

3M™ 4-Wall Header

.100" × .100" Low Profile, SMT Straight, Straight and Right Angle Thru Hole 2500 Series



- Low profile, space saving design
- Center slot polarization prevents mis-insertions and reduces insertion time
- Dual slot polarization means broader compatibility with competitive polarization designs (not 10 pos.)
- Optional retainer clip for locking sockets in place and increasing connection reliability in vibration-prone environments
- Optional High temperature insulator suitable for "no lead" soldering operations
- High temperature option in thru hole version suitable for "paste in hole" reflow soldering techniques
- Exposed solder tails (on right angle version) provide ease of cleaning and reduced repair costs
- RoHS* compliant version (RB Plating Suffix) available
- Straight surface mount version available

Date Modified: August 1, 2006

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Physical

Insulator

Material: Glass Filled Polyester (PBT), Glass Filled Polyester (PCT) - High temperature option
Flammability: UL 94V-0
Color: Gray (PBT), Beige (PCT) or Black (PCT) - RoHS compliant
Contact Material: Copper Alloy

Plating

Underplating: 100 μ" [2.54 μm] Nickel - Overall
Wiping Area: Gold (See Ordering Information)
Solder Tails: 200 μ" [5.08 μm] Tin Lead or Matte Tin (See Ordering Information)
Terminal Finish Indicator: e3 (For RB Plating Suffix) (per JESD97)

Marking: 3M Logo, Part Identification Number and Orientation Triangle

Electrical

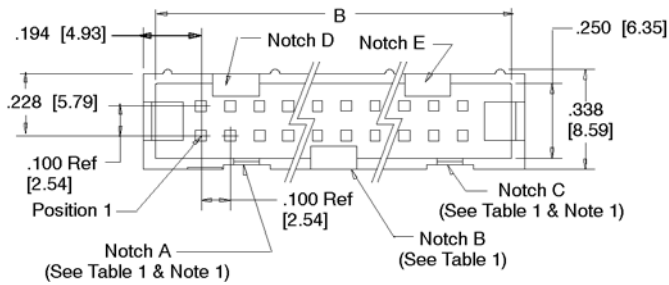
Current Rating: 2 A
Insulation Resistance: $>1 \times 10^9 \Omega$ at 500 Vdc
Withstanding Voltage: 1000 Vrms at Sea Level

Environmental

Temperature Rating: -55°C to +105°C
Process Rating: 260°C, (High Temp & RoHS Compliant versions only), single pass, (profile per J-STD-020C)
Moisture Sensitivity Level: 1 (per J-STD-020C)

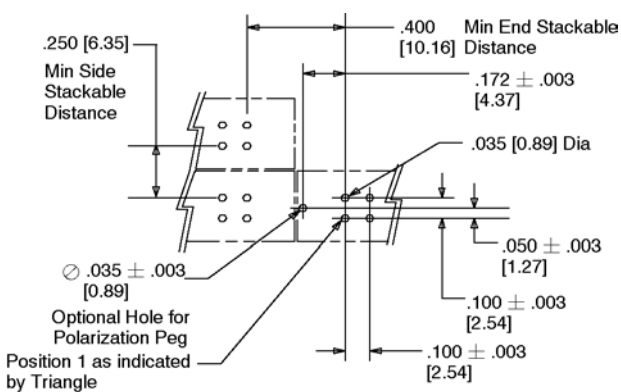
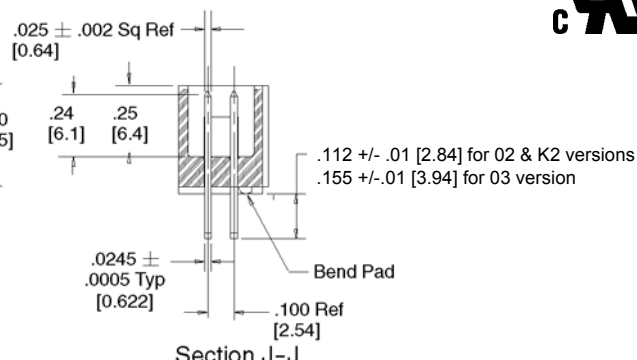
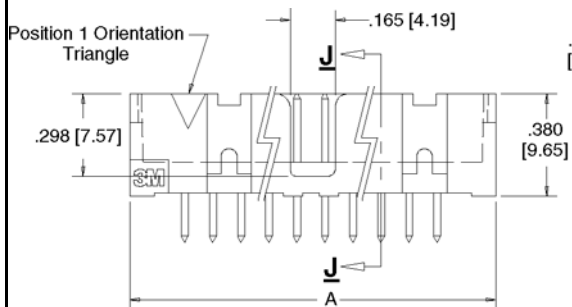
*RoHS = Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment
"RoHS compliant" means that the product or part does not contain any of the following substances in excess of the following maximum concentration values in any homogeneous material, unless the substance is in an application that is exempt under RoHS: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M's knowledge and belief based upon information provided by third party suppliers to 3M.

