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Jameco Part Number 1303716



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REVISE ON PC ONLY:		TITLE:	PICOFLEX CONNECTOR SYSTEM PRODUCT SPECIFICATION				
P	Text correction. ECN E2007-0219 – J.Dennehy						
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	DESIGN CONTROL	STATUS	WRITTEN BY:	CHECKED BY:	APPROVED BY	DATE:	YR/MO/DAY
	MXI	RELEASED	J.Dennehy	D.Waszkiz	J.Dennehy	2006-07-20	
DOCUMENT NUMBER						FILENAME	SHEET
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ES-40000-3996 REV. A SHEET 3 95/MAR/10 EC U5-0926 DCBRD03.LWP							



1.0 SCOPE

This specification defines the performance characteristics for the PICOFLEX connector system.

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2.0 PRODUCT DESCRIPTION AND APPLICABLE DOCUMENTS

Product Type	Series No.	Product Description	Sales Drawing
PCB Headers	90325	Vertical Thru Hole Header	SDA-90325
	90779	Vertical Thru Hole Header, High Temperature Thermoplastic	SDA-90779
	90715	Vertical Thru Hole Header, with Kinked Tails and Optional Polarising Pegs	SDA-90715
	90814	Vertical SMT Header	SDA-90814
	90800	Right-Angle Thru Hole Header	SDA-90800E
	91714	Right-Angle Thru Hole Header, High Temperature Thermoplastic	SD-91714-001
	91330	Bottom Entry SMT Header	SD-91330-001
	91819	Vertical Thru Hole Header, RoHS Compatible	SD-91819-001
	91820	Vertical SMT Header, RoHS Compatible	SD-91820-001
	91822	Bottom Entry SMT Header, RoHS Compatible	SD-91822-001
IDT Connector	90327	Insulation Displacement Connector	SDA-90327
Crimp Housing	91935	Discrete Wire Crimp Housing	SD-91935-001
Crimp Terminal	91821	Discrete Wire Crimp Terminal	SD-91821-001
PCB Connectors	90584	Insulation Displacement Board-In Connector	SDA-90584
	91577	Insulation Displacement Board-In Connector with Alternative Terminal Stagger	SD-91577-001

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3.0 RATINGS

Series No.	Wire/Cable Size (AWG)	Maximum Current at 105°C	Voltage AC/DC	Operating Temperature	Storage Temperature
90325	N/a	1.2A	250V Max.	-40°C to +105°C	-40°C to +85°C
90779	N/a	1.2A			
90715	N/a	1.2A			
90814	N/a	1.2A			
90800	N/a	1.2A			
91714	N/a	1.2A			
91330	N/a	1.2A			
91819	N/a	2.4A			
91820	N/a	2.4A			
91822	N/a	2.4A			
90327	28 AWG	1.2A			
91935 & 91821	24 AWG	2.4A			
	26AWG	2.2A			
	28AWG	1.2A			
90584	28 AWG	1.2A			
91577	28 AWG	1.2A			

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4.0 ELECTRICAL PERFORMANCE

	ITEM	TEST CONDITION	REQUIREMENT
4.1	Contact Resistance	20mV maximum open circuit voltage. 100mA maximum test current	15mOhms MAXIMUM
4.2	Insulation Resistance	500V DC applied to adjacent circuits	1000 megaohms MINIMUM
4.3	Dielectric Withstanding Voltage	750 VAC applied to adjacent circuits for 1 minute	No breakdown

