Order code	Manufacturer code	Description
22-3954	n/a	4WAY PICOFLEX LOWPROFILE HEADER MOLEX RC
22-3956	n/a	6WAY PICOFLEX LOWPROFILE HEADER MOLEX RC
22-3958	n/a	8WAY PICOFLEX LOWPROFILE HEADER MOLEX RC
22-3960	n/a	10WAY PICOFLEX LOWPROFILE HEADR MOLEX RC
22-3962	n/a	12WAY PICOFLEX LOWPROFILE HEADR MOLEX RC

Sales: 01206 751166 **Technical: 01206 835555** **Fax: 01206 7551188**
Sales@rapidelec.co.uk **Tech@rapidelec.co.uk** **www.rapidelectronics.co.uk**

PRODUCT SPECIFICATION	LANGUAGE
	ENGLISH

1.0 SCOPE

This specification defines the product performance requirements for the Picoflex connector system.

2.0 PRODUCTION DESCRIPTION

90325-****	Header assembly, straight P.C. tail version.
90715-****	Header assembly, with kinked P.C. tails and optional polarizing pegs.
90779-****	Header assembly, high temperature thermoplastic material.
90327-****	Insulation displacement female assembly.
90327-9001	Insulation displacement female assembly with pull tab feature.
90584-****	Board-in insulation displacement assembly.
90800-****	Header assembly right angle P.C. tail version.
90814-****	Header assembly SMT version.
91577-*3**	1.27mm low profile IDT alternative stagger board-in assembly.
91330-00**	Bottom entry SMT header assembly.

REV	L	L	L	L	L	L	L	L	L	
SHT	1	2	3	4	5	6	7	8	9	

REVISE ON PC ONLY		TITLE
L	E2004-0417 - J. Dennehy Changed plating spec from Tin-Lead to Tin.	**PRODUCT SPECIFICATION FOR PICOFLEX**
REV	DESCRIPTION	

STATUS M	WRITTEN BY: BBO	CHECKED BY: B. Maguire	APPROVED BY : B. Maguire	DATE : YR/MO/DAY 2003/11/12
DOCUMENT NO. PS-99020-0011			FILE PS99020_0011.DOC	SHT NO. 1 of 9

3.0 APPLICABLE DOCUMENT AND SPECIFICATIONS

See sales drawings and any other sections of this specification for the relevant reference documents and specifications. In cases where this product specification differs from product drawings, the product drawings take precedence.

4.0 RATINGS

4.1 VOLTAGE

Maximum of 250 VAC/DC.

4.2 CURRENT

1.2A at +70°C

4.3 OPERATING TEMPERATURE

-40 °C to +105 °C.

5.0 PERFORMANCE

5.1 ELECTRICAL PERFORMANCE

ITEM	TEST CONDITION	REQUIREMENT
Insulation resistance.	500V DC applied to adjacent circuits.	1000 megohms **MINIMUM**
Dielectric withstanding voltage 750 VAC/1 minute.	750 VAC applied to adjacent circuits for 1 minute.	No breakdown
Contact Resistance.	20 mV maximum open circuit voltage. 100mA maximum test current.	15mOhms **MAXIMUM**

5.2 MECHANICAL PERFORMANCE

ITEM	TEST CONDITION	REQUIREMENT
Insertion Force (per individual contact)	Insertion force tested by inserting standard gauge blade specified in section 7.0 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
Withdrawal Force (per individual contact)	Rate of withdrawal =25 ±6 mm/sec	Withdrawal force = 0.25N **Minimum**
Durability	1 durability cycle = 1 Mating & Unmating of the connector using Picoflex extraction tool or pull tab For Tin on Tin system Number of cycles = 30 (using extraction tool) For 0.76µm Gold on Gold system Number of cycles = 100 (using pull tab or extraction tool)	Allowable variation from initial insertion force value = 0.50N **Maximum** Change in contact resistance from initial value = 10mOhms **Maximum**
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**
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**
Terminal Retention Force in Housing (Header Terminal)	Terminal withdrawal force to be applied at the rate of 25 ± 6mm per minute	Terminal Retention force = 7N **Minimum**

