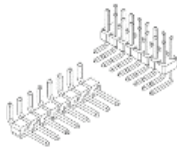


**68021-210HLF**

**68021-210HLF - BergStik® : Unshrouded Header,
Through Hole, Double Row, 10 Positions, 2.54 mm
Pitch, Right Angle, 5.84 mm (0.23 in.) Mating, 3.05
mm (0.12 in.) Tail**

[Customer
drawing](#)[Environmental
Compliance Report](#)[Specifications](#)[Download document](#)[Mating Half](#)

[General](#) [Dimensional](#) [Electrical](#) [Mechanical](#) [Mounting](#) [Physical](#) [Approvals / Certifications](#) [Other Features](#)

General

Number of contacts (per row)	5
Number of contacts (Total)	10
Number of rows	2
Orientation	Right Angle
Packaging	Bulk Packaging
Attachment type (Board)	Through Hole
Series Number	68021

Dimensional

Length (Mating pin)	5.84 mm (0.23 in.)
Length (Tail)	3.05 mm (0.12 in.)

Electrical

Current rating	3 amp Continuous
Resistance (Insulation)	5000 M-ohms
Voltage rating	1500V AC rms

Mechanical

Retention force	8.88N (2 lbf)
-----------------	---------------

Mounting

Retention feature (Board)	No
Solder process	Vapor-phase IR Reflow Soldering Processes Compatible with Wave

Physical

Color (Housing)	Black
Material (Contact)	Phospor Bronze
Material (Housing)	High Temperature Black Thermoplastic
Plating (Contact area)	0.38 µm (15 µin.) Gold or GXT
Plating (Tail)	0.38 µm (15 µin.) Gold or GXT, or Tin
Underplating (Contact)	1.27 µm (50 µin.) Nickel
Flammability rating	UL 94 V-0
Temperature (Range)	-65°C to +125°C

Approvals / Certifications

UL File Number	E66906
CSA File Number	LR46923
Approvals / Certifications	UL and CSA Approved

Other Features

Comments	Sample Kit 950501-016
Literature	950559-001



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PRODUCT NUMBER

XXXXX-YYY HTLF

LEAD FREE OPTION
SEE NOTE 1,8

TUBE PACKAGING OPTION
SEE NOTE 1

HIGH TEMPERATURE PLASTIC
SEE NOTE 1

NO. OF
POSITIONS
SEE NOTE 1

PIN PLATING
SEE SHEET 2

BASE PART NO.

68020-X XX-XXX XXX LF

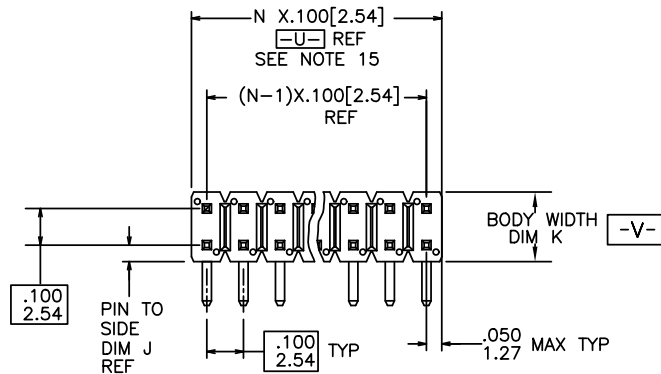
TAIL LENGTH (EXAMPLE BELOW)
3.0mm=030 12.8mm=128 (SEE NOTE 11 & 12)

MATING LENGTH (EXAMPLE BELOW)
5.0mm=050 25.5mm=255 (SEE NOTE 11 & 12)

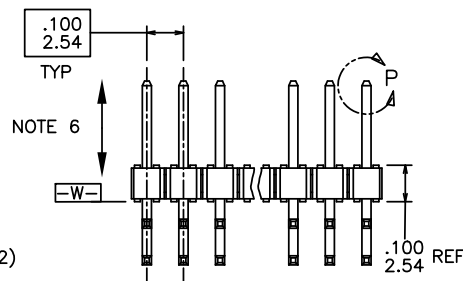
TOTAL NUMBER OF POSITION
FROM 2(2X1) THRU 72 (2X36) POSITIONS

PIN PLATING (SEE NOTE 9)
1=0.76µm Au
4= PURE TIN
8=0.36µm Au

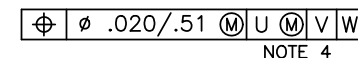
BASE PART NO.