UL File No.: E68080



Tolerance Unless Noted			
	Inch [mm]		
	.0	.00	.000
Inch	±.1	±.01	±.005

[] Dimensions for Reference only



Recommended P.C. Board Hole Pattern
(Shown for mounting side of board.)

Pin Qty	Dimensions		Polarizing Notches
	A	B	
10	.788 [20.02]	.708 [17.98]	BC
14	.988 [25.10]	.908 [22.06]	BCDE
16	1.088 [27.64]	1.008 [25.60]	ABCDE
20	1.288 [32.72]	1.208 [30.68]	ABCDE
24	1.488 [37.80]	1.408 [35.76]	ABCDE
26	1.588 [40.34]	1.508 [38.30]	ABCDE
30	1.788 [45.42]	1.708 [43.38]	ABCDE
34	1.988 [50.50]	1.908 [48.46]	ABCDE
40	2.288 [58.12]	2.208 [56.08]	ABCDE
50	2.788 [70.82]	2.708 [68.78]	ABCDE
60	3.288 [83.52]	3.208 [81.48]	ABCDE
64	3.488 [88.60]	3.408 [86.56]	ABCDE

- Notes:
- Notches A & C will accommodate 3M Polarizing Keys (3M Part #3518 or N3518).
 - Contact tails .0245 [0.622] wire with .0075 [0.191] corner radii & .028 [0.72] diagonal.
 - See page 4 for kink tail positions.
 - Solder stand offs facilitate .01 clearance above board for reflow soldering.

Ordering Information

Prefix:
Blank = Std. Temp. Gray (PBT) / Not RoHS*
Compliant
N = High Temp. Beige (PCT) / Not RoHS*
Compliant
N = High Temp. Black (PCT) / RoHS*
Compliant (RB Plating Req'd)

X25XX-60XX-XX

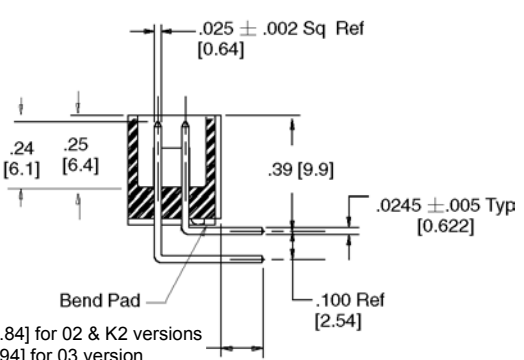
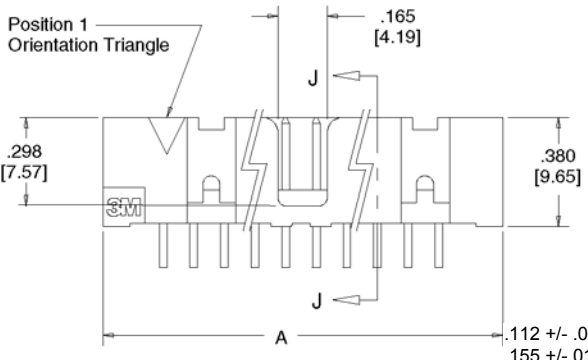
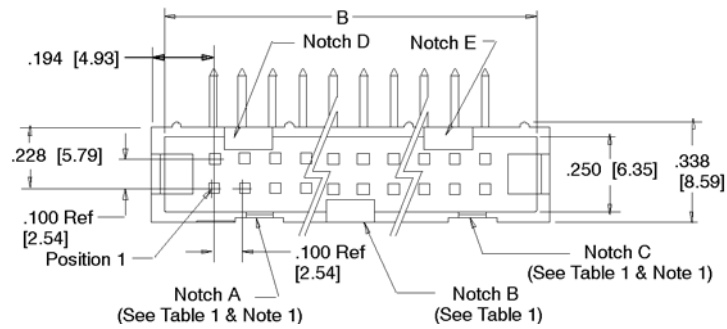
Pin Quantity: _____
(See Table 1)