5.3 ENVIRONMENTAL PERFORMANCE

ITEM	TEST CONDITION	REQUIREMENT
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
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
Thermal Shock	Mate connectors and expose to: 10 cycles of the following profile 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
Corrosive Atmosphere Sulphur Dioxide (SO2)	Mate Connectors and expose to: Atmosphere: 10 parts per million (ppm) SO2 Duration: 240 hours Temperature: 25 °C Humidity: 75% R.H.	Change in contact resistance from initial value = 10mOhms **Maximum** No visual damage
Corrosive Atmosphere Hydrogen Sulphide (H2S)	Mate Connectors and expose to: Atmosphere: 1 part per million (ppm) HS Duration: 96 hours Temperature: 25 °C Humidity: 75% R.H.	Change in contact resistance from initial value = 10mOhms **Maximum** No visual damage
Resistance to Infra-Red Reflow (90814 and 91330 only)	Subject Unmated connectors to Infra-red profile shown in appendix	No visual damage

5.4 TEST SEQUENCE FOR 90814 SMT PICOFLEX

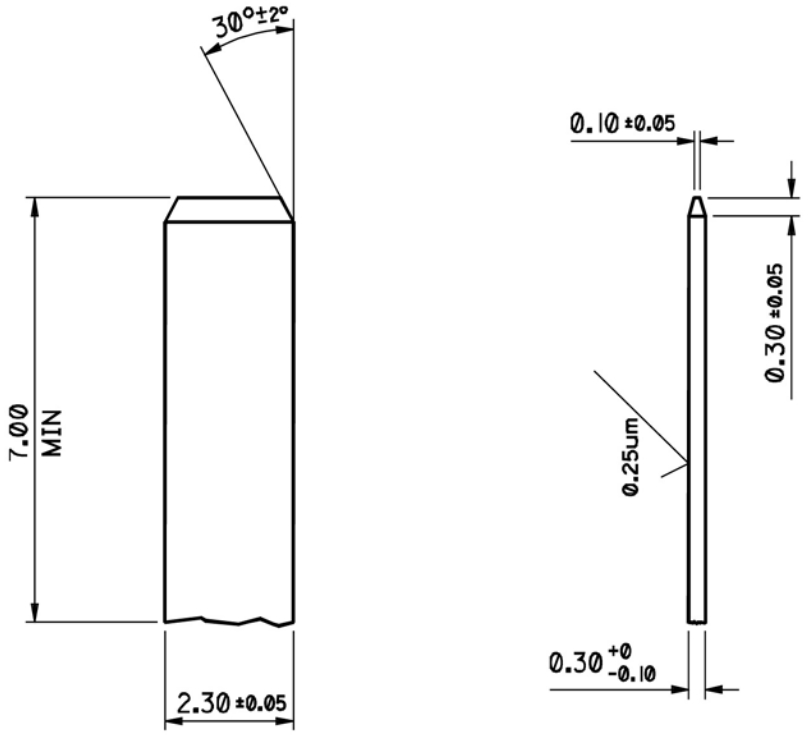
TEST ITEM	Group I.	GroupI I.	Group III.	Group IV.	Group V.
RESISTANCE TO INFRA-RED REFLOW	1	1	1	1	1
CONTACT RESISTANCE	2,4,6,8	2,4,6	2,4,7	2,4,6	2,4,6
DURABILITY	3	3	3	3	3
DRY HEAT	5				
DAMP HEAT	7				
THERMAL SHOCK		5			
VIBRATION			5		
DROP SHOCK			6		
SULPHUR DIOXIDE				5	
HYDROGEN SULPHIDE					5

6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage. For details of packaging see applicable family sales drawing.

