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REVISION DESCRIPTION	REMOVED OBSOLETED ADDED NOTE IN SHEET		RIES AND			PICOFLEX CONN SYSTEM PRODUCT SPECIFICATION		
CHANGE NO.	714693							
REVISED BY	GOWTHP	DATE	2022/07/15	DOC TYPE		DOC TYPE DESCRIPTION	DOC PART	SERIES
REV APPR BY	ISHWARG	DATE	2022/07/19	PS		PRODUCT SPECIFICATION WORD	001	99020
	INITIAL RELEAS	E		CUSTO	MER	DOCUMENT NUMBER	REVISION	SHEET
INITIAL DRWN	RFC_PLMIMP	DATE	2017/12/02	CENEDAL MADKET		PS 00020 0011	V2	1 OF 13
INITIAL APPR	MWILHITE	DATE	2002/08/01	GENERAL MARKET PS-99020-0011 Y2				1 05 13

PRODUCT SPECIFICATION

1.0 SCOPE

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

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INITIAL APPR	MWILHITE	DATE	2002/08/01	GLINLINALI	GENERAL MARKET PS-99020-0011 Y2 2 0				



2.0 PRODUCT DESCRIPTION AND APPLICABLE DOCUMENTS

Product Type	Series No.	Product Description	Sales Drawing
	90325	Vertical Thru Hole Header	SDA-90325
PCB Headers	90779	Vertical Thru Hole Header, High Temperature Thermoplastic	SDA-90779
1 02 11044015	90814	Vertical SMT Header	SDA-90814
	90816	Vertical Latched SMT Header	SD-90816-001
IDT Connector	90327	Insulation Displacement Connector	SDA-90327
PCB Connectors	90584	Insulation Displacement Board-In Connector	SDA-90584

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INITIAL APPR	MWILHITE	DATE	2002/08/01			F3-33020-0011	12	3 UF 13		

PRODUCT SPECIFICATION

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			
90779	N/a	1.2A			
90814	N/a	1.2A	250V	-40°C to +105°C	-40°C to +85°C
90816	N/a	1.2A	Max.	-40°C 10 +103°C	-40°C 10 +83°C
90327	28 AWG	1.2A			
90584	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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INITIAL APPR	MWILHITE	DATE	2002/08/01	OLIVLINALI	VIAINILI	P3-99020-0011	12	3 OF 13



5.0 MECHANICAL PERFORMANCE

	ITEM	TEST CONDITION	REQUIREMENT			
5.1	Insertion Force (Per individual	Insertion force tested by inserting standard gauge blade specified in Appendix A	1.7N maximum for initial insertion of Tin contact			
	contact, 90327 only)	Rate of insertion = 25 ± 6 mm/minute	1.5N maximum for initial insertion of PdNi/Gold contact			
5.2	Withdrawal Force (Per individual	Withdrawal force tested by withdrawing standard gauge blade specified in Appendix A	Withdrawal force = 0.25N minimum			
	contact, 90327 only)	Rate of withdrawal = 25 ± 6 mm/minute				
	Durability	1 durability cycle = 1 Mating & Un-mating of the connector using Picoflex extraction tool or pull-tab	Change in insertion force from initial value = 0.5N maximum			
5.3		For Tin on Tin system number of durability cycles = 30	Change in contact resistance from initial value = 10mOhms			
		For Gold on Gold system number of durability cycles = 100	maximum			
		For 90816 Latched maximum Cycles = 5(Tin or Gold) using Latched Picoflex extraction tool.				
	Shock	Acceleration = 50g	Change in contact resistance			
5.4		Duration = 11 milliseconds	from initial value = 10mOhms maximum			
		Per IEC 512-4, test condition 6c	Discontinuity = 1 micro second maximum			
	Vibration	Sweep = 10-55-10Hz	Change in contact resistance			
		Amplitude = 0.35mm or 5g	from initial value = 10mOhms maximum			
5.5		Pulse = 1/2 Sine				
		Duration = 2 hours in each X-Y-Z direction	Discontinuity = 1 micro second maximum			
		Per IEC 512-4, test condition 6d	maximum			
5.6	Terminal Retention Force in Housing	Terminal withdrawal force to be applied at the rate of 25 ± 6 mm per minute	Terminal retention force = 7N minimum.			
	(PCB Headers)					
	Latched header	Connector retention force to be applied at the rate	Circuit Size Straight R/angle			
5.8	retention force. (Reference only)	of 25 ± 6 mm per minute.	4ckt 30N 30N			
	(Straight and Right angle pull Minimum retention	14 ckt 55N 115N			
		force.	26ckt 65N 175N			

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6.0 ENVIRONMENTAL PERFORMANCE

