

# 3M™ Surface Mount Header

.100" × .100" High Temperature

N4600 Series



- Compliant gull wing leads make a reliable surface mount connection which is easily inspectable
- Optional ejector latches
- Shrouded to prevent physical and chemical pin damage
- High temperature plastic for vapor phase reflow process
- Slotted mounting flanges for securing header to board
- Raised body for easy inspection and repair
- Leads are protected within the body shadow
- See Regulatory Information Appendix (RIA) for chemical compliance information

Date Modified: November 2, 2007

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## Physical

### Insulator

Material: Glass Filled Polyester (PCT)  
Flammability: UL 94V-0  
Color: Beige or Black (RB plating suffix)

### Contact

Material: Copper Alloy

### Plating

Underplating: 100  $\mu$ " [ 2.54  $\mu$ m ] Nickel  
Wiping Area: 30  $\mu$ " [ 0.76  $\mu$ m ] Gold  
Solder Tails: 200  $\mu$ " [ 5.08  $\mu$ m ] 60/40 Tin Lead or 300  $\mu$ " [ 7.62  $\mu$ m ] Matte Tin  
(see ordering information)

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

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## Electrical

Current Rating: 1 A  
Insulation Resistance:  $>1 \times 10^9 \Omega$  at 500 V<sub>DC</sub>  
Withstanding Voltage: 1000 V<sub>RMS</sub> at Sea Level

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## Environmental

Temperature Rating: -55°C to +105°C  
Processing: Maximum 260°C (per J-STD-020C)  
Moisture Sensitivity Level: 1 (per J-STD-020C)

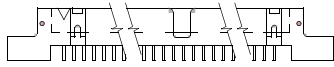
UL File No.: E68080

# 3M™ Surface Mount Header

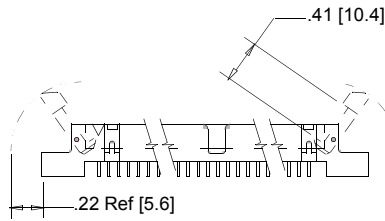
.100" × .100" High Temperature

N4600 Series

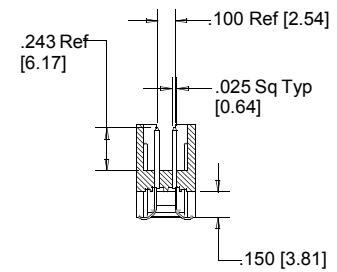
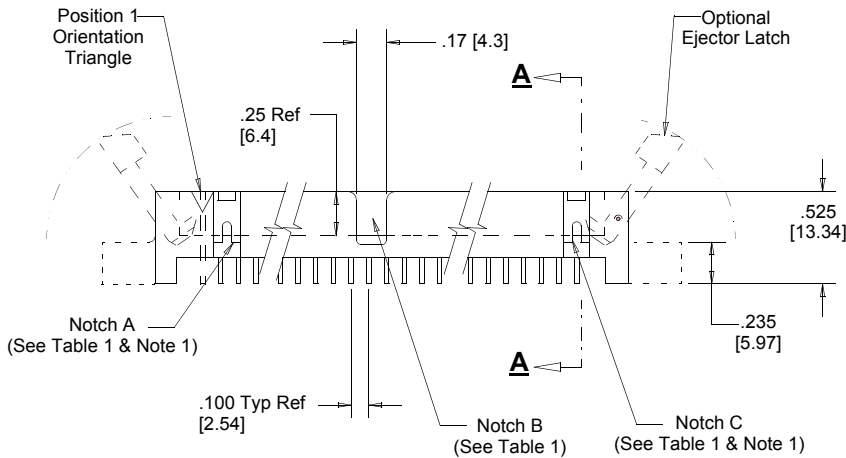
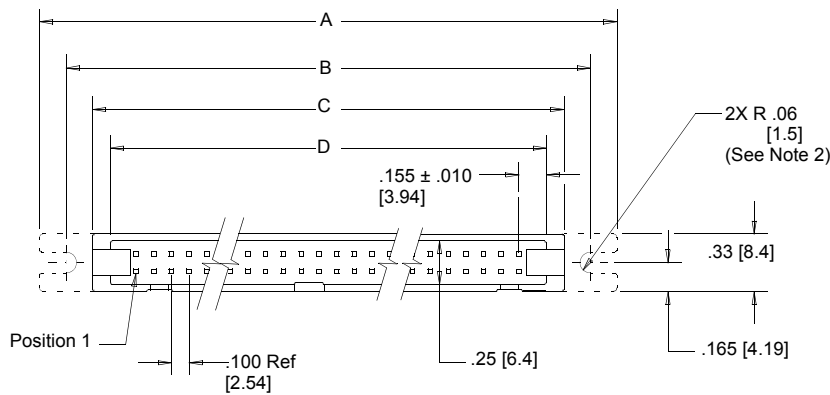
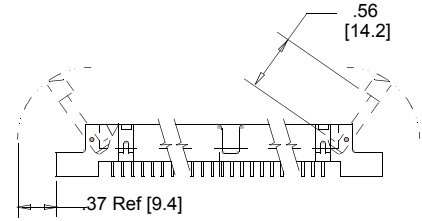
-20XX  
Header with  
no Ejector/Latch



