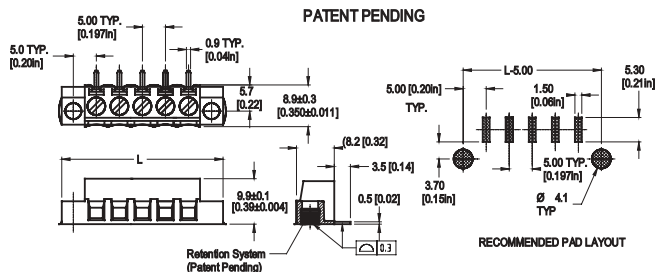


Series SMT

Type 140-A-524-SMD  
5 mm spacing • 2 to 12 poles



Dimensions: mm (in.) When locating connector, allow 0.5 mm clearance around it for process-induced variations.  
Length of Connector (L) L = No. of Poles x Center to Center Spacing + 10 mm

DESCRIPTION

Flat contact leads provide a large surface area for reliable solder joints. The retention devices provide robust mechanical connections between terminal block and PCB and reaches up to 0.3 mm (0.012 in.) coplanarity. Patent pending.

- Flat leads • Wire entrance parallel to PCB
- Typical peel off forces; 30 kg on 6 poles devices (depending on soldering process)

TECHNICAL DATA

Center to Center Spacing: 5 mm (0.197 in.) Wire Stripping length: 6 mm (0.25 in.)  
Nominal Cross Section: 1.5 mm<sup>2</sup> (2325 mils<sup>2</sup>)

APPROVAL INFORMATION

	Rating	Current (A)	Voltage (V)	AWG	Application Group	Screw Tightening Torque
UL File No.: E69841	UL	10	300	30-14	B,C,D	max. 4.5 lbf.in.
CSA File No.: LR24322	CSA	15	300	30-14	B	max. 0.51 Nm

UL: 20A range for factory wiring only.  
Rated Impulse Withstand Voltage: 2500 V

MATERIAL

MOLDING: Polyamide 4.6, 30% GF (glass fiber reinforced), self extinguishing to UL 94, V-0, black  
Material will handle reflow temperatures well without deforming or melting.

TEMPERATURE LIMITS: Short time: 260°C (500°F)  
Continuous: RTI 105°C (221°F)  
Low limit: -40°C (-40°F)  
Comparative Tracking Index: CTI > 250  
Oxygen Index Rating: 37%

Terminal Body: nickel plated copper alloy  
Current bar: tin plated copper alloy  
Screw: yellow chromate passivated, zinc plated, steel, M3  
Retention device: Tin plated copper alloy  
Average weight: 1.14 gram per pole

OPTIONS See How to Order. If more than one option is required, please separate each option with a dash (-).



- CN: Consecutive Numbering (hot stamped numbers)
- SM: Special Marking (please provide sketch)
- BS: Copper Alloy Screws
- PS: Clear chromate passivated, zinc plated, steel screws
- G05: Gold Plating (5 micro inches)
- G30: Gold Plating (30 micro inches)
- S30: Silver Plating (30 micro inches)
- TR: Tape and Reel Assembly
- PCP: Removable Pick Cap  
(Plated components: contact spring)

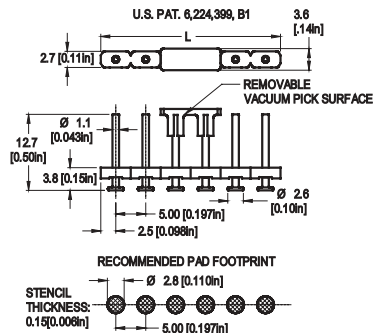
HOW TO ORDER

POLES:	OPTIONS:
02 to 12	CN, SM, BS, PS, G05, G30, S30, TR, PCP

140-A-524-SMD/

Series SMT

Type 971-SLK-SMD  
5 mm spacing • 2 to 12 poles



Dimensions: mm (in.) When locating connector, allow 0.5 mm clearance around it for process-induced variations.  
Length of Connector (L) L = No. of poles x Center to Center Spacing ± 0.4 mm

DESCRIPTION

- Patent # 6,224,399 B1
- Pinstrip
- Plug-In Direction Perpendicular to PCB when plugged with 950-NAF, 950-NLFL, 958-NLFL, 950-FL-DS
- Excellent coplanarity better than 0.1 mm
- Typical peel off forces; 10 kg on 6 poles devices (depending on soldering process)

TECHNICAL DATA

Center to Center Spacing: 5 mm (0.197 in.)

APPROVAL INFORMATION

	Rating	Current (A)	Voltage (V)
UL File No.: E69841	UL	10	300
CSA File No.: LR24322	CSA	10	300

MATERIAL

MOLDING: SPS (syndiotactic polystyrene), 30% GF (glass fiber reinforced), self extinguishing to UL 94, V-0, white  
Material will handle reflow temperatures well without deforming or melting.

