



1.0 SCOPE

This specification defined 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 polarising 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.

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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		

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5.2 MECHANICAL PERFORMANCE

ITEM	TEST COND	ITION	REQUIREMENT				
Insertion Force (per individual contact)	Insertion force tested standard gauge blad section 7.0		1.7N maximum for initial insertion of Tin-Lead contact				
	Rate of insertion =25	5 ±6 mm/sec	1.1N maximum for initial insertion of Gold on Gold contact				
Withdrawal Force (per individual contact)	Rate of withdrawal =	25 ±6 mm/sec	Withdrawal force = 0.25N Minimum				
Durability	1 durability cycle = 1 Unmating of the conr Picoflex extraction to	nector using	Allowable variation from initial insertion force value = 0.50N Maximum				
	For Tin-Lead on Tin- Number of cycles = 3 (using extraction tool	Lead system	Change in contact resistance from initial value = 10mOhms Maximum				
	For 0.76µm Gold on Number of cycles = 1 (using pull tab or exti	100					
Shock	Acceleration = 50g Duration = 11 millise per IEC 512-4, test c		Change in contact resistance from initial value = 10mOhms Maximum				
			Discontinuity = 1micro second. Maximum				
Vibration	Sweep = $10-55-10$ Amplitude = 0.35 mm Pulse = $1/2$ Sine	or 5g	Change in contact resistance from initial value = 10mOhms Maximum				
	Duration = 2 hours X-Y-Z direc per IEC condition 6	tion 512-4 test	Discontinuity = 1micro second Maximum				
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PRODUCT SPECIFICATION



ITEM	TEST CONDITION	REQUIREMENT
Terminal Retention Force in Housing (Header Terminal)	Terminal withdrawal force to be applied at the rate of 25 ± 6mm per minute	Terminal Rentention force = 7N Minimum

5.3 ENVIRONMENTAL PERFORMANCE

ITEM	TEST CONDITION	REQUIREMENT		
Damp Heat	Mate connectors and expose to:	Change in contact resistance from initial value = 10mOhms Maximum		
	Temperature = $+40^{\circ}$ C $+3/-0^{\circ}$ C Humidity = 90 - 95% R.H Duration = 1000 Hours	No visual damage		
Dry Heat	Mate connectors and expose to:	Change in contact resistance from initial value = 10mOhms Maximum		
	Temperature = +105°C +3/-0°C Duration = 240 hours	No visual damage		
Thermal Shock	Mate connectors and expose to: 10 cycles of the following profile Temperature °C Time Duration	Change in contact resistance from initial value = 10mOhms Maximum		
	-40 +0 /-3 30 minutes +20 ± 5 5 minutes max +105 +3/-0 30 minutes	No visual damage		
Corrosive Atmosphere Sulphur Dioxide	Mate Connectors and expose to: Atmosphere: 10 parts per million (ppm) SO ₂	Change in contact resistance from initial value = 10mOhms Maximum		
(SO ₂)	Duration: 240 hours Temperature: 25 °C Humidity: 75% R.H.	No visual damage		

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PRODUCT SPECIFICATION



ITEM	TEST C	ONDITION	REG	QUIREMENT	
Corrosive Atmosphere Hydrogen Sulphic (H ₂ S)	Duration: 96 Temperature: 25	art per million HS hours	initial value =	ontact resistanc - 10mOhms Ma isual damage	
Resistance to Infra-Red Reflow (90814 only)	Subject Unma	ted connectors to shown in appendix		isual damage	
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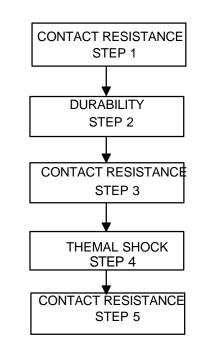


5.4 TEST SEQUENCE

5.4.1 TEST SEQUENCE (ALL PARTS EXCEPT 90814 SMT PICOFLEX)

TEST ITEM	Group I.	Group II.	Group III.	Group IV.	Group V.
CONTACT RESISTANCE	1.3.5.7	1.3.5	1.3.6	1.3.5	1.3.5
DURABILITY	2	2	2	2	2
DRY HEAT	4				
DAMP HEAT	6				
THERMAL SHOCK		4			
VIBRATION			4		
DROP SHOCK			5		
SULPHUR DIOXIDE				4	
HYDROGEN SULPHIDE					4