Plating:
UG = 15µ" [0.38µm] Gold with Tin-Lead Tails
UB = 30µ" [0.76µm] Gold with Tin-Lead Tails
RB = 30µ" [0.76µm] Gold with Matte Tin Tails
(RoHS* Compliant)

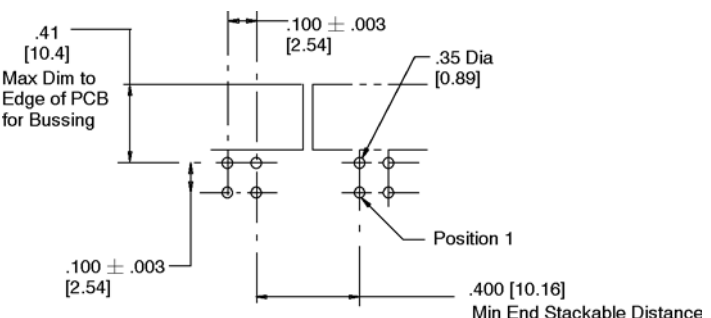
Solder Tail
02 = for .062 [1.57] thick board
03 = for .094 to .125 [2.39 to 3.18] thick board
K2 = for .062 [1.57] thick board

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Pin Qty	Dimensions		Polarizing Notches
	A	B	
10	.788 [20.02]	.708 [17.98]	BC
14	.988 [25.10]	.908 [22.06]	B C D E
16	1.088 [27.64]	1.008 [25.60]	A B C D E
20	1.288 [32.72]	1.208 [30.68]	A B C D E
24	1.488 [37.80]	1.408 [35.76]	A B C D E
26	1.588 [40.34]	1.508 [38.30]	A B C D E
30	1.788 [45.42]	1.708 [43.38]	A B C D E
34	1.988 [50.50]	1.908 [48.46]	A B C D E
40	2.288 [58.12]	2.208 [56.08]	A B C D E
50	2.788 [70.82]	2.708 [68.78]	A B C D E
60	3.288 [83.52]	3.208 [81.48]	A B C D E
64	3.488 [88.60]	3.408 [86.56]	A B C D E



Section J-J



Recommended Mounting Hole Pattern

Tolerance Unless Noted			
	.0	.00	.000
Inch	± .1	± .01	± .005

[] Dimensions for Reference only



- Notes:
1. Notches A & C will accommodate 3M Polarizing Keys (3M Part #3518 or N3518).
 2. Contacts tails .0245 [0.622] wire with .0075 [0.191] corner radii & .028 [0.71] diagonal.
 3. See page 4 for kink tail positions.

Ordering Information

Prefix:
 Blank = Std. Temp. Gray (PBT) / Not RoHS* Compliant
 N = High Temp. Beige (PCT) / Not RoHS* Compliant
 N = High Temp. Black (PCT) / RoHS* Compliant (RB Plating Req'd)

X25XX-50XX-XX

Pin Quantity:
 (See Table 1)

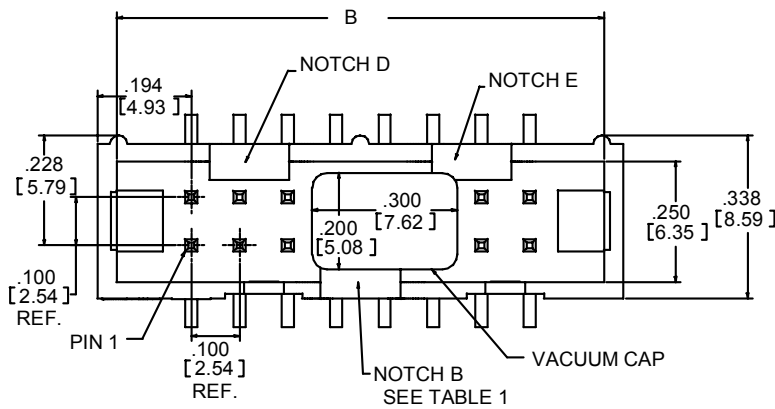
Plating:
 UG = 15µ" [0.38µm] Gold with Tin-Lead Tails
 UB = 30µ" [0.76µm] Gold with Tin-Lead Tails
 RB = 30µ" [0.76µm] Gold with Matte Tin Tails (RoHS* Compliant)
 Solder Tail
 02 = for .062 [1.57] thick board
 03 = for .094 to .125 [2.39 to 3.18] thick board
 K2 = for .062 [1.57] thick board

