### PAPPINES Straight male connector  ### ROMAN TONS  No. of collects    No. of collects   No. of coll		1 2	3 4	5		6	7	8	
Table 1 Straight male connector  CORREST INCREST TO ISS  CORREST TO ISS  CORRE				DECO	MMENDATION FOR	SOI DED DDOCES	SINC		
COPERAL PCORRATIONS  No. of contraction  No. of contractions  No. of contractions  No. of contractions  Contracting contractions  Contracting contractions  Contracting contractions  Contracting contractions  Contracting contractions  Contracting contracting  Contracting cont		harting har-flex straight male conne	ctor RoHS (N)				Sing		
TOP DR 4 plaining   The Annual Content of State of Stat	$ \hat{\ } $	GENERAL INFORMATIONS		I —					
Not de proposition from \$5.00 (Special ainser mention 5).  The hardest contraction are solderable on leaching plat surfaces like 1961, N.A. Immerial 50.  The hardest contraction are solderable on leaching plat surfaces like 1962, 42.  Storci de commendation in the platect on the past are and in contact states likes.  Leaching the contraction is the Special contraction are solderable on leaching plates.  The solder deposition has the platect on the past are and the contact states likes.  Leaching the contraction is the Special contraction in the platect on the past are and the contract on the Contraction of the Special contraction in the platect on the past are and in the contraction in the platect on the past are and in the contraction in the platect on the past are and in the contraction in the platect on the past are and in the contraction in the plate of the plate the pl	lł								
Contact passing  1.27 mm x 127 mm (ESEPO) (1.507)  The related passing  5.27 mm x 127 mm (ESEPO) (1.507)  The related relaxation best for by placed on the past ment of the contact solate flows.  The related relaxation best for by placed on the past ment of the contact solate flows.  The related relaxation best for by placed on the past ment of the contact solate flows.  Working improved ment in ESEPO (2.507), at 170, 69% containing of contact in the contact solated past in				┥					
Text   Second Processing Sec				Ine ha	r-flex connectors are	solderable on lead-	-free pad surfaces like HAL, NiAu,	Immersion Sn.	
Contract resistance Institution of seasons and seasons			<u> </u>	Stenci	Stencil recommendation				
Including entire in the state of a special part of the stage of the									
Working personant on DEC 00124 or 71°C 26% detailing size desirating diagram  11 representative freedroday of seed before confirment of seed or positive size of the seed property.  12 Personantial representative freedroday  13 Personantial representative freedroday  14 Personantial representative freedroday  15 Personantial representative freedroday  15 Personantial representative freedroday  16 Personantial representative freedroday  17 Personantial representative freedroday  18 Personantial					Ideally, the solder deposition has the same length-to-width ratio and center point like the PCB pads.  The size of the solder stencil apertures is depending on the thickness of the stencil.  In general, the thinner stencils will need larger apertures to result in the required volume of solder paste.				
Wherein parameters regge			· · · · · · · · · · · · · · · · · · ·						
For example, this can be extricted with the following shorted data:	В			The m					
Relice to ECAP-CORDEC ASTO 275 each PSE ARR ()  Conserved A crespond significance of the Conserved Assessment of Conse				For ex					
(oice DECAPPOLIDES LEPTOUTS (seed PSC, RF)   mis. 30 to 240 mm   0.00 to				1			Signal pins		
Incention force   Expecteding on mating connection   approximately 0.5Necontact   Monting opening   Approximately 0.5Necontact   PL1   250 mating opening   PL1   250 mating opening   PL2   250 mating   PL	1	(acc. to ECA/IPC/JEDEC J-STD-075 Level PSL R0)			Stencil thickness	PCB pad size	proposal stencil aperture size	calculated solder paste volume	
Wilding cycles   PLI : 500 mating cycles	Ш	Clearance & creepage distance	0.4mm min.	7	120 µm	1,1 x 0,8 mm	1,05 x 0,75 mm	0,095 mm³	
Making tyckes   PL1-500 making cycles   PL2-500 maki		Insertion force (depending on mating connector)	approximately 0,5N/contact		150 µm	1,1 x 0,8 mm	0,99 x 0,72 mm	0,107 mm³	
Mating cycles		Withdrawal force (depending on mating connector)					Hold-downs		
