

# 3M™ Three-Wall Header

.100" × .100" Latch/Ejector, Straight and Right Angle

3000 Series



- Military (with 3M's 3518 or N3518 polarizing key) and center bump polarization
- Low profile
- Optional ejector latches
- Mounting holes for securing header to board
- Three wall shroud provides design flexibility
- Solder tail and wrap tail options
- Optional polarizing posts available
- Optional high temperature insulator suitable for "no lead" soldering operations
- High temperature option is suitable for reflow soldering using "paste in hole" techniques
- See Regulatory Information Appendix for chemical compliance information

Date Modified: May 1, 2008

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## Physical

### Insulator:

Material: Glass Filled Polyester (PBT)  
Glass Filled Polyester (PCT) - High Temp Option

Flammability: UL 94V-0

Color: Gray (PBT), Beige (PCT), Black (PCT)

### Contact:

Material: Copper Alloy

### Plating:

Underplating: 100 μ" [ 2.54 μm ] Nickel - Overall

Wiping Area: 30 μ" [ 0.76 μm ] Gold

Solder Tails: 200 μ" [ 5.08 μm ] Tin Lead or Matte Tin (See Ordering Information)

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

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## Electrical

**Current Rating:** 2 A (EIA 364-70)

**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

**Process Rating:** 260°C (High Temp. PCT insulator) single pass (per J-STD-020C)  
PBT gray insulator, maximum insulator temperature 191°C (solder wave process only)

**Moisture Sensitivity Level:** 1 (per J-STD-020C) High Temp. (PCT) versions only

UL File No.: E68080

**3M**

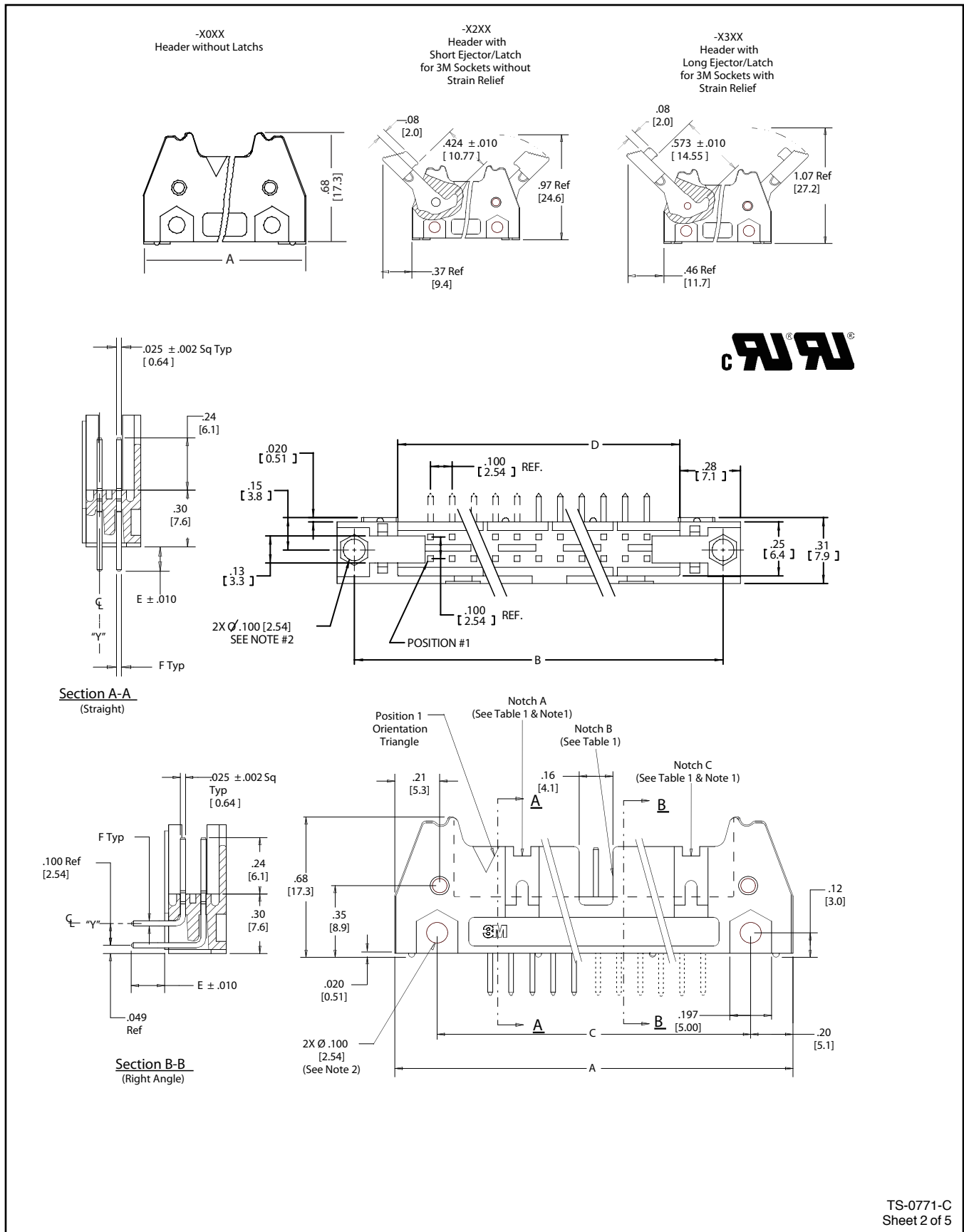
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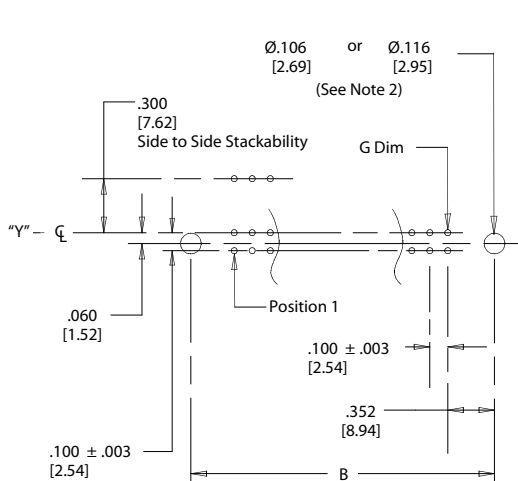
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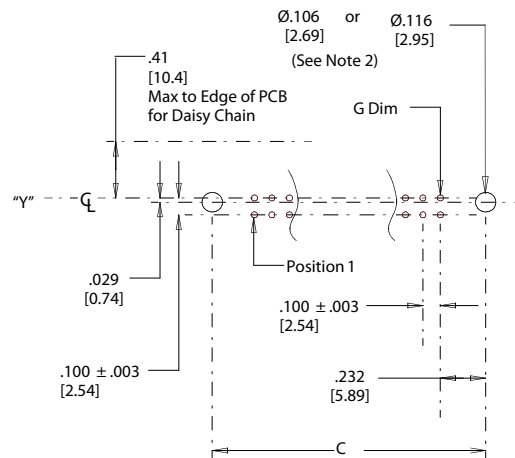
3000 Series