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5.0 MECHANICAL PERFORMANCE

	ITEM	TEST CONDITION	REQUIREMENT
5.1	Insertion Force (Per individual contact, 90327 & 91821 series only)	Insertion force tested by inserting standard gauge blade specified in Appendix A Rate of insertion = 25 ±6 mm/sec	1.7N maximum for initial insertion of Tin contact 1.1N maximum for initial insertion of Gold contact
5.2	Withdrawal Force (Per individual contact, 90327 & 91821 series only)	Withdrawal force tested by withdrawing standard gauge blade specified in Appendix A Rate of withdrawal =25 ±6 mm/seconds	Withdrawal force = 0.25N minimum
5.3	Durability	1 durability cycle = 1 Mating & Un-mating of the connector using Picoflex extraction tool or pull-tab For Tin on Tin system number of durability cycles = 30 For Gold on Gold system number of durability cycles = 100	Change in insertion force from initial value = 0.5N maximum Change in contact resistance from initial value = 10mOhms maximum
5.4	Shock	Acceleration = 50g Duration = 11 milliseconds Per IEC 512-4, test condition 6c	Change in contact resistance from initial value = 10mOhms maximum Discontinuity = 1micro second maximum
5.5	Vibration	Sweep = 10-55-10Hz Amplitude = 0.35mm or 5g Pulse = 1/2 Sine Duration = 2 hours in each X-Y-Z direction Per IEC 512-4, test condition 6d	Change in contact resistance from initial value = 10mOhms maximum Discontinuity = 1micro second maximum
5.6	Terminal Retention Force in Housing (PCB Headers)	Terminal withdrawal force to be applied at the rate of 25 ± 6mm per minute	Terminal Retention force = 7N minimum.
5.7	Terminal Retention Force in Housing (Crimp Terminal & Housing)	Terminal withdrawal force to be applied at the rate of 25 ± 6mm per minute	Terminal Retention force = 15N minimum

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6.0 ENVIRONMENTAL PERFORMANCE

	ITEM	TEST CONDITION	REQUIREMENT								
6.1	Damp Heat	Mate connectors and expose to: Temperature = +40°C +3/-0°C Humidity = 90 - 95% R.H. Duration = 1000 Hours	Change in contact resistance from initial value = 10mOhms maximum No visual damage								
6.2	Dry Heat	Mate connectors and expose to: Temperature = +105°C +3/-0°C Duration = 240 Hours	Change in contact resistance from initial value = 10mOhms maximum No visual damage								
6.3	Cold	Mate connectors and expose to: Temperature = -40° C +0°C /-3°C Duration = 96 Hours	Change in contact resistance from initial value = 10mOhms maximum No visual damage								
6.4	Thermal Shock	Mate connectors and expose to 10 cycles of the following profile: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Temperature °C</th> <th>Time Duration</th> </tr> </thead> <tbody> <tr> <td>-40 +0 /-3</td> <td>30 minutes</td> </tr> <tr> <td>+20 ± 5</td> <td>5 minutes max</td> </tr> <tr> <td>+105 +3/-0</td> <td>30 minutes</td> </tr> </tbody> </table>	Temperature °C	Time Duration	-40 +0 /-3	30 minutes	+20 ± 5	5 minutes max	+105 +3/-0	30 minutes	Change in contact resistance from initial value = 10mOhms maximum No visual damage
Temperature °C	Time Duration										
-40 +0 /-3	30 minutes										
+20 ± 5	5 minutes max										
+105 +3/-0	30 minutes										
6.5	Corrosive Atmosphere Sulphur Dioxide (SO ₂)	Mate Connectors and expose to: Atmosphere: 10 parts per million (PPM) SO ₂ Duration: 240 hours Temperature: 25 °C Humidity: 75% R.H.	Change in contact resistance from initial value = 10mOhms maximum No visual damage								
6.6	Corrosive Atmosphere Hydrogen Sulphide (H ₂ S)	Mate Connectors and expose to: Atmosphere: 1 part per million (PPM) H ₂ S Duration: 96 hours Temperature: 25 °C Humidity: 75% R.H.	Change in contact resistance from initial value = 10mOhms maximum No visual damage								
6.7	Solder Heat Resistance 90325, 90584, 90715, 90800 and 91577 series only	Insert Terminal Solder Tails in solder bath: Solder Temperature: 230°C Duration: 5 seconds maximum	No damage that would impair normal operation								

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PRODUCT SPECIFICATION



LANGUAGE

English

	ITEM	TEST CONDITION	REQUIREMENT
6.8	Resistance to Reflow Temperature 90779, 90814, 91330, 91714, 91819, 91820 and 91822 series only	Subject unmated connectors to applicable re-flow profile shown in Appendix C	No damage that would impair normal operation
6.9	Glow Wire 91819, 91820, 91821, 91822 and 91935 series only	Glow wire temperature: 750°C Test positions shown in Appendix D Per IEC 60695-2-11	Flame must extinguish within 2 seconds of removal of glow wire No ignition of wrapping tissue 200mm under test specimen

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PICOFLEX CONNECTOR SYSTEM
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7.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage. No Styrofoam shall be used in any packing that comes in direct contact with the connectors.

