

3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length [3] and Extended Length [4]



RECOMMENDED PCB HOLE PATTERN  
TOLERANCE = 0.05 [ .002 ]



PERFORMANCE [5] [7]	
CURRENT:	1A, 6 LINES ENERGIZED
INSULATION RESISTANCE:	>1 X 10 <sup>9</sup> OHMS AT 500 VDC
WITHSTANDING VOLTAGE:	500 VACrms AT SEA LEVEL
TEMPERATURE RATING:	-55° C TO +105° C
SOLDER PROCESS TEMPERATURE:	260° C MAX PER IPC/JEDEC J-STD-020D

REFERENCE TABLE ON SHEET 4  
FOR AVAILABLE TAIL POSITIONS AND  
SOLDER TAIL LENGTHS

METRIC [ ENGLISH ]

NOTES

- MATERIAL:  
BODY: HIGH TEMPERATURE  
GLASS FILLED LCP, BLACK  
UL94V-0  
CONTACTS: COPPER ALLOY
- PLATING:  
2.03-3.81  $\mu\text{m}$  [80-150  $\mu\text{in}$ ]  
NICKEL UNDERPLATE.  
0.38  $\mu\text{m}$  [15  $\mu\text{in}$ ] OR  
0.76  $\mu\text{m}$  [30  $\mu\text{in}$ ] AVG GOLD  
ON WIPING AREA.  
5.08  $\mu\text{m}$  [200  $\mu\text{in}$ ] MIN  
MATTE TIN ON SOLDER TAILS.
- STANDARD LENGTH HEADERS  
MATE WITH 3M™ SOCKETS,  
158 SERIES (REFERENCE 3M  
DRAWING 78-5100-2358-9).
- EXTENDED LENGTH HEADERS  
MATE WITH 3M™ SOCKETS,  
870 SERIES.
- FOR PRODUCT  
SPECIFICATIONS AND  
WARRANTY INFORMATION SEE  
3M 78-5102-0078-1.
- SEE THE REGULATORY  
INFORMATION APPENDIX (RIA)  
IN THE "ROHS COMPLIANCE"  
SECTION OF  
WWW.3MCONNECTOR.COM FOR  
COMPLIANCE INFORMATION  
(RIA E1 & C1 APPLY).
- IN THE EVENT OF CONFLICT  
BETWEEN THIS DATA AND  
THAT CONTAINED IN THE  
PRODUCT SPECIFICATION,  
THE PRODUCT SPECIFICATION  
TAKES PRECEDENT.

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD														
DIVISION	DIVISION CODE	DATE	DATE	DATE	DATE	DATE														
		JUL 29, 2010																		
DO NOT SCALE DRAWING	SCALE 6/1	TOLERANCES EXCEPT AS NOTED																		
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 1994	<table border="1"> <tr> <th>TOLERANCES</th> <th>INCHES</th> <th>MILLIMETERS</th> </tr> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>.00</td> <td>.00</td> <td>.00</td> </tr> <tr> <td>.000</td> <td>.000</td> <td>.000</td> </tr> <tr> <td>.0000</td> <td>.0000</td> <td>.0000</td> </tr> </table>	TOLERANCES	INCHES	MILLIMETERS	0	0	0	.00	.00	.00	.000	.000	.000	.0000	.0000	.0000	TITLE <b>3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES</b>		
TOLERANCES	INCHES	MILLIMETERS																		
0	0	0																		
.00	.00	.00																		
.000	.000	.000																		
.0000	.0000	.0000																		
MAX SURFACE ROUGHNESS 125	<input type="checkbox"/> ALL SURFACES <input checked="" type="checkbox"/> MARKED ONLY	CAGE NUMBER <b>D 78-5100-2359-7</b>	DRAWING NO. <b>78-5100-2359-7</b>	REV. <b>A</b>	MODEL SHT 1 OF 4															

3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



RECOMMENDED PCB HOLE PATTERN  
TOLERANCE = ±0.05 [ .002 ]