7.0 GAUGES & FIXTURES

7.1 INSERTION/WITHDRAWAL GAUGE SPECIFICATION



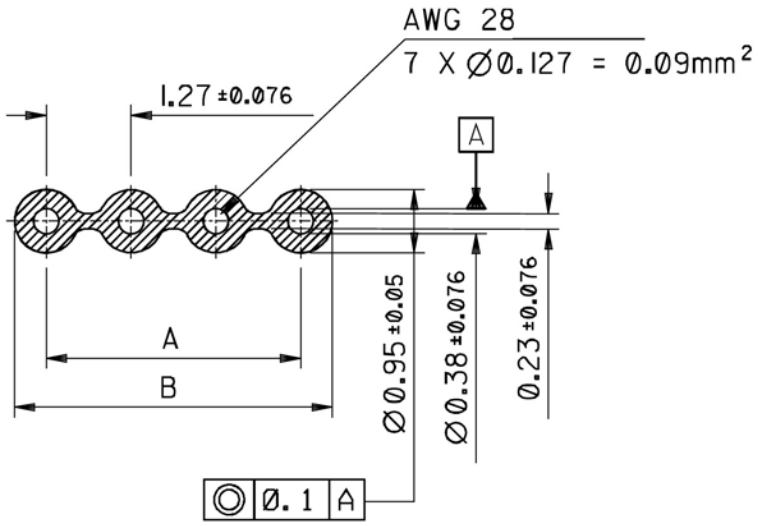
Insertion/Withdrawal Gauge Dimensions

Note: Gauge weight: 25 grams minimum

8.0 OTHER INFORMATION

8.1 CABLE SPECIFICATION

The cable profile is representational. Cable which meets the specified dimensions, constructions, and performance criteria is acceptable.



CIRCUIT SIZE	DIMENSION A	DIMENSION B
4	3.81	4.74
6	6.35	7.28
8	8.39	9.82
10	11.43	12.36
12	13.97	14.90
14	16.51	17.44
16	19.05	19.98
18	21.59	22.52
20	24.13	25.06
22	26.67	27.60
24	29.21	30.14
26	31.75	32.68

8.1.1 CONDUCTOR

28 AWG (0.09 square millimeter)
EL-Cu-58F21 to DIN 40500, Tin plated V3 to DIN 40500.
Twist length to 6.8 maximum.

8.1.2 INSULATION

PVC Y 17 to VDE 0207
Fire retardant rating VWI to UL62 and VDE 0472 and 804
Shore hardness: A90+-5.

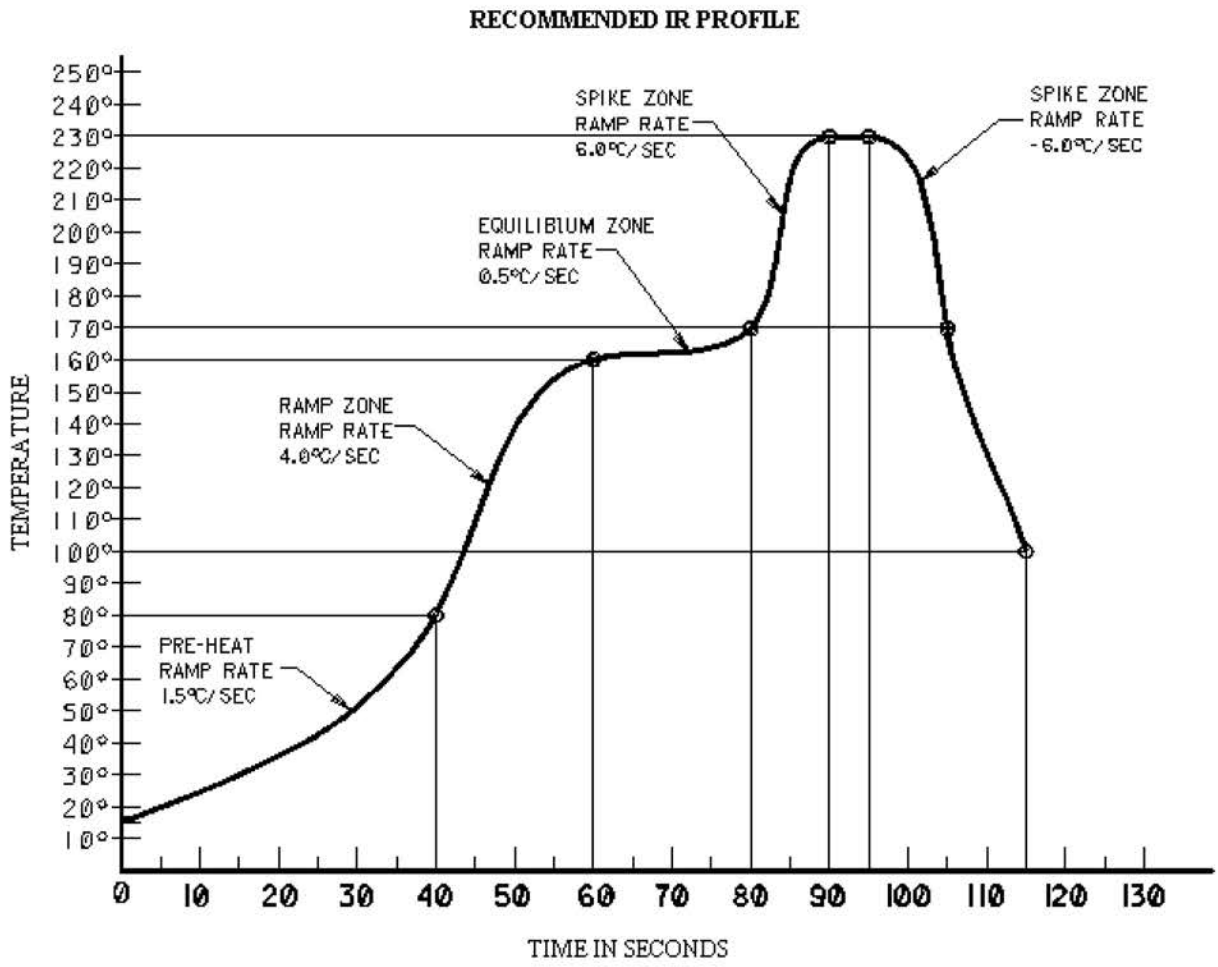
8.1.3 ELECTRICAL DATA (at +20°C)