Note: The numbers in the boxes represent the sequence of testing. For example, the sequence of testing for Group II is shown in flow chart form below:



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5.4.1 TEST SEQUENCE FOR 90814 SMT PICOFLEX

TEST ITEM	Group I.	Group II.	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

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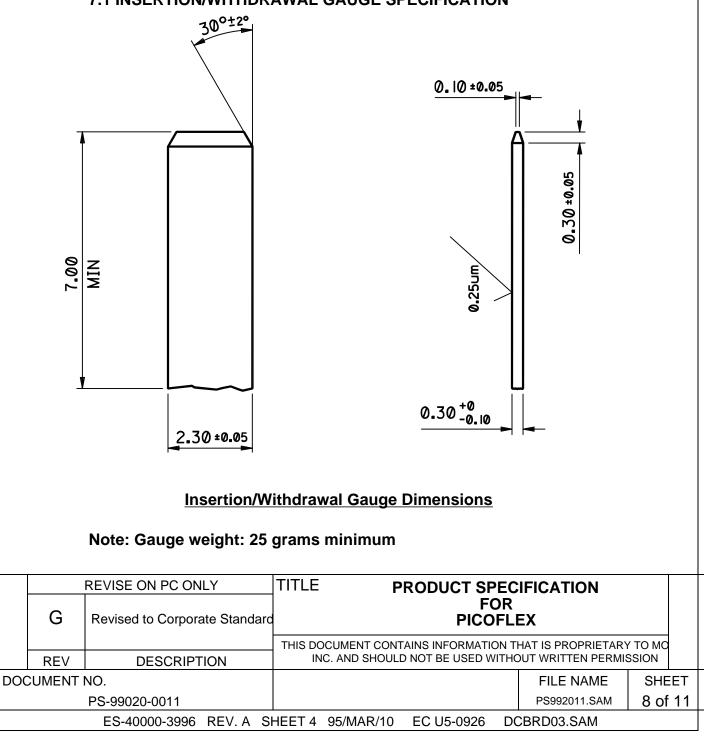
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6.0 PACKAGING

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



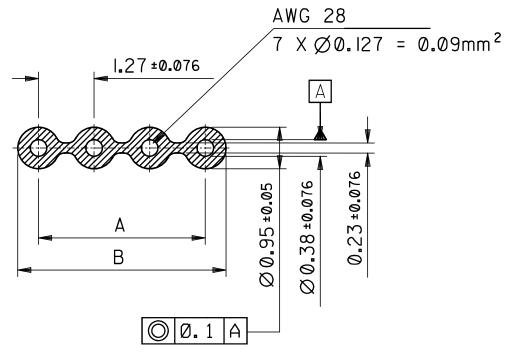




8.0 OTHER INFORMATION

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
26	31.75	32.68

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8.1.1 CONDUCTOR

EL-Cu stranded, 7 X 0.127mm diameter. 28 AWG (0.09 square millimetre) EL-Cu-58F21 to DIN 40500, Tin plated V3 to DIN 40500. Twist length to 6.8 maximum.

8.1.2 INSULATION

PVC Y17 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 degrees 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 to +80 deg C. Random rise: -20 to +80 deg C.

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APPENDIX A 130 SPIKE ZONE - RAMP RATE -6.0°C/SEC 120 <u>@</u> 00 SMT PI COFELX HEADER 96 RECOMMENDED I R PROFI LE 80 SECONDS 202 EQUILIBIUM ZONE RAMP RATE 0.5%C/SEC ME IN 60 H 50 40 RAMP ZONE RAMP RATE-4.0°C/SEC 90 20 RAMP RATE-I.5°C/SEC **PRE-HEAT** 0 9 250°-2400-2200-200°--006 80°-70°-60°-50°-40°-30°-230°-2100-20°-100-000 -006 80°. - 002 . 09 50°. 40°-30°-20°ô TEMPERATURE **Recommended SMT Profile for 90814 Header REVISE ON PC ONLY** TITLE PRODUCT SPECIFICATION FOR G Revised to Corporate Standard **PICOFLEX** THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MC INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION REV DESCRIPTION DOCUMENT NO. SHEET FILE NAME PS-99020-0011 PS992011.SAM 11 of 11

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