POLARIZATION SLOT  
RIGHT ANGLE HEADER  
6-12 POSITIONS ONLY



POLARIZATION SLOT AND  
DUAL FRICTION LATCHES  
RIGHT ANGLE HEADER  
14-50 POSITIONS



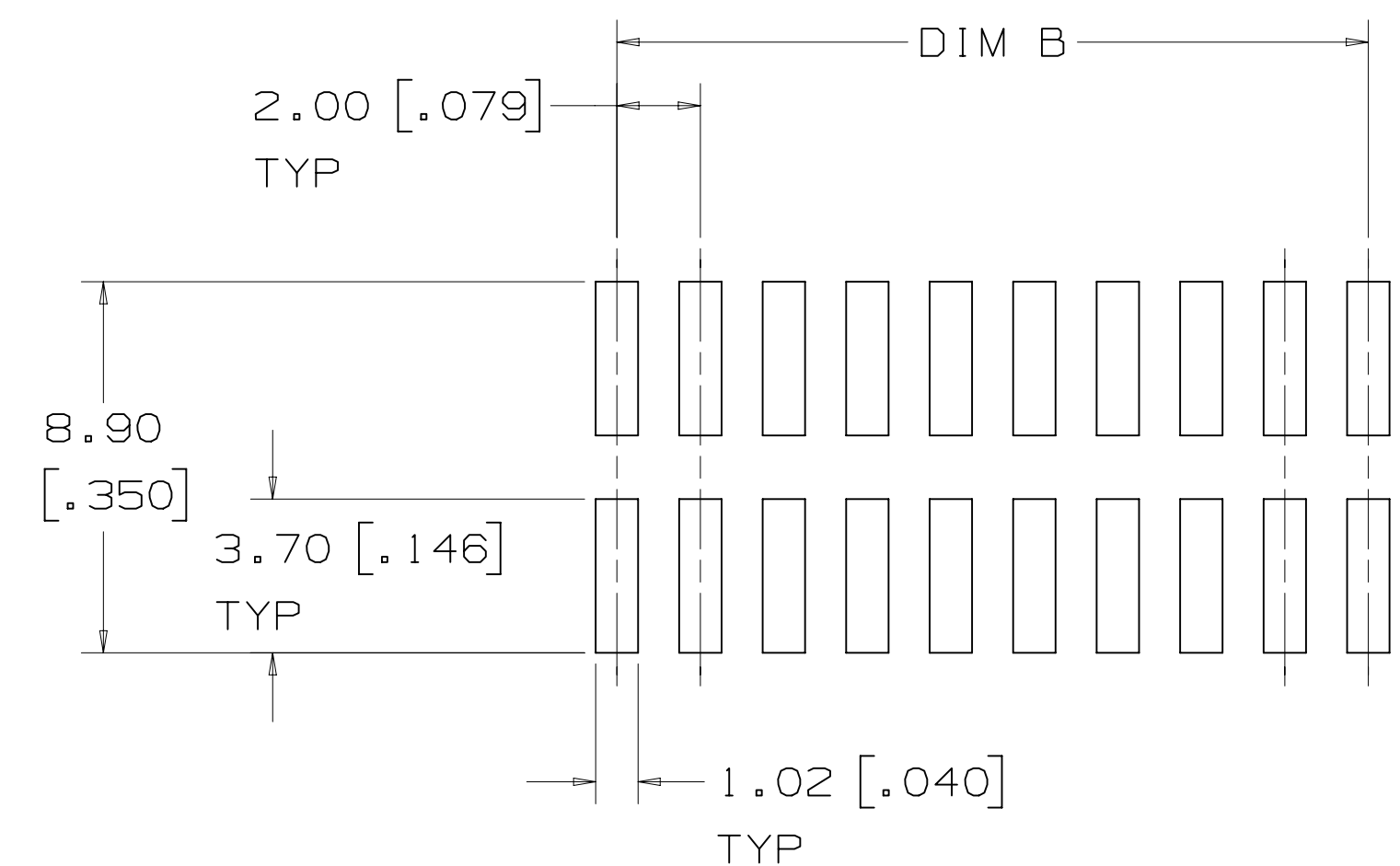
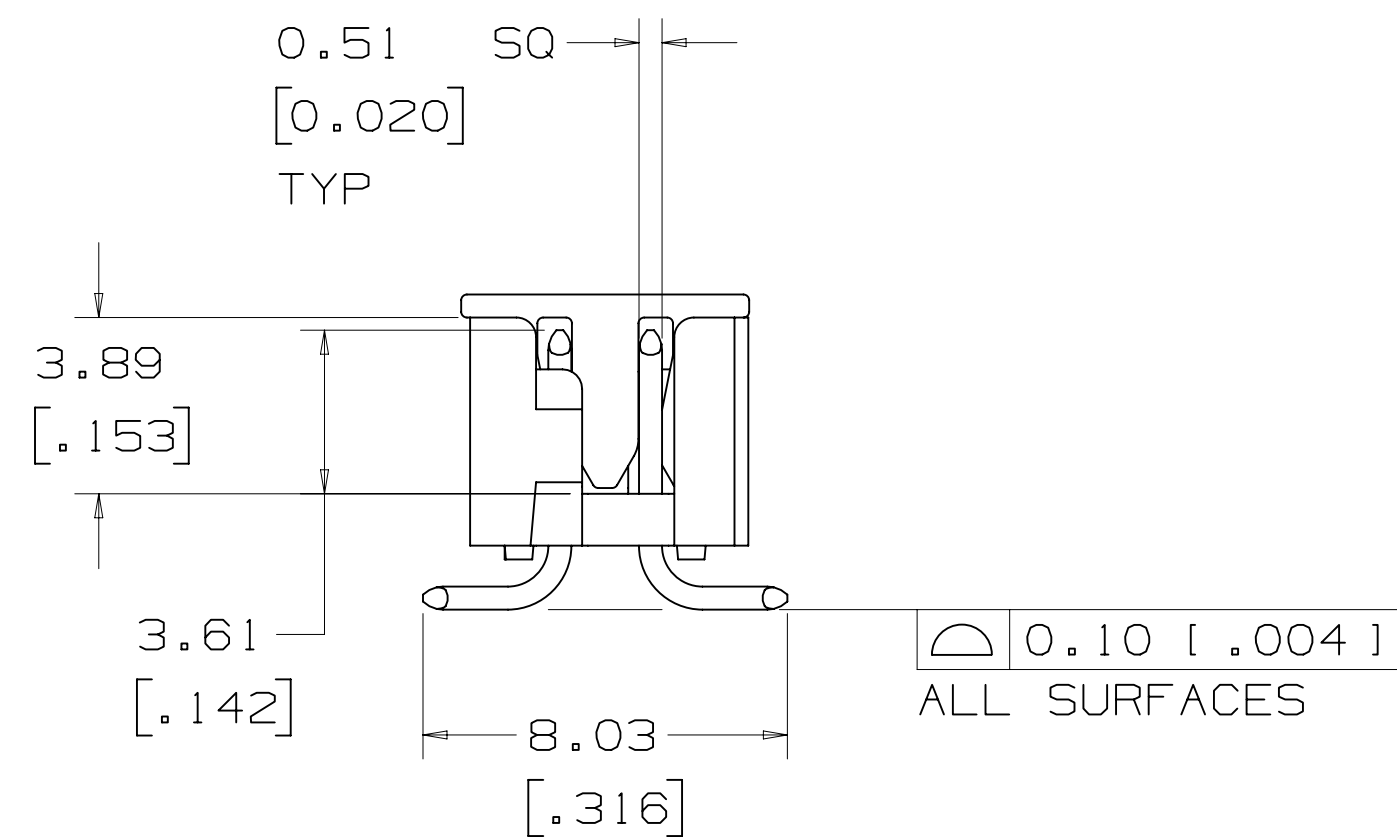
SINGLE FRICTION LATCH  
RIGHT ANGLE HEADER  
6-12 POSITIONS ONLY