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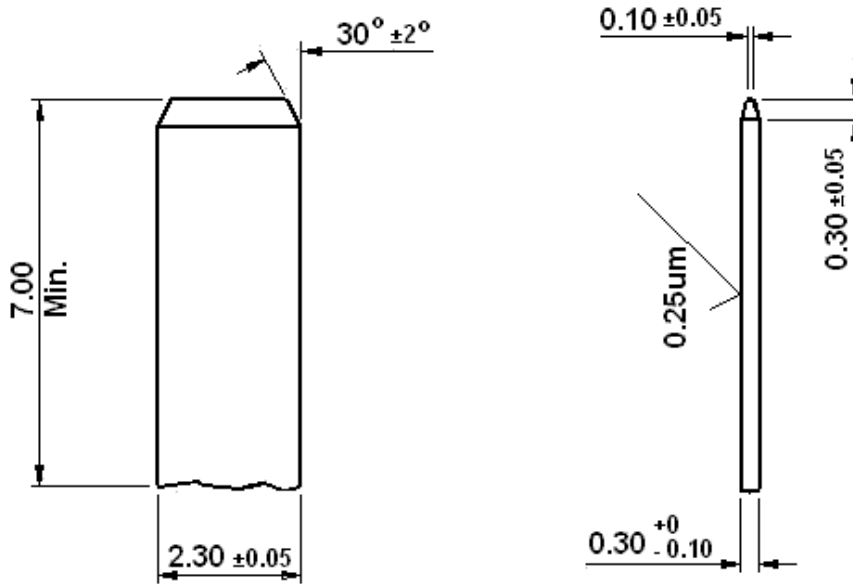
8.0 TEST GROUPS

TEST REF.	TEST	A	B	C	D	E	F	G
4.1	Contact Resistance	2 4 6 8	2 4 6	2 4 6 9	2 4 6	2 4 6		
4.2	Insulation Resistance	9						
4.3	Dielectric Withstanding Voltage	10						
5.1	Insertion Force						1	
5.2	Withdrawal Force						2	
5.3	Durability	3	3	3	3	3		
5.4	Shock			8				
5.5	Vibration			7				
5.6	Terminal Retention Force in Housing (PCB Headers)							1
5.7	Terminal Retention Force in Housing (Crimp Terminal & Housing)							1
6.1	Damp Heat	7						
6.2	Dry Heat	5						
6.3	Cold			5				
6.4	Thermal Shock		5					
6.5	Corrosive Atmosphere Sulphur Dioxide (SO ₂)				5			
6.6	Corrosive Atmosphere Hydrogen Sulphide (H ₂ S)					5		
6.7	Solder Heat Resistance	1	1	1	1	1		
6.8	Resistance to Reflow Temperature	1	1	1	1	1		
6.9	Glow Wire							1

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APPENDIX A - INSERTION/WITHDRAWAL GAUGE SPECIFICATION



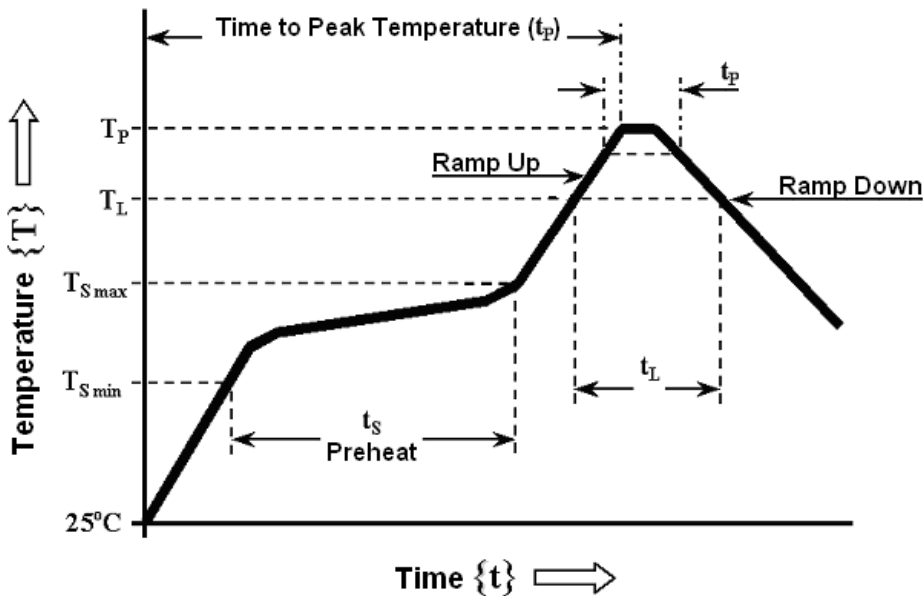
Note: Gauge weight = 25 grams minimum

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APPENDIX B – RE-FLOW PROFILES