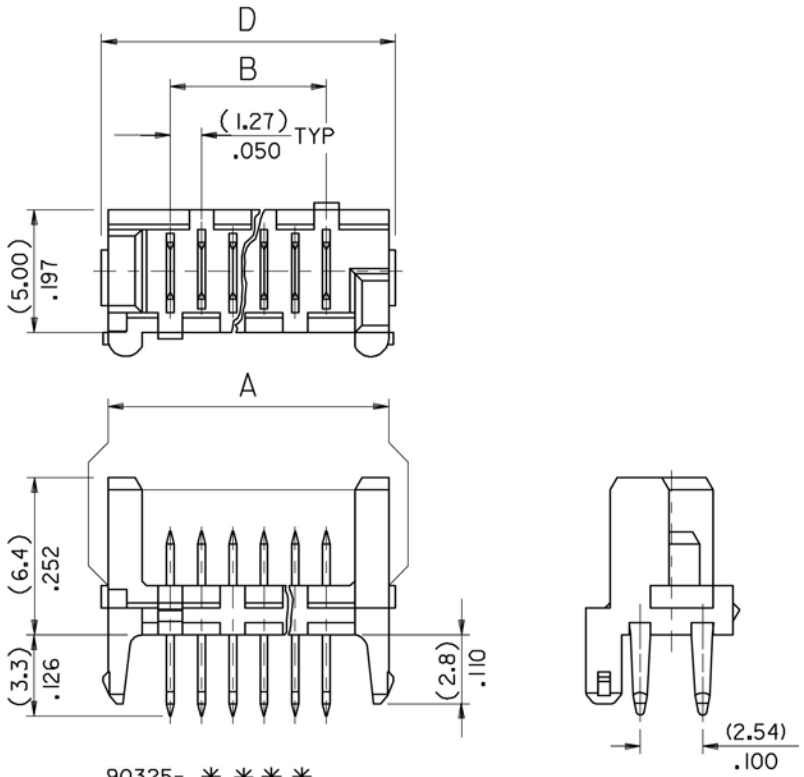
Nominal voltage: 300V
Test voltage:1500V
Conductor resistance: less than or equal to 240 ohms/km
Insulation resistance: greater than or equal to 100 ohms/km.
Nominal current 1.2A (each conductor)

8.1.4 TEMPERATURE RANGE

Steady rise: -40°C to +80°C.
Random rise: -20°C to +80°C.