REFERENCE TABLE ON SHEET 4  
FOR AVAILABLE POSITIONS AND  
SOLDER TAIL LENGTHS

METRIC [ ENGLISH ]

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				OCT 28, 2010 INITIAL RELEASE	LDS	SF
DATE	DATE	DATE	DATE	DATE	DATE	DATE
JUL 29, 2010	JUL 29, 2010	JUL 29, 2010	JUL 29, 2010	JUL 29, 2010	JUL 29, 2010	JUL 29, 2010
DRFT	CHKD	APPV	DATE	DATE	DATE	DATE
L. SCHMIDT	S. FELDMAN	S. FELDMAN	AUG 09, 2010	AUG 09, 2010	AUG 09, 2010	AUG 09, 2010
DIVISION	DIVISION CODE	© 3M COPYRIGHT 2010 This document and the information it contains are 3M property and may not be reproduced or further distributed without 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.				
DO NOT SCALE DRAWING	SCALE 4/1	TOLERANCES EXCEPT AS NOTED INCHES .00 ± .000 ± .0000 ±				
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 1994	MILLIMETERS 0 ± .00 ± .00 ± 0.13 .000 ±				
MAX SURFACE ROUGHNESS 125	ALL SURFACES MARKED ONLY	CAGE NUMBER	SIZE	DRAWING NO.	REV.	
		D	78-5100-2359-7	A		
MODEL				DEF	YES	NO
				SHT	2	OF 4