PROFILE FEATURE	Pb-FREE PROCESS (RoHS) COMPLIANT	Pb-FREE PROCESS (RoHS) COMPATIBLE
Product Series	90814, 90779, 91330, 91714.	91819, 91820, 91822.
Average Ramp Up Rate	3°C/second max.	3°C/second max.
Preheat - Temperature Min ($T_{S\ min}$) - Temperature Max ($T_{S\ max}$) - Time (t_s)	100°C 150°C 60 – 120 seconds	150°C 200°C 60 – 180 seconds
Time over Liquidus - Temperature (T_L) - Time (t_L)	183°C 60 – 150 seconds	217°C 60 – 150 seconds
Time from 25°C to Peak Temperature (T_P)	6 minutes max.	8 minutes max.
Peak Temperature (T_P)	230°C max.	260°C max.
Time within 5°C of Peak Temperature (t_p)	30 seconds max.	40 seconds max.
Ramp Down Rate	6°C/second max.	6°C/second max.

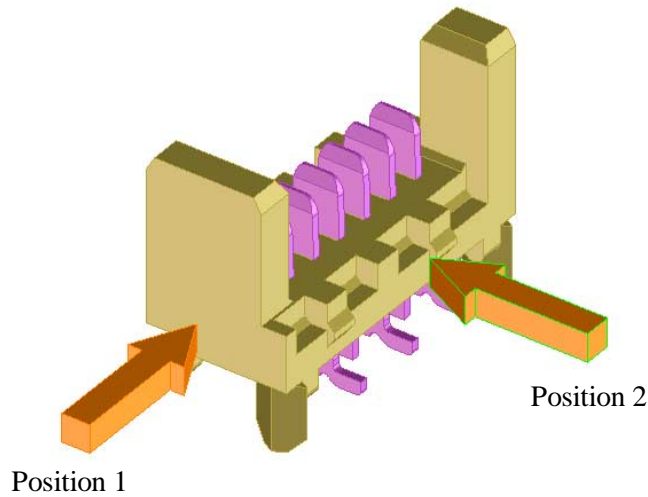


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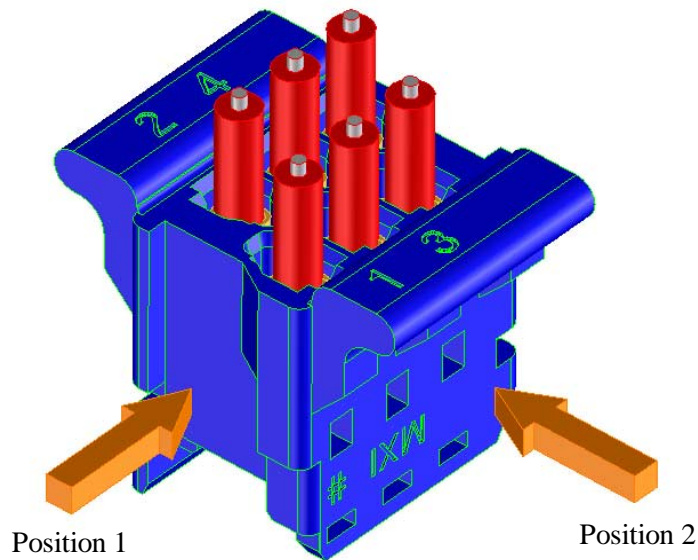


APPENDIX C - GLOW WIRE TEST POSITIONS

Series 91819, 91820 and 91822



Series 91821 and 91935



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NOTES:

1. APPL. CLASS TO DIN 40040 HME (-25°C/+100°C)
2. ENGAGING FORCE MAX 1.7 N/CKT TIN
1.1 N/CKT GOLD
DISENGAGING FORCE MIN 0.25 N/CKT TESTED USING
A POLISHED STEEL PIN NOM THK 0.3mm ± 0.01
3. COMPATABLE WITH MOLEX PT 90325.
4. USE WITH CABLES 28AWG STD, 26AWG
STD, AND 26AWG (69 STRANDS) SUPERFLEX.
5. SHADED AREA DENOTES POSITION OF COLOUR CODE
MOULD BASE COLOUR: WHITE.
6. TERMINATION SPECIFICATION : ES-99033-0001
7. PRODUCT SPECIFICATION : PS-99020-0011

HOUSING

MATL: POLYESTER RATED AT UL 94 V-0,
COLOUR WHITE.