-22XX  
Header with  
Short Ejector/Latch  
for 3M Sockets without  
Strain Relief



-23XX  
Header with  
Long Ejector/Latch  
for 3M Sockets with  
Strain Relief



Section A-A



Inch  
[mm]

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

[ ] Dimensions for Reference Only

Notes:

1. Notches A and C will accommodate 3M™ Polarization Key N3518.
2. Accepts a #4, #2, or 3 mm Panhead Machine Screw and Nut.
3. Mounting ears provide mechanical protection to solder joints and are recommended. For applications where there is not room for mounting ears, ejector/latches should be used.

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# 3M™ Surface Mount Header

.100" × .100" High Temperature

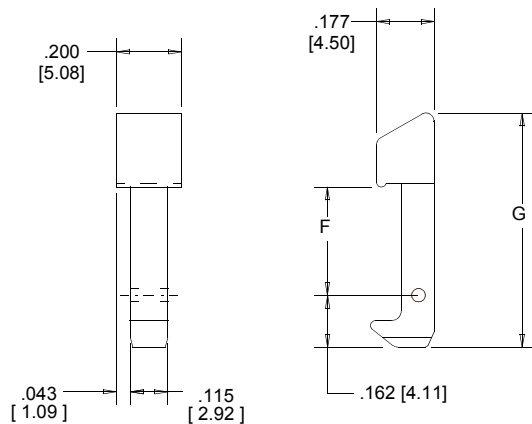
N4600 Series

Table 1

Pin Quantity	Part Number	Dimensions				Polarization Notches
		A	B	C	D	
10	N4610	1.50 [38.2]	1.20 [30.5]	0.90 [22.9]	0.71 [18.0]	B
14	N4614	1.70 [43.2]	1.40 [35.6]	1.10 [28.0]	0.91 [23.1]	B C
16	N4616	1.80 [45.8]	1.50 [38.2]	1.20 [30.5]	1.01 [25.6]	A B C
20	N4620	2.00 [50.9]	1.70 [43.2]	1.40 [35.6]	1.21 [30.7]	A B C
26	N4626	2.30 [58.5]	2.00 [50.9]	1.70 [43.2]	1.51 [38.3]	A B C
34	N4634	2.70 [68.6]	2.40 [61.0]	2.10 [53.4]	1.91 [48.5]	A B C
40	N4640	3.00 [76.3]	2.70 [68.6]	2.40 [61.0]	2.21 [56.1]	A B C
50	N4650	3.50 [89.0]	3.20 [81.3]	2.90 [73.7]	2.71 [68.8]	A B C
60	N4660	4.00 [101.7]	3.70 [94.0]	3.40 [86.4]	3.21 [81.5]	A B C

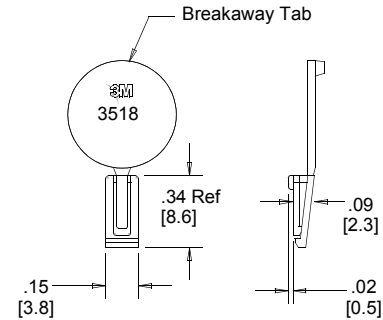
Table 2

3M Part Number	Latch Descr.	Latch/Ejector Dimensions	
		F	G
N3505-22	Short	0.335 [ 8.51]	0.726 [18.44]
N3505-23	Long	0.484 [12.29]	0.875 [22.23]



**Latch/Ejector**

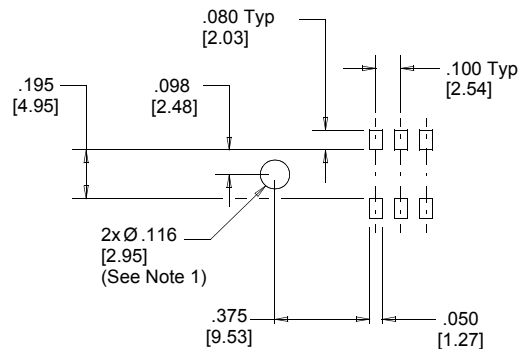
Material: Glass Filled Polyester (PCT)



**3M Part No. N3518**

**Polarizing Key**

Material: Black LCP



**Recommended Printed Circuit Board Pattern**

## Ordering Information

### X46XX-2XXX-XX

N = High Temp. Beige (PCT)  
blank Pltg. Suffix  
N = High Temp. Black (PCT) RB  
Pltg. Req'd.