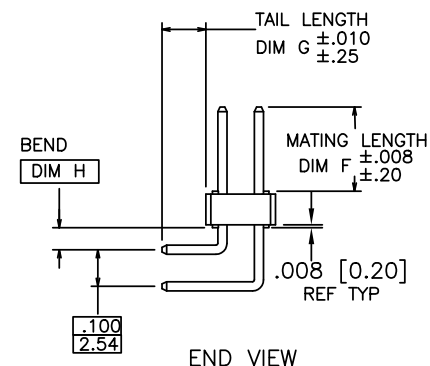
TOP VIEW



SIDE VIEW



DETAIL P
TYP BOTH ENDS



END VIEW

rev	ecn no	dr	date
BL	M06-0346	MHT	9/04/06
BM	M07-0165	AGS	3/22/07
BN	M08-0169	MHT	3/05/07
BP	M08-0267	MHT	9/25/08
BR	M08-0331	MHT	12/01/08
BH	M09-0105	MHT	7/10/09
BJ	N11-0118	J.Z	2011-04-12

www.fciconnect.com			surface 6.4 ISO 1302	tolerance std ISO 406 ISO 1101	projection ISO 1101	INCH/MM
TOLERANCES UNLESS OTHERWISE SPECIFIED			ANGULAR	LINEAR	size A4	Scale 1.000
Dr	D.WIHTING	03/08/93	0°	±2°	0.X ±0.3	ECN N11-0118
Eng	T.HANNA	03/08/93	0°	±2°	0.XX ±0.15	Spec ref
Chr	T.BREWNAKER	03/08/93	0°	±2°	0.XXX ±0.05	
Appr	T.HANNA	03/08/93	Product family BERGSTIK			
FCI			title BERGSTIK® II HEADER .100/2.54cc DR R/A			Rev. BJ
catalog no			CUSTOMER			sheet 1 of 5

PIN PLATING CODES:

XXXXX-1YY	30u"/0.76u MIN (SEE NOTE 9) OVER 50u"/1.27u MIN Ni
XXXXX-2YY	15u"/0.38u MIN (SEE NOTE 9) OVER 50u"/1.27u MIN Ni
XXXXX-3YY	50u"/1.27u MIN (SEE NOTE 9) OVER 50u"/1.27u MIN Ni
XXXXX-4YY	100u"/2.54u MIN Sn OVER 50u"/1.27u MIN Ni (SEE NOTE 10)
XXXXX-4YYHLF	
XXXXX-5YY	15u"/0.38u MIN (SEE NOTE 9) OVER 50u"/1.27u MIN Ni
XXXXX-6YY	30u"/0.76u MIN (SEE NOTE 9) OVER 50u"/1.27u MIN Ni
XXXXX-7YY	30u"/0.76u MIN (SEE NOTE 9) OVER 50u"/1.27u MIN Ni
XXXXX-8YY	15u"/0.38u MIN (SEE NOTE 9) OVER 50u"/1.27u MIN Ni
XXXXX-9YY	15u"/0.38u MIN (SEE NOTE 9) OVER 50u"/1.27u MIN Ni
XXXXX-0YY	30u"/0.76u MIN (SEE NOTE 9) OVER 50u"/1.27u MIN Ni

NOTES

1. PART NUMBER OPTIONS:

PIN PLATING CODES (SEE ABOVE)

HIGH TEMP. MATERIAL:

PART NUMBERS WITH AND WITHOUT "H" WILL BE SUPPLIED WITH HIGH TEMPERATURE PLASTIC

NUMBER OF POSITION:

EVEN NUMBER OF POSITIONS FROM 2 (2X1) THRU 72 (2X36).

