

# Filtered Modular Jack Connectors

Protecting signals from electromagnetic interference (EMI) is now more important than ever. Spectrum gives you more choices in keeping your signals clean and free of EMI. Whatever the level of protection your application requires, we offer signal conditioning products that meet varied levels of price and performance.

These compact, low-cost, filtered printed circuit board RJ45 modular jack connectors from Spectrum offer an inexpensive way to protect equipment from conducted and radiated electromagnetic interference (EMI), while meeting all appropriate performance requirements. Offering compact size and high reliability, these new connectors are fully intermateable and interchangeable with existing standard product. The low profile and narrow width of the multi-port style allows more ports to be packed into less space.

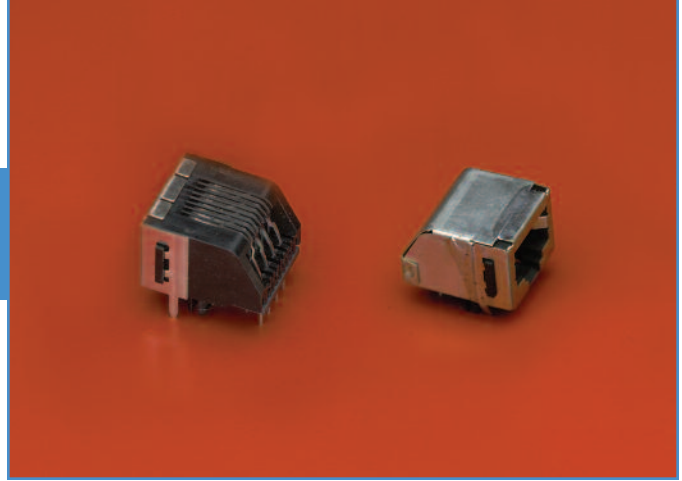
Filtered versions can be supplied in shielded or unshielded versions. Redundant shielding tabs ensure that a low impedance ground path is maintained across the interface. These flame retardant polyester thermoplastic connectors are compatible with wave solder environments, and utilize duplex plated contacts with solder tails.

Modular jack connectors assist with FCC Part 15 A & B; and CISPR 22 compliance.

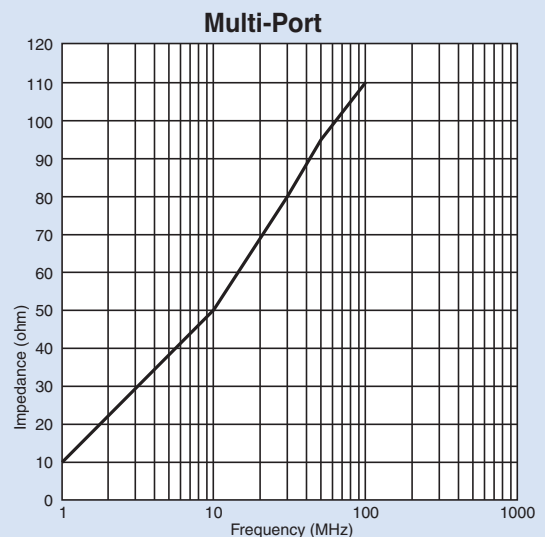
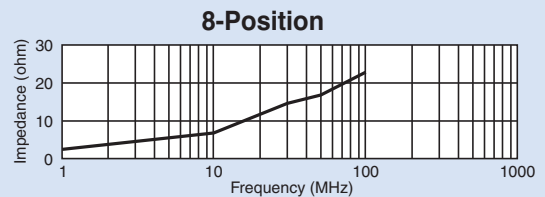
Applications for this type of connector are widely diversified and include: LANs, WANs, network cards, broadband transmission equipment, workstations, peripherals, fax/modems, copy machines and multiplexing.