	ITEM	TEST C	ONDITION	REQUIREMENT
6.1	Damp Heat	Mate connectors and ex Temperature = +40°C Humidity = 90 - 95% R Duration = 1000 Hours	+3/-0°C	Change in contact resistance from initial value = 10mOhms maximum No visual damage
6.2	Dry Heat	Mate connectors and ex Temperature = $+105^{\circ}$ C Duration = 240 Hours	•	Change in contact resistance from initial value = 10mOhms maximum No visual damage
6.3	Cold	Mate connectors and ex Temperature = -40° C - Duration = 96 Hours		Change in contact resistance from initial value = 10mOhms maximum No visual damage
6.4	Thermal Shock	following profile: <u>Temperature °C</u> <u>T</u> -40 +0 /-3	Expose to 10 cycles of the Fime Duration 30 minutes 5 minutes max 30 minutes	Change in contact resistance from initial value = 10mOhms maximum No visual damage
6.5	Corrosive Atmosphere Sulphur Dioxide (SO ₂)	Mate Connectors and e. Atmosphere: 10 parts p 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 examosphere: 1 part per 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, 90779 and 90814 series only (*90814 standard profile parts).	Insert Terminal Solder Solder Temperature: 23 Duration: 5 seconds ma	80°C	No damage that would impair normal operation

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INITIAL APPR	MWILHITE	DATE	2002/08/01			F3-99020-0011	1 2	1 OF 13	

molex PRODUCT SPECIFICATION **ITEM** TEST CONDITION REQUIREMENT No damage that would impair Resistance to Reflow Subject unmated connectors to applicable re-flow Temperature profile shown in Appendix C normal operation 90814 and 90816 series 6.8 only (* 90814 Low Profile parts only) Glow Wire Glow wire temperature: 750°C Flame must extinguish within 2 seconds of removal of glow 90779, 90814 and Test positions shown in Appendix D

Per IEC 60695-2-11

wire

No ignition of wrapping tissue 200mm under test specimen

6.9

90816 series only

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PRODUCT SPECIFICATION

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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INITIAL APPR	MWILHITE	DATE	2002/08/01			P3-99020-0011	12	9 OF 13

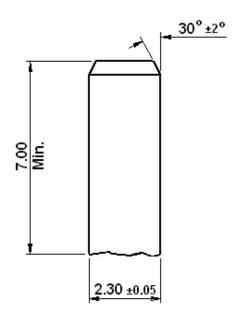
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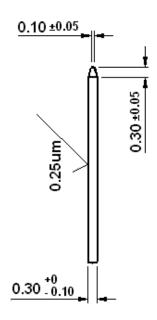
8.0 TEST GROUPS

TEST REF.	TEST	A	В	C	D	E	F	G
4.1	Contact Resistance	246	2 4 6	246	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
5.8	Latched header retention force.							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

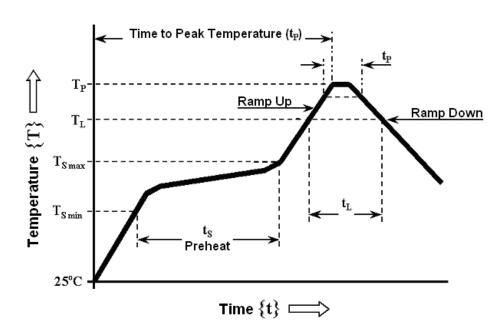
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APPENDIX C – RE-FLOW PROFILES

PROFILE FEATURE	Pb-FREE PROCESS (RoHS) COMPLIANT	Pb-FREE PROCESS (RoHS) COMPATIBLE
Product Series	90779 and 90814. (90814 standard profile)	90814 and 90816. (90814 low profile)
Average Ramp Up Rate	3°C/second max.	3°C/second max.
$ \begin{array}{l} \text{Preheat} \\ \text{- Temperature Min} \left(T_{S \text{ min}}\right) \\ \text{- Temperature Max} \left(T_{S \text{ max}}\right) \\ \text{- Time } \left(t_{S}\right) \end{array} $	100°C 150°C 60 − 120 seconds	150°C 200°C 60 − 180 seconds
$\label{eq:Time over Liquidus} \begin{tabular}{ll} Time over Liquidus \\ - Temperature (T_L) \\ - Time (t_L) \end{tabular}$	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.

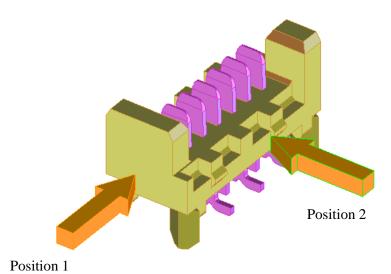
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Note: Please check the mount condition (reflow soldering condition) by your own devices beforehand, because the condition changes by the soldering devices, printed wiring boards (PWB), and so on. Although tail of terminal and nail may discolors, a solderability does not have a problem.

APPENDIX D - GLOW WIRE TEST POSITIONS

Series 90779, 90814 and 90816



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