PACKAGING:

PACKAGED IN POLY BAGS.

EIGHT DIGIT PART NUMBERS FOLLOWED BY A "T" ARE PACKAGED IN TUBES. SEE SPECIFIC PART NUMBERS FOR AVAILABILITY.

LEAD FREE:

ADD "HLF" SUFFIX AT THE END OF PART NUMBER FOR LEAD FREE OPTION, NOT AVAILABLE FOR -5YY,-5YYH,-6YY & -6YYH.

2. BODY MATERIAL:

MANUFACTURER'S OPTION OF NYLON, PCT GLASS FIBER REINFORCED, OR MINERAL FILLED LCP FLAME RETARDANT PER UL-94V-0. COLOR: BLACK.

PART NUMBERS WITH AND WITHOUT "H" SUFFIX WILL WITHSTAND EXPOSURE TO 260°C PEAK TEMPERATURE FOR 20 SECONDS IN WAVE SOLDER, INFRA-RED OR VAPOR PHASE SOLDER PROCESS.

3. PIN MATERIAL: PHOS-BRONZE.

4. MEASURED WITH PART IN RESTRAINED CONDITION.

5. TWO SIDES OF PIN TIPS NOT PLATED. TYPICAL BOTH ENDS.

6. 2LBS/0.9KG MIN PIN RETENTION IN EITHER DIRECTION.

7. MILITARY BERGSTIK HEADER

P/N XXXXX-XY-MIL
NOT AVAILABLE.

8. THESE PRODUCTS MEETS EUROPEAN UNION DIRECTIVES AND OTHER COUNTRY REGULATION AS DESCRIBED IN GS-22-008.

9. PLATING OPTIONS:

PERFORMANCE PLATING WILL BE EITHER GOLD OR GXT ON POST OR TAIL, OPTIONALLY (78~295u"/2~7.5u) TIN ON TAIL.

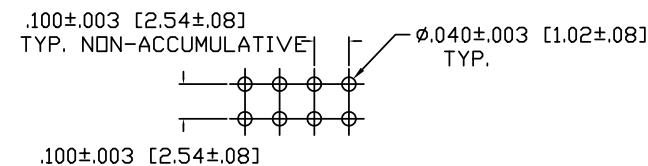
10. THIS PRODUCT HAS 100%% TIN PLATING IN THE INTERFACE AND HAS NOT BEEN TESTED FOR WHISKER GROWTH IN ALL INTERCONNECT ENVIRONMENTS."

11. THE OAL DON'T EXCEED 31mm
OAL= MATTING DIM + TAIL DIM +4.0mm<=31mm "WHERE THE SUM OF TAIL LEGTH DON'T EXCEED 27mm" TAIL
TAIL LENGTH MIN 2.00mm TAIL LENGTH MAX 10.4mm
MATTING LENGTH MIN 1.5mm MATTING LENGTH MAX 25.4mm

12. INCREMENTS BY 0.1mm IN LENGTH ONLY

13. FOR ESPECIAL PACKAGING REQUEST PLEASE CONTACT PRODUCT MANAGER FOR AVAILABILITY

14. BEND DIMENSION AT 1.5mm ONLY

15. TO DETERMINE DIMENSIONS:
N=NUMBER OF POSITION PER ROW
EXAMPLE: 10 POS. N X .100/2.54

RECOMMENDED HOLE PATTERN

www.fciconnect.com			surface ISO 1302 ✓	tolerance std ISO 406 ISO 1101	projection A4	INCH/MM
			TOLERANCES UNLESS OTHERWISE SPECIFIED		size	Scale
Dr	D.WIHTING	03/08/93	ANGULAR	LINEAR	0.X	±0.3
Eng	T.HANNA	03/08/93			0.XX	±0.15
Chr	T.BREWNAKER	03/08/93	0°	±2°	0.XXX	±0.05
Appr	T.HANNA	03/08/93	Product family		BERGSTIK	Spec ref
FCI			title		BERGSTIK® II HEADER	dwg no
					.100/2.54cc DR R/A	68020
			catalog no		CUSTOMER	
					sheet 2 of 5	