3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3 and Extended Length 4



RECOMMENDED PCB PAD PATTERN  
TOLERANCE = ±0.08 [0.003]



POLARIZATION SLOT  
SURFACE MOUNT HEADER  
6-12 POSITIONS ONLY



POLARIZATION SLOT AND  
DUAL FRICTION LATCHES  
SURFACE MOUNT HEADER  
14-50 POSITIONS



SINGLE FRICTION LATCH  
SURFACE MOUNT HEADER  
6-12 POSITIONS ONLY

REFERENCE TABLE ON SHEET 4  
FOR AVAILABLE POSITIONS

METRIC ( ENGLISH )

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
DIVISION		DIVISION CODE		DATE		
DO NOT SCALE DRAWING		SCALE 4/1		TOLERANCES EXCEPT AS NOTED		
THIRD ANGLE PROJECTION		MILLIMETERS		INCHES		
INTERPRET PER ASME Y14.5 - 1994		0 ±		.00 ±		
MAX SURFACE ROUGHNESS 125		.00 ± 0.13		.000 ±		
ALL SURFACES MARKED ONLY		ANGLES ±1°		.0000 ±		
CAGE NUMBER		DRAWING NO.		REV.		
D78-5100-2359-7		D78-5100-2359-7		A		
MODEL		SHT		3 OF 4		

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3M Center  
St. Paul, MN 55144

DATE: OCT 28, 2010  
MFG DATE: JUL 29, 2010  
APPV: S FELDMAN  
DATE: AUG 09, 2010

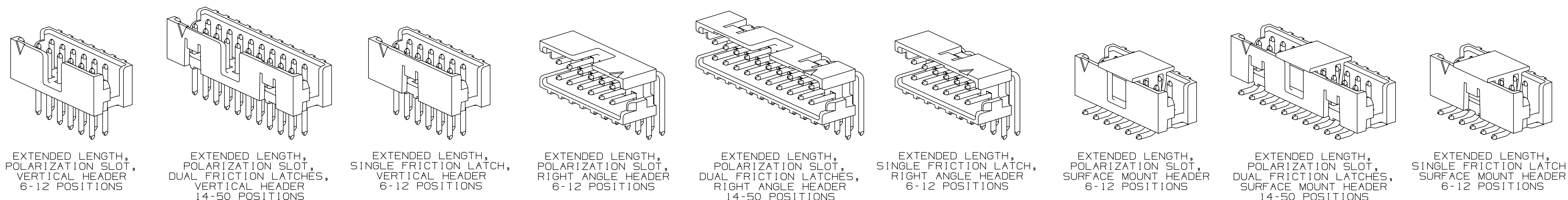
3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Standard Length 3

STANDARD LENGTH HEADERS ARE AVAILABLE



3M™ Shrouded Board Mount Header 2 mm X 2 mm Pitch 159 Series, Extended Length 4

CALL 3M INTERCONNECT SOLUTIONS AT 800-225-5373 FOR AVAILABILITY OF EXTENDED LENGTH HEADERS



ORDERING INFORMATION

**TIER 1 - BEST**  
 1591XX-XXXX

TIER 1 = BEST 0.76 μm [30 μin] GOLD

CONTACT TAIL LENGTH  
 2 = 2.84 mm [.112]  
 3 = 3.94 mm [.155]

POLARIZATION/LATCHING  
 0 = POLARIZATION SLOT AND DUAL FRICTION LATCHES (14-50 POSITIONS ONLY)  
 1 = POLARIZATION SLOT (6-12 POSITIONS ONLY)  
 2 = SINGLE FRICTION LATCH (6-12 POSITIONS ONLY)

POSITION COUNT (SEE TABLE)

PART CONFIGURATION  
 2 = VERTICAL SMT  
 5 = RIGHT ANGLE THRU HOLE  
 6 = VERTICAL THRU HOLE

BODY LENGTH  
 0 = STANDARD LENGTH (MATES TO 158 SERIES)  
 1 = EXTENDED LENGTH (MATES TO 870 SERIES)

**TIER 2 - BETTER**  
 1592XX-XXXX

TIER 2 = BETTER 0.38 μm [15 μin] GOLD

CONTACT TAIL LENGTH  
 2 = 2.84 mm [.112]  
 3 = 3.94 mm [.155]