Control Material group soc. IEC 90864-1   100V / 150V (depending on installation category)   If a sterior with the PCB design, the sadder deposition may protrude to the PCB deads. But to address a good sterior between the PCB design, the sadder deposition may protrude to the PCB deads. But to address a good sterior design during sadder past venture by enlarging the sterior large to require the PCB design, the sadder deposition may protrude to the PCB deads. But to address a good sterior design during sadder past venture by enlarging the sterior large to require the PCB deads and the PCB design, the sadder deposition may protrude to the PCB deads. But to address a good sterior design during sadder past venture by enlarging the sterior large to require the PCB deads and the		Mating cycles		_	Stencil thickness	PCB pad size	proposal stencil aperture size	calculated solder paste volume	
150 Jun   2.5 x 1.2 mm   2.5 x 1.0 mm   0.386 mm²				4		·	1	<u>'</u>	
Working rollage act. to IEC 60664-1  100 // 150V (depending on installation category)  U. file acc. U. 1977	C	· '		-	<del> </del>		· · · · ·	<u>'</u>	
U. He sec. UL 1977 ECRIZE 102079 U. He sec. CSP-C222 (for Canade) ECRISE 102079 PSL level acc. CSC-C222 (for Canade) ECRISE 102079 PSL level acc. CSC-C222 (for Canade) ECRISE 102079 PSL level acc. CSC-C222 (for Canade) MSL toward acc. ECAIPC/CEDED ESTD-075 PSL level acc. CSC-C222 (for Canade) MSL toward acc. ECAIPC/LEDED L-STD-075 PSL level acc. CSC-C222 (for Canade) MSL toward acc. ECAIPC/CEDED L-STD-075 PSL level acc. CSC-C222 (for Canade) MSL toward acc. ECAIPC/CEDED L-STD-075 PSL level acc. CSC-C222 (for Canade) MSL toward acc. ECAIPC/CEDED L-STD-075 PSL level acc. Ecaipc/CEDE L-STD-075 PSL level acc. Ec					<u> </u>				
Sealing during solder paste printing and to reduce the cleaning interval of the stencil, the aperture should be smaller than the PCE pad about 10% or 25µm enriching.  PSL level acc. ECA/PC/LEPEC J-STD-075 PSL R0  MSL level acc. ECA/PC/LEPEC J-STD-0200 MSL 1  MSL level acc. EcA/PC/LEPEC J-STD-0200					stencil aperture. Depending on the PCB design, the solder depostion may protrude the PCB pads. But to achieve a good sealing during solder paste printing and to reduce the cleaning interval of the stencil, the aperture should be smaller				
FSL level acc. ECAJPC/LEDEC J-STD-020 MSL 1  MSL towl acc. ECAJPC/LEDEC J-STD-020 MSL 1  MSL 1  MSL 1 Solution (ECAJPC/LEDEC J-STD-020 MSL 1  MSL 1  MSL 1 Solution (ECAJPC/LEDEC J-STD-020 MSL 1  MSL 1  MSL 1 Solution (ECAJPC/LEDEC J-STD-020 MSL 1  MSL 1  Material LCP (liquid crystalline polymer)  Color Black  Performance level 1 (recommended for majority of applications)  UL classification  UL 94-V0  Malerial group acc. IEC 6064-1 MIla (175 ≤ CTI < 400)  CONTACT MATERIAL  CONTACT MATERIAL  CONTACT MATERIAL  CONTACT MATERIAL  COntact material  Copper alloy  Performance level 2  Initial 125 mating cycles, 10 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Measurement of contact finish through to the base material. No functional impairment.  Performance level 2  Initial 125 mating cycles, 4 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Performance level 2  Initial 125 mating cycles, 4 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Performance level 2  Initial 125 mating cycles, 4 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Measurement of contact resistance in the range of 6 pin to 80 pin ≤ 0.15mm  Performance level 1  Performance level 2  Initial 125 mating cycles, 4 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Measurement of contact resistance in the range of 6 pin to 80 pin ≤ 0.15mm  Performance level 2  Initial 125 mating cycles, 4 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Performance level 2  Initial 125 mating cycles, 4 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb,				sealing of					
MSL Ievel acc. ECAIPC/LEDEC J-STD-020D MSL 1    NSULATOR MATERIAL   82 pin to 100 pin ≤ 0.15mm	${oxed{\square}}$				I <del> </del>				
Material LCP (liquid crystalline polymer)  Discoir Black Material LCP (liquid crystalline polymer)  Color Black Material Connectors are sested for copparatiny of contacts and are in the range of a pin to 100 pin: ≤ 0.15mm  Performance level 1  Performance level 1  Performance level 2  Contact material Comparation of the contact finish through to the base material. No functional impairment.  Performance level 3  Contact material  Copper alloy Plating contact sidding side  DERATING DIAGRAM acc. to IEC 60512-5 (Current carrying capacity)  The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals.  The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals.  The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals.  The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals.  The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals.  The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals.  The current carrying capacity is limited by maximum temperature.  Control and test procedures according to DIN IEC 60512-5  derating curve at Imax*0,8 (IEC 60512-5-2)  Temperature   C				Coplana					