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PRODUCT NUMBER	MATING LENGTH		TAIL LENGTH		BEND DIM.		PIN TO SIDE		BODY WIDTH		PACKAGING	LF OPTION
	DIM F	DIM F	DIM G	DIM G	DIM H	DIM H	DIM J	DIM J	DIM K	DIM K		
	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC		
68020-XYX	0.230	5.84	0.095	2.41	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	NOTE 1,8
68021-XYX	0.230	5.84	0.120	3.05	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
68022-XYX	0.318	8.08	0.110	2.79	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
68025-XYX	0.230	5.84	0.195	4.95	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
68405-XYX	0.230	5.84	0.095	2.41	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
68452-XYX	0.380	9.65	0.110	2.79	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
68459-XYX	0.318	8.08	0.150	3.81	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS/TUBES	
68462-XYX	0.400	10.16	0.120	3.05	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
68463-XYX	0.230	5.84	0.110	2.79	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
68480-XYX	0.318	8.08	0.110	2.79	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
68492-XYX	0.230	5.84	0.150	3.81	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
68493-XYX					U N A V A I L A B L E							NOTE 1,8
68695-XYX	0.230	5.84	0.090	2.29	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
68696-XYX	0.318	8.08	0.125	3.18	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
68697-XYX	0.230	5.84	0.125	3.18	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
68715-XYX	0.138	3.51	0.138	3.51	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
68728-XYX					U N A V A I L A B L E							
68740-XYX	0.345	8.76	0.110	2.79	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
68759-XYX	0.275	6.99	0.120	3.05	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
68780-XYX	0.230	5.84	0.039	0.99	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
69147-XYX	0.540	13.72	0.260	6.60	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
69186-XYX					U N A V A I L A B L E							NOTE 1,8
72240-XYXH	0.550	13.97	0.120	3.05	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
72261-XYXH	0.100	2.54	0.100	2.54	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
72324-XYXH	0.550	13.97	0.260	6.60	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
72410-XYXH	0.120	3.05	0.350	8.89	0.120	3.05	0.070	1.78	0.240	6.10	POLY BAGS	
74430-XYXH	0.000	0.00	0.233	5.92	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	

NOTE 1,8

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www.fciconnect.com			surface ISO 1302		tolerance std ISO 406 ISO 1101		projection ISO 10110		INCH/MM	
			TOLERANCES UNLESS OTHERWISE SPECIFIED							
Dr	D.WIHTING	03/08/93	ANGULAR		LINEAR		0.X	±0.3	size	A4
Eng	T.HANNA	03/08/93					0.XX	±0.15	Scale	1.000
Chr	T.BREWNAKER	03/08/93	0° ±2°				0.XXX	±0.05	ECN	N11-0118
Appr	T.HANNA	03/08/93	Product family		BERGSTIK		Spec ref			
FCI			title				BERGSTIK® II HEADER		dwg no	
			.100/2.54cc DR R/A				68020		Rev.	
			catalog no				CUSTOMER		sheet 3 of 5	

