# M–Series™ 56

56GB/S HIGH SPEED MEZZANINE BGA CONNECTOR SYSTEM

Leveraging proven technologies, including an industry leading BGA design, offering superior self–aligning and self–leveling. With a next generation differential pair contact design for up to 56Gb/s NRZ and 112Gb/s PAM4 performance.

- High density, high speed, dual–point contacts
- Self–aligning/leveling for multiple connector use
- 1.6mm column to column pitch
- 56Gb/s NRZ and 112Gb/s PAM4 performance
- Stack Heights: 4mm & 5mm

TARGET MARKETS

FEATURES

- Dedicated 85Ω and 92Ω Designs
- 22+ year old solder joint reliability per IPC–SM–785
- Industry–leading self–alignment
- Integrated pin protection on receptacle connector
- Proven contact mating beam geometries with 2–pts of contact
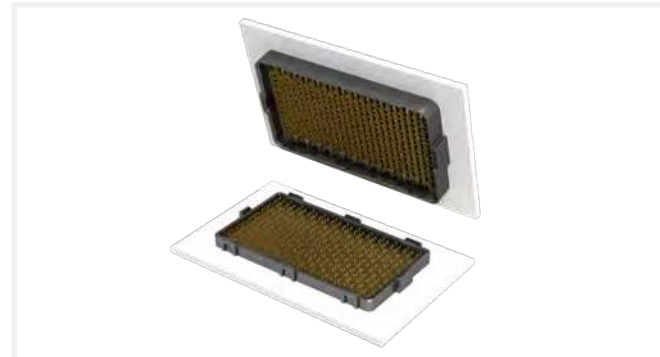
BENEFITS

- Impedance matched for optimal peformance
- Quality and Reliability
- Supports multiple connector applications
- Durable mating interface design eliminates bent pins
- Reliable peformance through shock and vibration

TECHNICAL INFORMATION

MATERIAL

- Housing: Liquid crystal polymer
- Contact Base Metal: Copper alloy
- Solder Spheres: 95.5Sn/4Ag/0.5Cu

ELECTRICAL PERFORMANCE

- Insulation Resistance: 1000MΩ min
- Dielectric withstanding voltage: 2000V AC max
  1.5A < 30°C $\triangle$ T (all contacts energized)

MECHANICAL PERFORMANCE

- Durability: 200 mating cycles
- Contact Wipe: 1.0mm nominal

ENVIRONMENTAL

- Pb Free
- Be Free

PACKAGING

- Tape and Reel

TARGET MARKETS/APPLICATIONS

Router and Servers
Data Center
Network

Telecom
Datacom
Switches and Routers

Car Navigation Systems

Imaging

Gaming Machine
Test Equipment

Entertainment PC

PART NUMBERS

DESCRIPTION	PRODUCT FAMILY DRAWING
M–Series™ 56 Receptacle, 4mm, 4 Pair x 12–40 Column	10154179c
M–Series™ 56 Plug, 0mm, 4 Pair x 12–40 Column	10154178c
M–Series™ 56 Plug, 1mm, 4 Pair x 12–40 Column	10154425c

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