8.2 RECOMENDED SMT PROFILE FOR 90814 AND 91330 HEADERS



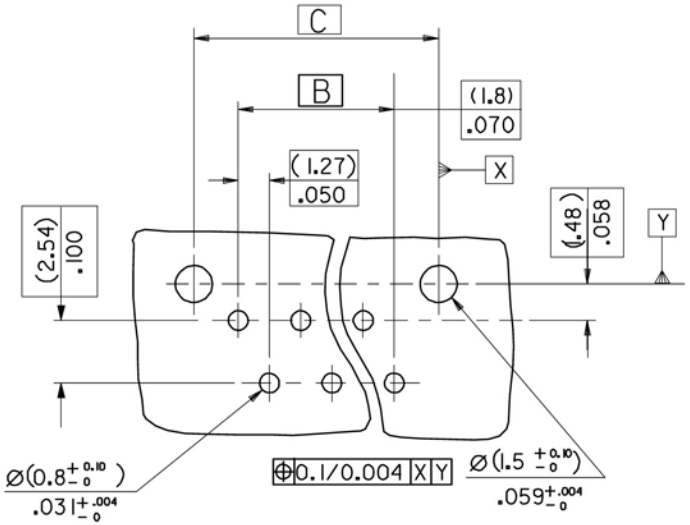


PART NO.	NO. OF CKTS	DIM. A	DIM. B	DIM. C	DIM. D	NO. ASSYS IN TUBE
90325 - **26	26	(36.80)/1.449	(31.75)/1.250	(35.35)/1.392	(37.26)/1.467	14
- **24	24	(34.26)/1.349	(29.21)/1.150	(32.81)/1.292	(34.72)/1.367	15
- **22	22	(31.72)/1.249	(26.67)/1.050	(30.27)/1.192	(32.18)/1.267	16
- **20	20	(29.18)/1.149	(24.13)/.950	(27.73)/1.092	(29.64)/1.167	18
- **18	18	(26.64)/1.049	(21.59)/.850	(25.19)/ .992	(27.10)/1.067	19
- **16	16	(24.10)/ .949	(19.05)/.750	(22.65)/ .892	(24.56)/ .967	22
- **14	14	(21.56)/ .849	(16.51)/.650	(20.11)/ .792	(22.02)/ .867	24
- **12	12	(19.02)/ .749	(13.97)/.550	(17.57)/ .692	(19.48)/ .767	27
- **10	10	(16.48)/ .649	(11.43)/.450	(15.03)/ .592	(16.94)/ .667	31
- **08	8	(13.94)/ .549	(8.89)/.350	(12.49)/ .492	(14.40)/ .567	36
- **06	6	(11.40)/ .449	(6.35)/.250	(9.95)/ .392	(11.86)/ .467	44
90325 - **04	4	(8.86)/ .349	(3.81)/.150	(7.41)/ .292	(9.32)/ .367	57

90325- * * * *

- CIRCUIT SIZE 04 CKT TO 26 CKT
- 0 = HOUSING : COLOUR BLACK
- 9 = HOUSING : CUSTOMER SPECIFIC (COLOUR BLACK)

0= 3-5um TIN ASSY
3= 0.76um GOLD ASSY
5= NON STANDARD VOIDED OPTION SEE SHEET 2
6= ROUND PEG WITH KINKS OPTION SEE SHEET 3
7= 0.76um GOLD, TUBED
9= 3-5um TIN ASSY TUBED



PCB LAYOUT VIEWED FROM SOLDER SIDE.
BOARD (1.60±0.14) THK
.063+.006 THK.

NOTES:

1. HOUSING MATL. POLYESTER PBT 15% GLASS FILLED TO UL94 V-0.
2. TER. MATL. BRASS (0.28)/.011 THK
   PLATING. TIN: (1.27um)/50u" MIN NICKEL
   UNDER (3-5um)/120-200u" TIN
   PLATING. GOLD: (1.27um)/50u" MIN. NICKEL
   UNDER (3-5um)/120-200u" TIN SELECTIVE
   AND (0.76um)/30u" SELECTIVE GOLD
3. CONFORMS TO PRODUCT SPECIFICATION PS-99020-0011

ADD PART OPTION
EC NO: E2006-0015
DRWN: GMCSWEEN 2005/07/14
CHKD: JDENNEHY 2005/07/14
APPR: JDENNEHY 2005/07/18
DESCRIPTION
REV
AL

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	±.008
2 PLACES	±0.20	±.008
1 PLACE	±0.20	± ---
ANGULAR ±1/2°		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM/IN
SCALE: 5:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: DMCN DATE: 2001/05/29
CHECKED BY: ROCONNOR DATE: 2001/05/29
APPROVED BY: MWILHITE DATE: 2001/05/29
MATERIAL NO.: SEE CHART

TITLE: HEADER ASSEMBLY

molex MOLEX INCORPORATED

DOCUMENT NO.: SDA-90325
SHEET NO.: 1 OF 3
SIZE: A3