 5 mins = one cycle. 10 Cycles for each direction