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3M™ 4-Wall Header

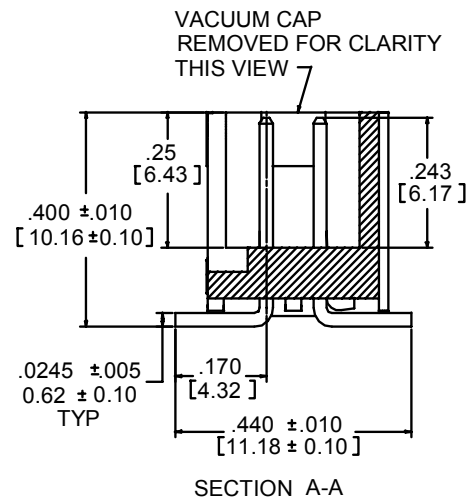
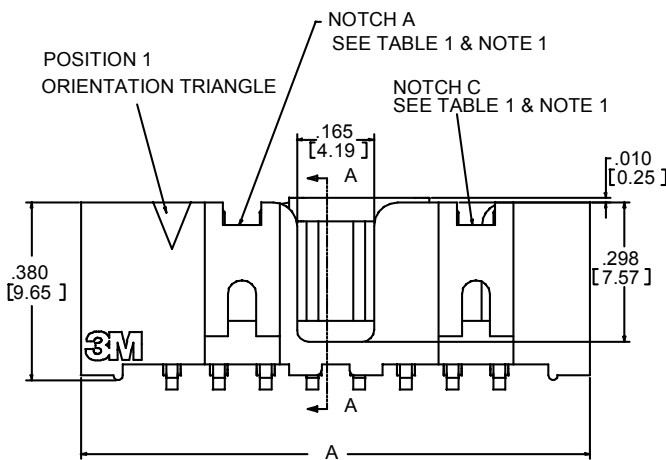
.100" × .100" Low Profile, SMT Straight

2500 Series

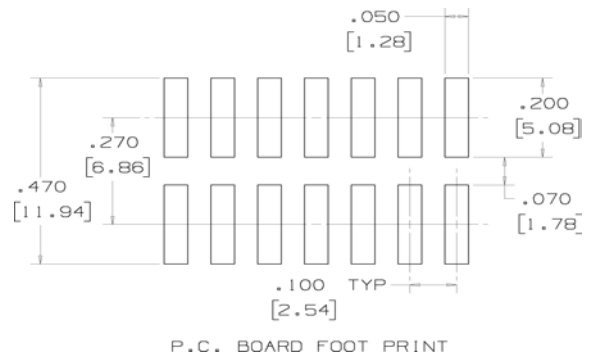


		Inch [mm]		
		Tolerance Unless Noted		
		.0	.00	.000
Inch		±.1	±.01	±.005

[] Dimensions for Reference only



Pin Qty	Dimensions		Polarizing Notches	Tape & Reel Pkg Code
	A	B		
10	.788 [20.02]	.708 [17.98]	BC	WD (44 mm)
14	.988 [25.10]	.908 [22.06]	B C D E	WD (44 mm)
16	1.088 [27.64]	1.008 [25.60]	A B C D E	WE (56 mm)
20	1.288 [32.72]	1.208 [30.68]	A B C D E	WE (56 mm)
24	1.488 [37.80]	1.408 [35.76]	A B C D E	WE (56 mm)
26	1.588 [40.34]	1.508 [38.30]	A B C D E	WF (72 mm)
30	1.788 [45.42]	1.708 [43.38]	A B C D E	WF (72 mm)
34	1.988 [50.50]	1.908 [48.46]	A B C D E	WF (72 mm)
40	2.288 [58.12]	2.208 [56.08]	A B C D E	WH (120 mm)
50	2.788 [70.82]	2.708 [68.78]	A B C D E	WG (88 mm)
60	3.288 [83.52]	3.208 [81.48]	A B C D E	WH (120 mm)
64	3.488 [88.60]	3.408 [86.56]	A B C D E	WH (120 mm)



Notes:

1. Notches A & C will accommodate 3M polarizing key N3518.
2. Vacuum cap will be centered on connectors with odd # of pins/row. It will be offset away from Pin 1 on connectors having an even # of pins per row (shown).
3. Coplanarity .004 for less than 30 position, .006 for 30 and above.