Material LCP (Equid crystalline polymer) Deformance level 1 (recommended for majority of applications) Initial 250 mating cycles, 10 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb. Initial 250 mating cycles are subject to measurement of contact resistance and visual inspection. Visual inspection. No abrasion of the contact finish through to the base material. No functional impairment. Part number definition: 15				All conr	1 · · · · · · · · · · · · · · · · · · ·				
Deformance level 1 (recommended for majority of applications)  UL classification  UL classification  UL classification  UL classification  Material group acc. IEC 60684-1  UL classification  Measurement of contact resistance. The remaining 250 material pcycles are subject to measurement of contact resistance.  And visual inspection.  Visual inspection.  Visual inspection.  Parformance level 2  Initial 250 mating cycles, 10 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Weasurement of contact resistance and visual inspection.  Visual inspection.  Parformance level 2  Initial 250 mating cycles, 10 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Parformance level 2  Initial 250 mating cycles, 10 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Parformance level 2  Initial 250 mating cycles, 10 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Parformance level 2  Initial 250 mating cycles, 10 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Parformance level 2  Initial 250 mating cycles, 10 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Parformance level 2  Initial 250 mating cycles, 10 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Parformance level 2  Initial 250 mating cycles are subject to measurement of contact resistance and visual inspection.  Part number definition: 15	<b> </b>	INSULATOR MATERIAL							
UL dassification   UL94-V0   Material group acc. IEC 60664-1   Illa (175 < CTI < 400)   Material group acc. IEC 60664-1   Illa (175 < CTI < 400)   Measurement of contact resistance. The remaining 250 mating cycles are subject to measurement of contact resistance and visual inspection. No abrasion of the contact finish through to the base material. No functional impairment.		Material	LCP (liquid crystalline polymer)	I					
Measurement of contact resistance. The remaining 250 mating cycles are subject to measurement of contact resistance and visual inspection. Wisual inspection. Wisual inspection. Visual inspection. Visual inspection. Visual inspection. Visual inspection. Visual inspection. No abrasion of the contact finish through to the base material. No functional impairment. Part number definition: 15		Color	Black						
Material group acc. IEC 60664-1 Illa (175 < CTI < 400)  CONTACT MATERIAL  Contact material  Copper alloy Plating termination zone Plating contact sliding side  Au over PdNi (acc. to Performance level)  DERATING DIAGRAM acc. to IEC 60512-5 (Current carrying capacity)  The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals.  The current carrying capacity curve is valid for continuous, non interrupted current loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.  Control and test procedures according to DIN IEC 60512-5  derating curve at Imax*0,8 (IEC 60512-52)  Material Flex male stacking height1.75 and 3.25  All rights reserved for the contact finish through to the base material. No functional impairment.  Performance level 2 Initial 125 mating cycles, 4 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Initial 125 mating cycles, 4 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Performance level 2 Initial 125 mating cycles are subject to measurement of contact resistance and visual inspection. No abrasion of the contact finish through to the base material. No functional impairment.  Performance level S4 Defined contact surface of min. 0,06 µm Au over 0,7+0,2µm PdNi Part number definition: 15 5  All rights reserved forming the maximum temperature.  Control and test procedures according to DIN IEC 60512-5  derating curve at Imax*0,8 (IEC 60512-5-2)  Temperature [°C]  All rights reserved forming the maximum temperature in the sum of the contact finish through to the base material. No functional impairment.  Performance level 2 Initial 125 mating cycles, 4 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Initial 125 mating cycles, 4 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Performance level 2 Initial 125 mati		UL classification	· · · · · · · · · · · · · · · · · · ·		Measurement of contact resistance. The remaining 250 mating cycles are subject to measurement of contact resistance and visual inspection.				
