



FEATURES AND SPECIFICATIONS

查询"87786-1002"供应商

Molex expands its offering of Voltage Regulator Module (VRM) connectors with the addition of a 24-signal, 38-power circuit configuration

The necessity for a highly efficient DC-to-DC power conversion to be located close to the processor is vital, especially in today's high performance microprocessors. Molex provides such a solution in the iCool™ Low Profile VRM connectors. Incorporating a low loop inductance design, the iCool is created exclusively for high output currents at high slew rates for applications like servers, PCs and workstations.

Designed for both the VRM 10.0 and 11.0 applications, these VRM connectors handle up to 150 amps of current (based on 400 FLM) in the 4.00" connectors under ambient temperatures of up to 60°C. Configurations of 200A or more.

This new revision includes the series 78086. This new surface-mount version has a lower profile and narrower body compared to the rest of VRM connectors. This provides greater options for customers who have real estate constraints in their design.

Features

- High-temperature thermoplastic housing
- Open housing design
- Four beveled metal pins (Forklocks)
- Low loop inductance design
- Plastic locating peg
- Unique reverse angle latch notch feature

Benefits

- Withstands lead-free process
- Allows air flow to cool the contacts
- Secure connectors to PCB against shock and vibration
- Ideal for high slew rates characteristics
- Ensures proper insertion and polarization on the PCB
- Retains the VR Module securely during shock and vibration

1.00mm (.039") Pitch iCool™ Low Profile VRM Connector

87786, 78086

Vertical, Surface Mount

87787, 87810

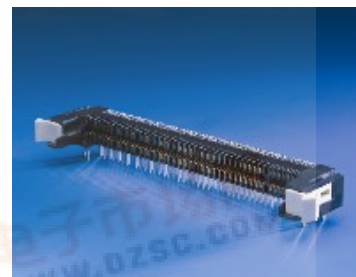
Vertical, Through Hole

87818

Right Angle, Through Hole



iCool Vertical versions



iCool Right Angle versions

SPECIFICATIONS

Reference Information

Packaging: Tray
Mates With: Voltage Regulator Module
Designed In: Millimeters

Electrical

Voltage : Power: 48V
Signal: 48V

Current : Refer to Temperature Rise
Chart on Page 3

Contact Resistance :
For series 87786, 87787, 87810 and 78086
Power 5 milliohms max.
Signal 10 milliohms max.

For series 87818
Power 7.5 milliohms max.
Signal 15 milliohms max.

Dielectric Withstanding Voltage: 1100V AC

Insulation Resistance: 5000 Megohms min.

Mechanical

Contact Retention to Housing:
For series 87786, 87787, 87810 and 78086
Power: 3.43N min/pin
Signal: 3.43N min/pin

For series 87818
Power: 4.90N min/pin
Signal: 3.43N min/pin.

Insertion Force to PCB (Total):
For series 87786, 87787, 87818 and 78086
90.22N max.

For Series 87810
45.11N max.

Mating Force: 245.25N max.

Unmating Force:
For series 87786, 87787, 87818 and 78086
88.26N max. (Force required to open latches)

For series 87810 (No latch)
98.1N min. (Force required to pull out module directly)

Durability : 25 cycles

Physical

Housing: Thermoplastic, high temperature, UL 94V-0

Contact: Copper (Cu) Alloy

Plating:

Contact Area — 0.76μm(30μ") Gold
Solder tail plating — Tin(Sn), Lead-free
Underplating — Nickel (Ni)

Operating Temperature: -10°C to +105°C



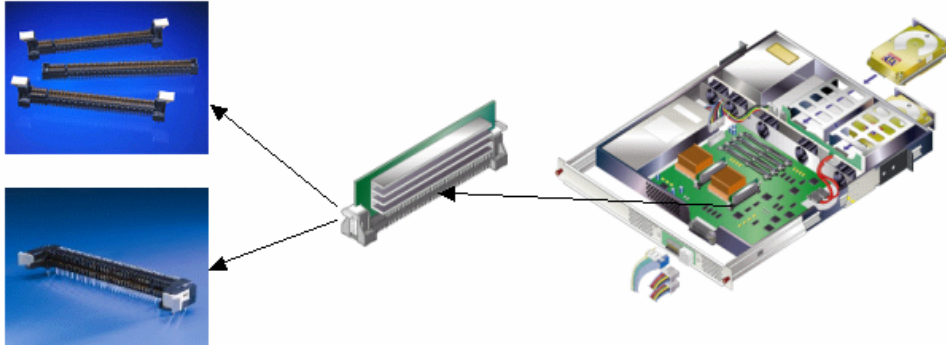
MARKETS AND APPLICATIONS

[查询"87786-1002"供应商](#)

- Specifically targeted at 1U and 2U servers but has application in all types of Servers
- Small Form Factor PCs and Workstations



1.00mm (.039") Pitch iCool™ Low Profile VRM Connector



87786, 78086

Vertical, Surface Mount

87787, 87810

Vertical, Through Hole

87818

Right Angle, Through Hole

ORDERING INFORMATION

| | Lead-Free Order No. | Description | Circuits Details |
|--|---------------------|--|---------------------|
| | 78086-0001 | Vertical, Surface Mount with Latches | Signal 24, Power 38 |
| | 87786-1002 | Vertical, Surface Mount with Latches | Signal 20, Power 72 |
| | 87786-1011 | Vertical, Surface Mount with Latches | Signal 24, Power 70 |
| | 87787-1002 | Vertical, Through Hole with Latches | Signal 20, Power 72 |
| | 87787-1011 | Vertical, Through Hole with Latches | Signal 24, Power 70 |
| | 87810-1001 | Vertical, Through Hole without Tower | Signal 22, Power 88 |
| | 87810-1002 | Vertical, Through Hole with Tower | Signal 22, Power 88 |
| | 87818-1001 | Right Angle, Through Hole with Latches | Signal 20, Power 72 |



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