IDT CONTACT

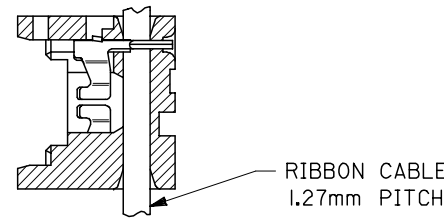
MATL. PHOS BRONZE (0.17)/.0066
THK HV 180-200
PLATING. TIN: (2-4um)/80-160u" PURE TIN
PLATING. GOLD: (1.3um)/50u" MIN. NICKEL
UNDER (0.76um)/30u" SELECTIVE GOLD

90327- * * * *

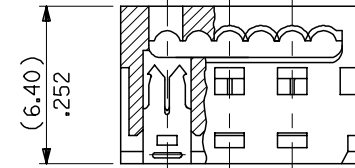
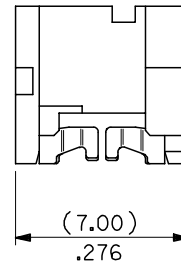
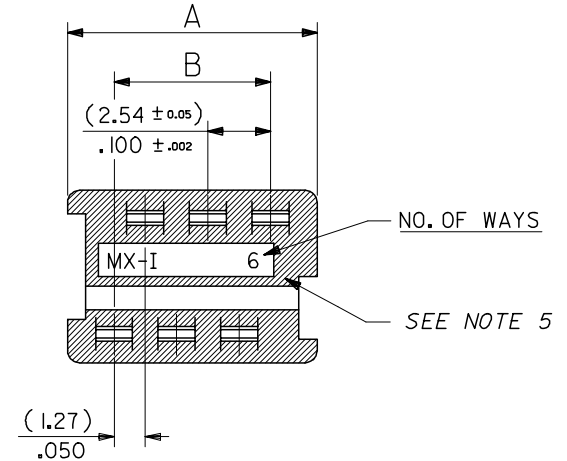
0= 2um PRE TIN ASSY
3= 0.76um GOLD ASSY
SEE CONTACT PLATING NOTE

04 TO 26 = CCT SIZE, 51 TO 98
= ASSY ON REELS, SEE CHART.

COLOUR 0 BLACK 1 GREEN 2 RED
3 WHITE 4 BLUE 5 YELLOW



SECTION SHOWING
ASSY AFTER TERMINATION
SEE NOTE 6



90327 - **26	26	(35.53)/1.399	(31.75)/ 1.250
↑	- **24	24	(32.99)/1.299 (29.21)/1.150
	- **22	22	(30.45)/1.199 (26.67)/1.050
	- **20	20	(27.91)/1.099 (24.13)/ .950
	- **18	18	(25.37)/ .999 (21.59)/ .850
	- **16	16	(22.83)/ .899 (19.05)/ .750
	- **14	14	(20.29)/ .799 (16.51)/ .650
	- **12	12	(17.75)/ .699 (13.97)/ .550
	- **10	10	(15.21)/ .599 (11.43)/ .450
	- **08	8	(12.67)/ .499 (8.89)/ .350
↓	- **06	6	(10.13)/ .399 (6.35)/ .250
90327 - **04	4	(7.59)/ .299 (3.81)/ .150	
PART NO.	CCT SIZE	DIMENSION A	DIMENSION B

OBSOLETE SHEET 3 & 4 EC NO: E2005-0618 DRAWN: GMSWEEEN 2005/05/10 CHKD: DMORLARTY 2005/05/10 APPR: JDENNHY 2005/05/26	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± .004 2 PLACES ± 0.10 ± --- 1 PLACE ± --- ± --- ANGULAR ± 2 °	DIMENSION STYLE MM/IN	SCALE 5:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
	DRAWN BY NPC	DATE 1987/07/28	TITLE IDT ASSEMBLY PICO FLEX				
	CHECKED BY DMORLARTY	DATE 2004/09/15	APPROVED BY JDENNHY	DATE 2004/09/16	MATERIAL NO. SEE CHART	DOCUMENT NO. SDA-90327	SHEET NO. 1 OF 2
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS						

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