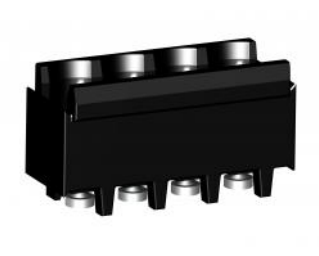
Surface Mount Terminal Blocks

120-M-221-SMD | 5.00 mm (0.197 in) Spacing - 2-24 poles

PICTURES



120-M-221-SMD

120-M-221-SMD & 120-D-111

TECHNICAL INFORMATION

Description

US Patent # 7,207,811 B2

120-M-221-SMD header is a multi-pole 5 mm connector that performs total dynamic adaptability to planar variations of PCB. Contact pins of this product are capable to move in all X, Y, Z directions. The first result of this total co-planar adaptability, is the fact that even the slightest variation of the PCB planarity is compensated during the reflow soldering process. The second result is the elimination of the CTE (Coefficient of Thermal Expansion) mismatch. It is because of its particular design, that pins are capable to compensate the negative effect of the different expansion parameters of both thermo resistant material of the plastic housing and the Epoxy material of the PCB. It has been computed that for an extreme expansion case, the plastic housing could move on OX direction as much as 0.1 mm. In the majority of the cases the impact of such differential move would fracture or dislocate the solder contact area between the pin and the PCB. This phenomena is totally avoided through the special pin design. This connector type brings therefore a breakthrough solution into the SMT industry: total co-planarity dynamic adaptability and elimination of CTE mismatch.

Type 120-M-221-SMD terminal block has been specially designed to allow effective potting of PC boards. The molding design prevents seepage of the potting material into the wire clamping area up to 7.5 mm (0.295 in.) from the board. Removable thermo resistant pick caps are supplied when packed in tape and reel. This allows automated pick & place applications.

Header

Surface Mount Terminal Blocks

Surface Mount adjustable to PCB planar variations

Technical Data

Center to Center Spacing: 5.000 mm (0.197 in)

Bill of Materials

Molding : HT Polyamide PA46 30% GF (Glass fiber reinforce), Self extinguishing UL 94, V-0
Color : Black
Temperature limits :
- **Short Time :** 250°C (482°F)
- **Continuous :** 105°C (221°F)
- **Low Limit :** -40°C (-40°F)

Comparative Tracking Index : CTI ? 250 V
Oxygen Index Rating : 37 %

Solder Pin: Tin plated copper alloy 1.1 mm (0.043 in.)
Average weight per pole: 0.65 g

Application

You can convert on your board 5 mm connector receptacle made for wave solder or through hole reflow to 120-M-221-SMD genuine surface mount connector. You can increase PCB packaging and component density by using both sides of the PCB, reduce and eliminate set-up costs, simplify and streamline your processes.

Universal, thermo resistant keyed pick cap is designed to ensure pick and place capability of headers for both even or odd pole versions. 56 mm width tape in 13 in. (330 mm) dia reel (300 pieces / reel) is available for 2,3,4,5,6 poles. Other tape and reel configurations can be manufactured upon customer request. Connectors of more than 10 poles can be shipped in trays upon customer request.

APROVAL INFORMATION

UL File No. E69841 | CSA File No. LR24322

Type	Current (A)	Voltage (V)	Application Group	AWG	Screw Tightening Torque
120-M-221-SMD	15	300	B		
5.0 mm	10	300	D		
120-M-221-SMD	15	300	B		
5.0 mm	10	300	D, E		

PLUGGING PARTS

Plug-In Direction Perpendicular to PCB and Wire Entrance Parallel to PCB

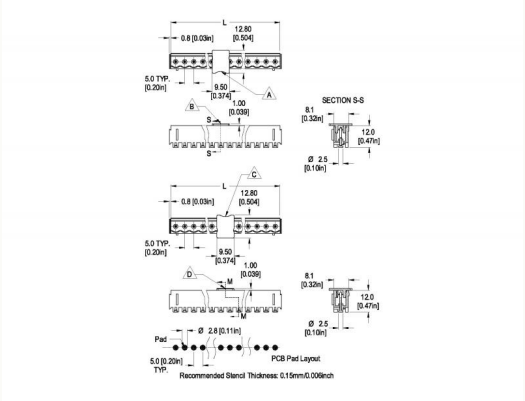
TYPE 120-D-111
5.00 mm spacing - 2-24 poles

TYPE 120-D-121
5.00 mm spacing - 2-24 poles

Plug-In Direction and Wire Entrance Perpendicular to PCB

TYPE 120-A-111
5.00 mm spacing - 2-24 poles

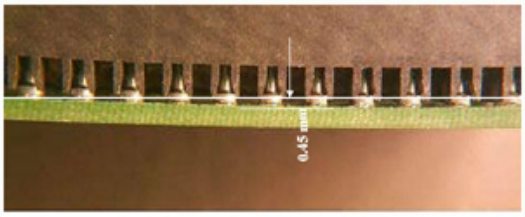
TECHNICAL DRAWING



Description :

Length of Connector (L)
L = No. of Poles x Center to Center Spacing + 0.4 mm
(B) Recommended Stencil Thickness: 0.15 mm (0.006 in.)
(C) Pad
(D) PCB Pad layout
(E) This cavity on this side of the connector for odd numbers of poles
(F) Pick-cap installed in the middle of the header
(G) This cavity on this side of the connector for even numbers of poles
(H) Pick-cap installed in the middle of the header

ILLUSTRATIONS



Description :