TEMPERATURE LIMITS: Short time: 240°C (464°F)  
Continuous: RTI 105°C (221°F)  
Low limit: -40°C (-40°F)  
Comparative Tracking Index: CTI > 250  
Oxygen Index Rating: 28%

Solder Pin: tin plated copper alloy, 1 mm (0.04 in.)  
Average weight: 0.15 gram per pole  
Pick Cap weight: 0.04 gram

OPTIONS See How to Order. If more than one option is required, please separate each option with a dash (-).

- G05: Gold Plating (5 micro inches)
- G30: Gold Plating (30 micro inches)
- S30: Silver Plating (30 micro inches)
- TR: Tape and Reel Assembly
- PCP: Removable Pick Cap  
(Plated components: solder pin)

HOW TO ORDER

POLES:	OPTIONS:
02 to 12	G05, G30, S30, TR, PCP

971-SLK-SMD/



TAPE AND REEL DATA - GENERAL GUIDELINE FOR SIZING

Carrier tapes can be produced as per the following EIA standard, upon customer order. Non-standard configurations can also be produced. Tooling fees and minimum quantities may apply. Please consult factory.

Tape and Reel Data - 5.0 mm center to center spacing connectors

Number of poles	Connector Length (mm)	Length with anchoring element (mm)*	Single Row EIA Standard Tape Width		Min Reel Hub Diameter		Max Overall Reel Diameter		EIA Standard
			mm	in	mm	in.	mm	in	
2	10	20	16	0.63	50	2	330	13	EIA-481-1
3	15	25	24	0.94	50	2	360	14	EIA-481rev A
4	20	30	32	1.26	50	2	360	14	EIA-481rev A
5	25	35	44	1.73	50	2	360	14	EIA-481rev A
6	30	40	44	1.73	50	2	360	14	EIA-481rev A
7	35	45	56	2.20	100	4	609	24	EIA/IS-704
8	40	50	56	2.20	100	4	609	24	EIA/IS-704
9	45	55	72	2.83	80	3	609	24	EIA/IS-704
10	50	60	72	2.83	80	3	609	24	EIA/IS-704
11	55	65	72	2.83	80	3	609	24	EIA/IS-704
12	60	70	88	3.46	80	3	609	24	EIA/IS-704
13	65	75	88	3.46	80	3	609	24	EIA/IS-704
14	70	80	88	3.46	80	3	609	24	EIA/IS-704
15	75	85	104	4.09	80	3	609	24	EIA/IS-704
16	80	90	104	4.09	80	3	609	24	EIA/IS-704
17	85	95	104	4.09	80	3	609	24	EIA/IS-704
18	90	100	120	4.72	80	3	609	24	EIA/IS-704
19	95	105	120	4.72	80	3	609	24	EIA/IS-704
20	100	110	120	4.72	80	3	609	24	EIA/IS-704
21	105	115	136	5.35	80	3	609	24	EIA/IS-704
22	110	120	136	5.35	80	3	609	24	EIA/IS-704
23	115	125	136	5.35	80	3	609	24	EIA/IS-704
24	120	130	136	5.35	80	3	609	24	EIA/IS-704

Connector Pole Quantity, Length and Mass			
Type	Poles	Length (mm)	Mass (g)
971-SLK-SMD	2 to 12	No. poles x 5	No. poles x 0.2
971-SLK-THR	2 to 12	No. poles x 5	No. poles x 0.2
140-A-524-SMD*	2 to 12	(No. poles x 5)+10	No. poles x 1.2
950-THR	2 to 12	No. poles x 5	No. poles x 1.1
970-THR	2 to 12	No. poles x 5	No. poles x 1.4
120-M-221-THR	2 to 12	No. poles x 5	No. poles x 0.5
120-M-211-THR	2 to 12	No. poles x 5	No. poles x 0.5
120-M-221-SMD	3 to 24	No. poles x 5	No. poles x 0.5

General Rules for Tape Width

- Depending on the shape, a narrower tape may be adequate or a wider tape may be required.
- Depends on pocket draft angle needs.
- 44 mm tapes tend to be practical. 44 mm loaders are usually easily available and connectors fit well.
- 8,12,16 & 24 mm tapes have one set of sprocket holes. Allow 5 mm over total connector length.
- 32,44 & 56 mm tapes have two sets of sprocket holes. Allows 10 mm over total connector length.
- 72,88 & 104 mm tapes have two sets of sprocket holes. Allow 13 mm over total connector length.
- Applicable standards are ANSI/EIA-481 series and EIA/IS-704 series.
- Carrier tape widths are cited in mm only.
- Applies to deep embossed, adhesive sealed carrier tape and to mechanically interlocked tape.