Ordering Information

X25XX-6V0C-RB -XX

Prefix: _____
 N = High Temp Black (PCT) RoHS* Compliant (RB Plating Req'd)

Pin Quantity: (See Table)

Packaging Options:
 WX = tape & reel packaging (see table 1)

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2500 & 3000 Series Shrouded Header					
Total Number of Pins	Number of Tails Kinked	Positions Kinked			
		3	4	7	8
10	4	3	4	7	8
14	4	3	4	11	12
16	4	3	4	13	14
20	4	3	4	17	18
24	4	3	4	21	22
26	4	3	4	23	24
30	4	5	6	25	26
34	4	7	8	27	28
36	4	7	8	27	28
40	4	7	8	33	34
50	4	7	8	43	44
60	4	11	12	49	50
64	4	11	12	53	54

Kinked Tail Detail:
 Kink is located .05" below bottom surface of plastic.
 External radius of kink toward part centerline.

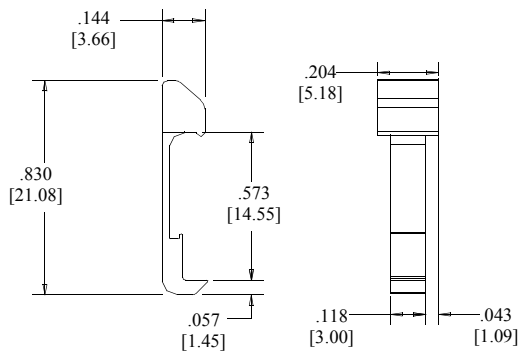
Connector Pin Qty	Dimension A
10	.81 [20.6,]
14	1.02 [25.9]
16	1.12 [28.4]
20	1.32 [33.5]
24	1.52 [38.7]
26	1.63 [41.4]
30	1.83 [46.4]
34	2.03 [51.6]
40	2.33 [59.2]
50	2.83 [71.9]
60	3.33 [84.6]
64	3.53 [89.7]

3505-8XXX

Connector Pin Count:
 (See Table)

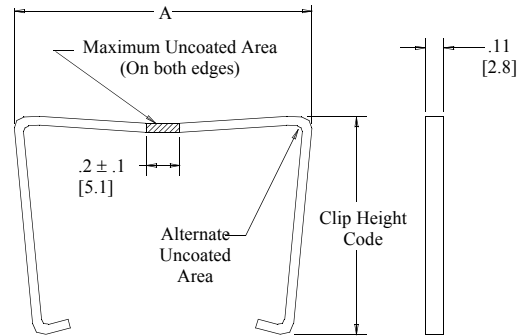
Clip Height Code
 0 = .31 [7.9] for Sockets W/O Strain Relief
 1 = .53 [13.5] for Sockets with Strain Relief

Part Number	Material	Color
3505-33B	Nylon	Black
3201-1	PBT	Gray



Long Snap In Latch

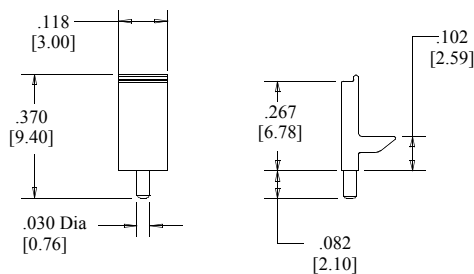
Note: Latches not compatible with reflow soldering. For reflow soldering, attach latches after soldering.



Short/Long Socket Retainer Clip

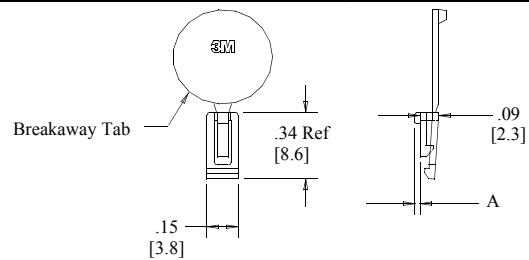
Note: Stainless steel with gray polyurethane coating.

Part Number	Material	Color
3201-3	PCT	Black
3201-1	PBT	Gray



Polarizing Post

Part Number	Material	Color	Dim A
N3518	LCP	Black	0.02
3518	PBT	Gray	0.02



Note: #2216 B/A Scotchweld can be used to adhere keys.

Polarizing Keys

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Important Notice

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