## Features

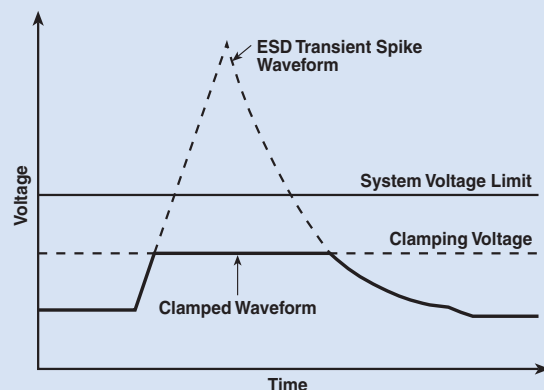
- RoHS compliant
- Lower installed cost
- Assists with FCC Part 15 A & B; and CISPR 22 compliance
- Drop-in replacement, matched footprint
- All circuit lines protected
- Inductor, capacitor or ESD versions
- Unshielded or shielded versions
- Select lead versions available
- High temperature versions available for reflow processes



## Typical Impedance vs. Frequency (Ferrite Version)



## Typical Time Voltage Curves (ESD Version)



Typical Time-Voltage Curve of Transient Spike on Integrated Protected Connector with Capacitance (Parts with Working Voltage Code starting with 0)

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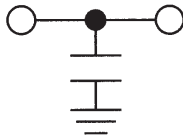


## Equivalent Circuit

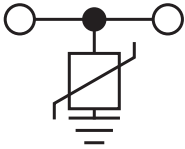
**Ferrite Version**



**Capacitive Version**



**ESD Version**



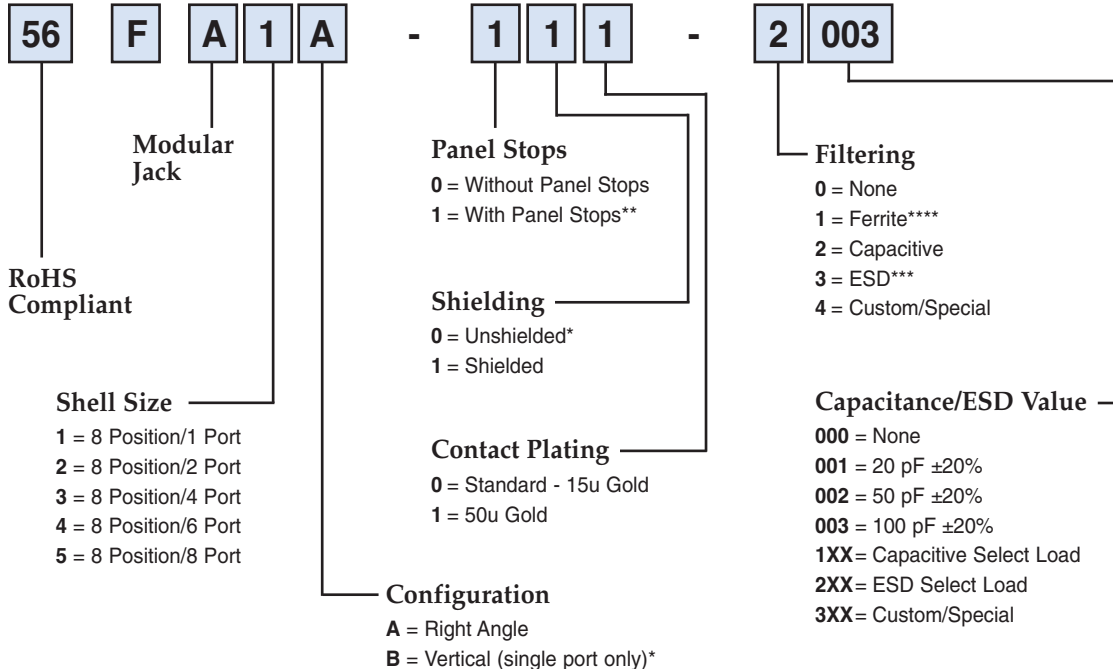
## Minimum Insertion Loss (dB) (Capacitive Version)

Part Number	100MHz	500MHz	1000MHz
20pF	—	4	8
50pF	—	11	15
100pF	4	15	20

## Ordering Information

*Example:* **56FA1A-111-2003**

This part number represents a RoHS compliant 8 position/ 1 port filtered modular jack connector that can be mounted at a right angle. It has panel stops, is shielded, has 50u gold contact plating and provides capacitive filtering with a value of 100pF and a tolerance of  $\pm 20\%$ .



\* Capacitive and ESD option not available for vertical and unshielded mod jacks  
 \*\* Not available on multiport versions  
 \*\*\* Customer to specify working voltage or clamping voltage for protected lines  
 \*\*\*\* Vertical configurations & versions without panel stops are not available with ferrite.

Note 1: Other capacitance values are available. Consult factory.  
 Note 2: Consult factory for mechanical drawing of part and PCB layout.