Contact material  Copper alloy  Performance level 2  Intial 125 mating cycles, 4 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.  Measurement of contact resistance. The remaining 125 mating cycles are subject to measurement of contact resistance and visual inspection.  Visual inspection.  Visual inspection.  Visual inspection.  The current carpoint capacity curve is valid for continuous, non interrupted current loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.  Control and test procedures according to DIN IEC 60512-5  derating curve at Imax*0,8 (IEC 60512-5-2)  Temperature [*C]  Part number definition: 15		Material group acc. IEC 60664-1	IIIa (175≤CTI< 400)	and visu					
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Plating contact sliding side  Au over PdNi (acc. to Performance level)  DERATING DIAGRAM acc. to IEC 60512-5 (Current carrying capacity)  The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals.  The current capacity curve is valid for continuous, non interrupted current loaded contacts is given, without exceeding the maximum temperature.  Control and test procedures according to DIN IEC 60512-5  derating curve at Imax*0.8 (IEC 60512-5-2)  Au over PdNi (acc. to Performance level)  Measurement of contact resistance. The remaining 125 mating cycles are subject to measurement of contact resistance and visual inspection. Visual					Initial 125 mating cycles, 4 days gas test (25°C / 75% r.h.) using H2S 10 ppb, NO2 200 ppb, CL2 10 ppb, SO2 200 ppb.				
DERATING DIAGRAM acc. to IEC 60512-5 (Current carrying capacity)  The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity curve is valid for continuous, non interrupted current loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.  Control and test procedures according to DIN IEC 60512-5 derating curve at Imax*0,8 (IEC 60512-5-2)  Temperature [*C]  DERATING DIAGRAM acc. to IEC 60512-5 (Current carrying capacity)  The current carrying capacity is limited by maximum temperature. Part number definition: 15 6									
DERATING DIAGRAM acc. to IEC 60512-5 (Current carrying capacity)  Visual inspection. No abrasion of the contact finish through to the base material. No functional impairment.  Part number definition: 15 6  Performance level S4 Defined contact surface of min. 0,06 µm Au over 0,7+0,2µm PdNi Part number definition: 15 5  Performance level S4 Defined contact surface of min. 0,06 µm Au over 0,7+0,2µm PdNi Part number definition: 15 5  All rights reserved derating curve at Imax*0,8 (IEC 60512-5-2)  Temperature [°C]  Visual inspection. No abrasion of the contact finish through to the base material. No functional impairment.  Part number definition: 15 6  All rights reserved derating curve at Imax*0,8 (IEC 60512-5-2)  Type DS  Number 15111100301  Visual inspection. No abrasion of the contact finish through to the base material. No functional impairment.  Part number definition: 15 6  All rights reserved dby Inspected by I									
The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals.  The current capacity curve is valid for continuous, non interrupted current loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.  Control and test procedures according to DIN IEC 60512-5 derating curve at Imax*0,8 (IEC 60512-5-2)  Temperature [*C]  Performance level S4 Defined contact surface of min. 0,06 µm Au over 0,7+0,2µm PdNi Part number definition: 15 5  All Dimensions in min. Scale Free size tol.  All rights reserved  Title har flex male stacking height1.75 and 3.25  Dec. Key / ECM-Nr. 10057788/UDD/ONI/A 1/2  Page D-32339 Espelkamp  Number 15111100301	Ε				Visual inspection. No abrasion of the contact finish through to the base material. No functional impairment.				
simultaneous power on all contacts is given, without exceeding the maximum temperature.  Control and test procedures according to DIN IEC 60512-5 derating curve at Imax*0,8 (IEC 60512-5-2)  Temperature [°C]  All rights reserved Department EC PD - FR HARTING Electronics GmbH D-32339 Espelkamp  Type DS Number 15111100301  1:1 Sub.  Created by Inspected by Inspected by Det VANSSAY HOFFMANN 2014-05-23 Final Release  Final Release  Type DS Number 15111100301  Rev. A Page 1/2		temperature of materials for inserts and contacts including terminals.  The current capacity curve is valid for continuous, non	p	Perform Defined Part nur	Performance level S4 Defined contact surface of min. 0,06 µm Au over 0,7+0,2µm PdNi Part number definition: 15 5  All Dimensions in mm Original Size DIN A3  All rights reserved  All rights reserved  MAILLARDS  All rights reserved  MAILLARDS  Description:  Performance level S4  Defined contact surface of min. 0,06 µm Au over 0,7+0,2µm PdNi  Ref.  Sub.  Standardisation Date 2014-05-23  Final Release				
derating curve at Imax*0,8 (IEC 60512-5-2)    Continue of the properties of the prop		simultaneous power on all contacts is given, without exceeding the maximum temperature.	The control of the co						
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