REV F - 2006-04-17

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PDM: Rev:BJ

STATUS Released 4 Printed: Apr 20, 2011

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PRODUCT NUMBER	MATING	LENGTH	TAIL	LENGTH	BEND DIM.		PIN TO SIDE		BODY WIDTH		PACKAGING	LF OPTION
	DIM F	DIM F	DIM G	DIM G	DIM H	DIM H	DIM J	DIM J	DIM K	DIM K		
	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC		
78576-XYX	0.120	3.05	0.120	3.05	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	NOTE 1,8
78923-XYX	0.240	6.10	0.095	2.41	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
78951-XYX	0.500	12.70	0.120	3.05	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
79200-XYX	0.155	3.94	0.280	7.11	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
79201-XYX	0.225	5.72	0.280	7.11	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
79202-XYX	0.245	6.22	0.280	7.11	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
79203-XYX	0.315	8.00	0.280	7.11	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
79204-XYX	0.177	4.50	0.410	10.41	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
79205-XYX	0.25	6.35	0.410	10.41	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
79206-XYX	0.315	8.00	0.410	10.41	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
79248-XYX					UNAVAILABLE							
79257-XYX	0.230	5.84	0.120	3.05	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS/TUBES	
79258-XYX	0.318	8.08	0.120	3.05	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS/TUBES	
79807-XYX					UNAVAILABLE							
79841-XYX	0.060	1.52	0.230	5.84	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
86385-XYX	0.260	6.6	0.120	3.05	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
86840-XYX	0.318	8.08	0.230	5.84	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
86867-XYX					UNAVAILABLE							
88822-XYX	0.318	8.08	0.080	2.03	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
89292-XYX	0.120	3.05	0.300	7.62	0.120	3.05	0.045	1.14	0.190	4.83	POLY BAGS	
90234-XYX	0.130	3.30	0.195	4.95	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
92634-XYX	0.318	8.08	0.318	8.08	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	
93162-XYX	0.230	5.84	0.400	10.16	0.150	3.81	0.045	1.14	0.190	4.83	POLY BAGS	
93932-XYX	0.200	5.08	0.120	3.05	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
93939-XYX	0.160	4.06	0.120	3.05	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
94687-XYXH	0.430	10.92	0.230	5.84	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	NOTE 1,8
94688-XYXH	0.385	9.78	0.280	7.11	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	

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www.fciconnect.com			surface ISO 1302 ✓		tolerance std ISO 406 ISO 1101		projection 		INCH/MM ←————→	
			TOLERANCES UNLESS		OTHERWISE SPECIFIED					
Dr	D.WIHTING	03/08/93	ANGULAR	LINEAR	0.X	±0.3	size	A4	Scale 1.000	
Eng	T.HANNA	03/08/93			0.XX	±0.15				
Chr	T.BREWNAKER	03/08/93			0.XXX	±0.05	ECN		N11-0118	
Appr	T.HANNA	03/08/93	Product family BERGSTIK				Spec ref			
	title BERGSTIK® II HEADER .100/2.54cc DR R/A					dwg no 68020			Rev B.J	
	catalog no					CUSTOMER			sheet 4 of 5	

PDM: Rev:BJ

STATUS Released 4 Printed: Apr 20, 2011

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PRODUCT NUMBER	MATING LENGTH		TAIL LENGTH		BEND DIM.		PIN TO SIDE		BODY WIDTH		PACKAGING	LF OPTION
	DIM F	DIM F	DIM G	DIM G	DIM H	DIM H	DIM J	DIM J	DIM K	DIM K		
	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC		
95035-YYYH	0.230	5.84	0.400	10.16	0.060	1.52	0.045	1.14	0.190	4.83	POLY BAGS	NOTE 1,8 ↓
95182-YYYH	0.400	10.16	0.110	2.79	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
98358-YYYH	0.205	5.21	0.410	10.41	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	
98359-YYYH	0.275	6.99	0.410	10.41	0.060	1.52	0.070	1.78	0.240	6.10	POLY BAGS	

A

B

C

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D

A

B

C

D

www.fciconnect.com			surface ISO 1302		✓	tolerance std ISO 406 ISO 1101		projection 		INCH/MM 				
			TOLERANCES UNLESS		OTHERWISE SPECIFIED									
Dr	D.WIHTING	03/08/93	ANGULAR		LINEAR	0.X	±0.3	size	A4					
Eng	T.HANNA	03/08/93				0.XX	±0.15							
Chr	T.BREVNAKER	03/08/93	0°	±2°		0.XXX	±0.05	ECN		N11-0118				
Appr	T.HANNA	03/08/93	Product family				BERGSTIK		Spec ref					
		title					BERGSTIK® II HEADER					dwg no	68020	Rev. BJ
							.100/2.54cc DR R/A							
		catalog no												
					CUSTOMER					sheet 5 of 5				

REV F - 2006-04-17

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PDM: Rev:BJ

STATUS Released 4 Printed: Apr 20, 2011