Table 1						
Pin Qty	3M Part Number	Dimensions				Polarizing Notches
		A	B	C	D	
10	3793	1.26 (32.1)	1.105 (28.07)	0.865 (21.97)	0.71 (18.0)	BC
14	3314	1.46 (37.2)	1.305 (33.15)	1.065 (27.05)	0.91 (23.1)	BC
16	3408	1.56 (39.7)	1.405 (35.69)	1.165 (29.59)	1.01 (25.6)	ABC
20	3428	1.76 (44.8)	1.605 (40.77)	1.365 (34.67)	1.21 (30.7)	ABC
26	3429	2.06 (52.4)	1.905 (48.39)	1.665 (42.29)	1.51 (38.3)	ABC
34	3431	2.46 (62.6)	2.305 (58.55)	2.065 (52.45)	1.91 (48.5)	ABC
40	3432	2.76 (70.2)	2.605 (66.17)	2.365 (60.07)	2.21 (56.1)	ABC
50	3433	3.26 (82.9)	3.105 (78.87)	2.865 (72.77)	2.71 (68.8)	ABC
60	3372	3.76 (95.6)	3.605 (91.57)	3.365 (85.47)	3.21 (81.5)	ABC
64	3764	3.96 (100.7)	3.805 (96.65)	3.565 (90.55)	3.41 (86.6)	ABC

Table 2						
3M Part Number Suffix	Contact Tail	Dimension E	Pin Cross Section			Dimension G
			Dimension F	Diagonals	Corner Radii	
-1XX2 -2XX2	Solder Tail for .062 (1.57) Thick PC Board	.112 (2.84)	.0245 ± .0005 (0.622)	.028 ± .001 (0.71)	.0075 Ref (0.191)	0.035 ± .003 (0.89) (See Note 3)
-1XO3 -2XO3	Solder Tail for 0.94 (2.39) to .125 (3.18) Thick PC Board	.155 (3.94)	.0245 ± .0005 (0.622)	.028 ± .001 (0.71)	.0075 Ref (0.191)	0.035 ± .003 (0.89)



**Recommended Mounting Hole Pattern**  
(Straight)



**Recommended Mounting Hole Pattern**  
(Right Angle)

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

[ ] Dimensions for Reference only

**Notes:**

- Notches A & C will accommodate 3M Polarizing Keys (3M Part #3518 or N3518).
- Accepts Rear and Front mounting hardware:  
Rear Entry: #4-24 thread cutting screw, 3M Part #3341-5, .116 [2.95] dia mounting hole  
Front Entry: (Prior to installation of latch on Straight Versions) #2-56 bolt and nut, 3M Part #3341-6, .106 [2.69] dia mounting hole
- The recommended PCB hole size for the kinked tail positions on the .112 solder tail connector is .035 ± .002. Kink is located .05" below bottom surface of plastic. External radius of kink toward part centerline