POLARIZATION/LATCHING  
 0 = POLARIZATION SLOT AND DUAL FRICTION LATCHES (14-50 POSITIONS ONLY)  
 1 = POLARIZATION SLOT (6-12 POSITIONS ONLY)  
 2 = SINGLE FRICTION LATCH (6-12 POSITIONS ONLY)

POSITION COUNT (SEE TABLE)

PART CONFIGURATION  
 2 = VERTICAL SMT  
 5 = RIGHT ANGLE THRU HOLE  
 6 = VERTICAL THRU HOLE

BODY LENGTH  
 0 = STANDARD LENGTH (MATES TO 158 SERIES)  
 1 = EXTENDED LENGTH (MATES TO 870 SERIES)

NUMBER OF POSITIONS	SHROUDED BOX HEADER						DIM D	
	DIM A		DIM B	DIM C				
	STANDARD	EXTENDED		STANDARD	EXTENDED			
6	8.35 [.329]	9.52 [.375]	4.00 [.157]	6.83 [.269]	7.99 [.315]	2.84 [.112]	3.94 [.155]	
8	10.35 [.407]	11.52 [.453]	6.00 [.236]	8.83 [.347]	9.99 [.393]	2.84 [.112]	3.94 [.155]	
10	12.35 [.486]	13.52 [.532]	8.00 [.315]	10.83 [.426]	11.99 [.472]	2.84 [.112]	3.94 [.155]	
12	14.35 [.565]	15.52 [.611]	10.00 [.394]	12.83 [.505]	13.99 [.551]	2.84 [.112]	3.94 [.155]	
14	16.35 [.644]	17.52 [.690]	12.00 [.472]	14.83 [.584]	15.99 [.630]	2.84 [.112]	3.94 [.155]	
16	18.35 [.722]	19.52 [.768]	14.00 [.551]	16.83 [.662]	17.99 [.708]	2.84 [.112]	3.94 [.155]	
20	22.35 [.880]	23.52 [.926]	18.00 [.709]	20.83 [.820]	21.99 [.866]	2.84 [.112]	3.94 [.155]	
22	24.35 [.959]	25.52 [1.005]	20.00 [.787]	22.83 [.899]	23.99 [.945]	2.84 [.112]	3.94 [.155]	
24	26.35 [1.037]	27.52 [1.083]	22.00 [.866]	24.83 [.977]	25.99 [1.023]	2.84 [.112]	3.94 [.155]	
26	28.35 [1.116]	29.52 [1.162]	24.00 [.945]	26.83 [1.056]	27.99 [1.102]	2.84 [.112]	3.94 [.155]	
30	32.35 [1.274]	33.52 [1.320]	28.00 [1.102]	30.83 [1.214]	31.99 [1.260]	2.84 [.112]	3.94 [.155]	
34	36.35 [1.431]	37.52 [1.477]	32.00 [1.260]	34.83 [1.371]	35.99 [1.417]	2.84 [.112]	3.94 [.155]	
40	42.35 [1.667]	43.52 [1.713]	38.00 [1.496]	40.83 [1.607]	41.99 [1.653]	2.84 [.112]	3.94 [.155]	
44	46.35 [1.825]	47.52 [1.871]	42.00 [1.654]	44.83 [1.765]	45.99 [1.811]	2.84 [.112]	3.94 [.155]	
50	52.35 [2.061]	53.52 [2.107]	48.00 [1.890]	50.83 [2.001]	51.99 [2.047]	2.84 [.112]	3.94 [.155]	

METRIC ( ENGLISH )

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				INITIAL RELEASE		
DISTRICT CODES		DRP	DATE	MFG	DATE	
		L. SCHMIDT	JUL 29, 2010			
DIVISION	DIVISION CODE	CHKD	DATE	APPV	DATE	
		S FELDMAN	AUG 09, 2010			
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THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 1994	MILLIMETERS		TITLE 3M SHROUDED BOARD MOUNT HEADER 2 MM X 2 MM PITCH 159 SERIES		
MAX SURFACE ROUGHNESS 125	ALL SURFACES MARKED ONLY	INCHES		CAGE NUMBER D 78-5100-2359-7		
		ANGLES ±1°		DRAWING NO. 78-5100-2359-7		
				REV. A		
				SHT 4 OF 4		

78-5100-2359-7 DRAWING NUMBER

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- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

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