

BOARD-TO-BOARD 3-WAY SPRING-LOADED CONNECTOR USED AS AN RF INTERFACE



1. DESCRIPTION AND GENERAL FEATURES

GENERAL DESCRIPTION

Low profile 3-way spring-loaded connector with limited board spacing. This connector is connecting two printed circuit boards with three 3.5mm height spring-loaded contacts. Maximum stroke is 1.0mm. Product is supplied in tape and reel packaging. The challenge was to replace a fragile stamped and formed coax connector with a very low profile high-reliable connector and uses minimal space.

ADVANTAGES

Main advantage of this connector is its small size and high performances especially under vibrations. Optimal connection between two PCB: spring-loaded connector compensates errors of parallelism and coplanarity. Connector can easily be positioned on the board with a pick-and-place vacuum system.

APPLICATIONS

This connector is used as an RF interface for cellular wireless communication modules used in mobile computing or M2M industrial in automotive applications. High-frequency signal is transmitted to and from the antenna through this 3-way connector placed between two boards. Pin arrangement is optimized to transmit RF antenna signals up to 3 GHz.

OPTIONAL VERSIONS

Current version can be modified to meet with your specific requirements. Plastic carrier and contacts can easily be adapted to fit your application.

2. TECHNICAL SPECIFICATIONS

ENVIRONMENTAL

Operating temperature	-55 ... + 85°C
Climatic category (IEC)	55 / 85 / 21
Solderability	235°C, 5s
Resistance to soldering heat	280°C, 10s

MATERIALS

Contact barrel and piston	Machined brass, Gold plated 0.5 µm over 2.5 µm Ni
Spring	Spring steel wire EN10270-1
Insulator	Glass filled polyester PCT-GF30-Fr, self-extinguishing UL94V-0, colour black

MECHANICAL CHARACTERISTICS

Max. stroke	1 mm
Forces	0.2 N initial, 0.7 N at ½ stroke
Mechanical life	Min. 50'000 cycles
Coplanarity SMD terminations	Max. 0.1 mm

ELECTRICAL CHARACTERISTICS

Operating voltage	100 V _{RMS} / 150 V _{DC}
Continuous operating current	Max. 1 A per terminal
Contact resistance	Max. 10 mΩ (static measurement, half-way position)
Insulation resistance	Min. 10'000 MΩ (after climatic tests)
Dielectric strength	500 V _{RMS}
Air and creepage distances	0.50 mm
Capacitance	1 pF max.

3. ORDERING INFORMATION

ORDER CODE NUMBERS

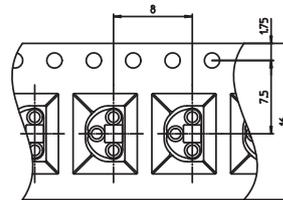
Part number: 9PM-SS-0003-02-248

PACKAGING INFORMATION

T&R packaging: 2'400 pcs / reel 12'000 pcs / box

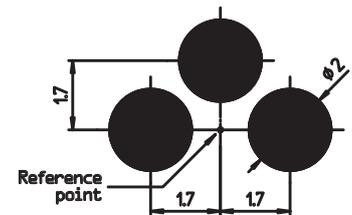
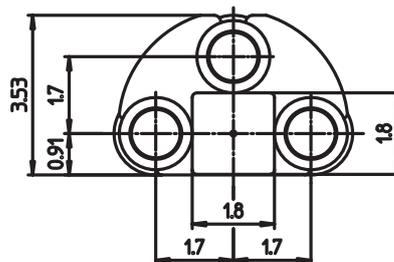
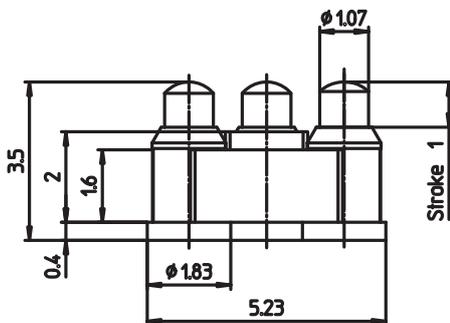
AVAILABILITY

On request, MOQ 1 reel 2'400 pcs



Tape Specification

4. TECHNICAL DRAWINGS



PCB Layout

Connector 9PM-SS-0003-02-248