Pin Qty (See Table 1)

Latch Option:  
0 - No ejector Latch  
2 - Short ejector latch  
3 - Long ejector Latch

Plating suffix:  
blank = tin-lead solder tails (RIA E3 & C2 Apply)  
RB = matte tin solder tails (RIA E1 & C1 Apply)

Body style:  
0 = with mounting ears  
1 = without mounting ears

Polarization:  
0 = for pin qty 14 to 60  
5 = for pin qty 10

## Polarizing Key (Order Separately) N3518 (black only)

## Ejector Latch (May be ordered separately for use with N46XX-20XX-XX version)

N3505-22 (short, beige)  
N3505-22B (short, black)  
N3505-23 (long, beige)  
N3505-23B (long, black)

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# Regulatory Information Appendix

## 3M Electronic Solutions Division/Interconnect

### EUROPE

#### Appendix E1: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment, as amended by EU Commission Decision 2005/618/EC.

**This product is RoHS Compliant 2005/95/EC.**

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

#### Appendix E2: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment, as amended by EU Commission Decision 2005/618/EC.

**This product contains lead in the compliant pin area in excess of the maximum concentration value allowed but is compliant by exemption under EU Commission Decision 2005/747/EC.**

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

#### Appendix E3: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment as amended by Commission Decision 2005/618/EC.

**This product contains lead in the solder tail area in excess of the maximum concentration value allowed.**

Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

#### Appendix E4: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment, as amended by EU Commission Decision 2005/618/EC.

**This product contains decaBDE in the insulating material in excess of the maximum concentration value allowed but is compliant by exemption under EU Commission Decision 2005/717/EC.**

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

## Appendix E5: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, as amended by EU Commission Decision 2005/618/EC.

**This product contains lead in excess of the maximum concentration value allowed but is compliant by exemption under Item 6 of the Annex to the Directive.**

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

## CHINA

### Appendix C1: China RoHS

Electronic Industry Standard of the People’s Republic of China, SJ/T11363-2006, Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

This symbol, per Marking for the Control of Pollution Caused by Electronic Information Products, SJ/T11364-2006, 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: (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 best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

### Appendix C2: China RoHS

Electronic Industry Standard of the People’s Republic of China, SJ/T11363-2006, Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

This symbol, per Marking for the Control of Pollution Caused by Electronic Information Products, SJ/T11364-2006, means that the product or part **does** contain a substance, as detailed in the chart below, in excess of the following maximum concentration values in any homogeneous material: (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 best knowledge and belief based upon information provided by third party suppliers to 3M.

The numerical reference in the symbol above should not be construed as a representation regarding the product’s life or an extension of a product warranty. The product warranty is stated below. In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the product Warranty stated below.

产品中有毒有害物质或元素的名称及含量 Name and Content of Hazardous Substances or Elements

部件名称 (Part or Component Name)	有毒有害物质或元素 (Hazardous Substances or Elements)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
端子镀层 (contact plating)	×	○	○	○	○	○
○: 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006 标准规定的限量要求以下。(Indicates that this hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.)						
×: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006 标准规定的限量要求。(Indicates that this hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.)						

# Appendix C3: China RoHS

Electronic Industry Standard of the People's Republic of China, SJ/T11363-2006, Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

This symbol, per Marking for the Control of Pollution Caused by Electronic Information Products, SJ/T11364-2006, means that the product or part **does** contain a substance, as detailed in the chart below, in excess of the following maximum concentration values in any homogeneous material: (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 best knowledge and belief based upon information provided by third party suppliers to 3M.

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产品中有毒有害物质或元素的名称及含量 Name and Content of Hazardous Substances or Elements

部件名称 (Part or Component Name)	有毒有害物质或元素 (Hazardous Substances or Elements)					
	铅(Pb)	汞(Hg)	镉(Cd)	六价铬(Cr(VI))	多溴联苯(PBB)	多溴二苯醚(PBDE)
合金(Metal alloy)	×	○	○	○	○	○
<p>○: 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006 标准规定的限量要求以下。(Indicates that this hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.)</p> <p>×: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006 标准规定的限量要求。(Indicates that this hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.)</p>						

### Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

### Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture for a period of 90 days from the time of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**



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