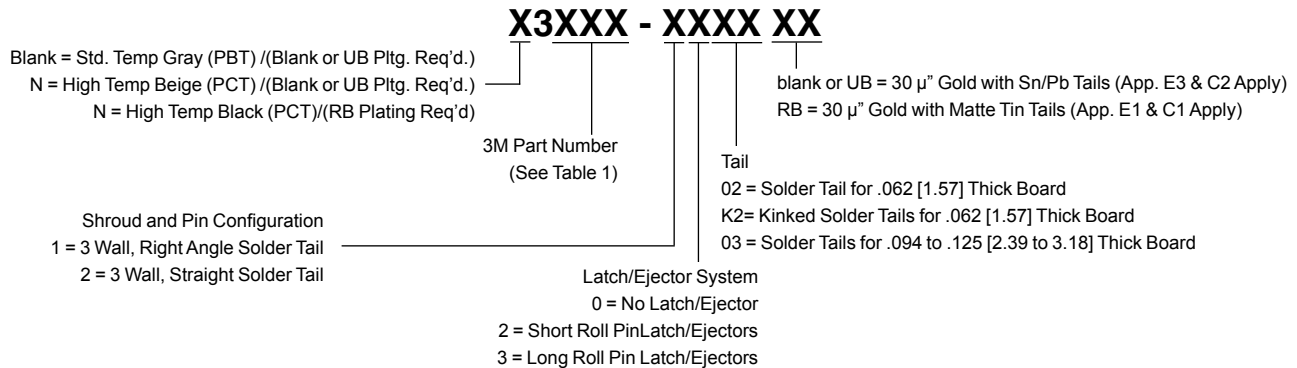
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# 3M™ Three-Wall Header

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## Ordering Information



## Part Customization

This spec sheet details our standard offering.

3M has several capabilities that can provide a part tailored to your specific needs. Ask your 3M sales representative or customer service for more details.

Use of snap-in style latch/ejectors in either short (N3XXX X5XX) or long (N3XXX-X6XX) styles, installed or shipped separately (the -5 & -6 snap-in latches are dimensional and functional equivalents to the -2 & -3 roll pin latches) which are also available separately with roll pins included. Refer to chart below.

If ordering snap-in or roll pin style latches separately, please use the below chart

	Short Latch	Long Latch	Latch Style	Color
Standard Temperature (PBT)	3505-2	3505-3	Roll Pin	Gray
High Temperature (PCT)	N3505-2	N3505-3	Roll Pin	Beige
High Temperature (PCT)	N3505-2B	N3505-3B	Roll Pin	Black
High Temperature (PPA)	3505-30	3505-31	Snap-In	Gray
High Temperature (PPA)	N3505-30	N3505-31	Snap-In	Beige
High Temperature (PPA)	N3505-30B	N3505-31B	Snap-In	Black

- Selective pin removal (ATA or other compatibility)
- Wire wrap tails styles

## Kinked Tail (K2 option) positions:

2500 & 3000 Series Shrouded Header					
Total Number of Pins	Number of Tails Kinked	Positions Kinked			
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.

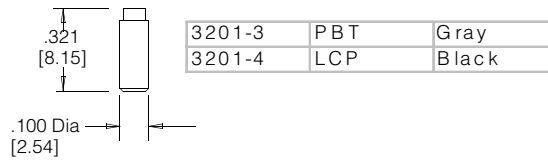
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# 3M™ Three-Wall Header

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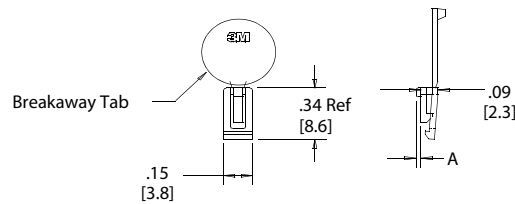
## Polarizing Post



Note: Insert Post into one mounting hardware hole on bottom of header. Set post to protrude .115" [2.92]

## Polarizing Keys

			Dim A
N3518	LCP	Black	.02
3518	PBT	Gray	.02



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

## Mounting Hardware

3341-5 (Installed from bottom of board)      3341-6 (Must be inserted prior to latch or vertical headers)



Panhead Thread Cutting Screw:  
#4-24 X 5/16"  
Type: USA Std BT, Federal BG

Hex Head Bolt, Nut and Was  
Bolt - #2-56 X 1/2"

3341-5 & 6  
Material - Stainless Steel

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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.

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## 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>						

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