朝貴電子股份有限公司
CKM ELECTRONICS CO., LTD.

PRODUCT SPECIFICATION

RJ SERIES

Revisions Control

Rev.	ECN Number	Record	Originator	Approval	Issue Date
A		New Release	Alan	Jacky	2013/5/23
B		Change Table	Alan	Angus	2013/10/20
C		Change Test procedure	Alan	Angus	2013/12/17
D		Change Test procedure	Alan	Angus	2014/4/22
E		Change Test procedure	Alan	Corey	2015/11/2

1.0 Scope

This specification defines the performance, tests and quality requirements for the RJ series connectors.

2.0 Material of Components

2.1 Housing
High Temperature Thermoplastic, UL 94V-0 Rated.
2.2 Contact
Copper Alloy.
Contact area : Gold pleated.
Solder area : Tin plated or Gold pleated.
Under-plating : Nickel plated.
2.3 Other :
See Drawing

3.0 Rating

Current rating : 1.5A
Voltage rating : 150V AC
Operating temperature : 0°C ~ +70°C
Storage temperature : -40°C ~ +85°C
Ambient humidity : 95% R.H. MAX

4.0 Performance and testing

Test	Test procedure	Test Requirement
Electrical:		
Low level contact resistance	EIA-364-23 Current: 100 mA Max. Voltage: 20 mV Max.	Initial: 30 milliohms Max. After test: ΔR=30 milliohms Max.
Insulation resistance	EIA-364-21 Apply a voltage between adjacent terminals. Voltage: 500 VDC	Initial: 500 megohms Min. After test: 200 megohms Min.
HI Pot test	EIA-364-20C Apply a voltage between Input Dip PIN to RJ45 Contact. Voltage: 1500 VAC	No breakdown Current leakage < 1.0 mA

Dielectric withstanding voltage	EIA-364-20 Apply a voltage between 1.Input Dip PIN to Shield. Voltage: 2000 VDC Duration: 1 minute 2.RJ45 Contact to Shield. Voltage: 2000 VDC Duration: 1 minute	No breakdown Current leakage < 1.0 mA
Impedance	EIA-364-108	Insertion Loss:-1.0dB Max. @100KHz-100MHz Return Loss: -18dB min.@1MHz-30MHz -16dB min.@30MHz-60MHz -12dB min.@60MHz-80MHz -10dB min.@80MHz-100MHz Cross Talk: -30dB Typ.@100KHz-100MHz Insulation Voltage:1,500Vrms(Input to Output) Rise Time(10-90%):2.5ns Typ. INDUCTANCE:350uH Min.@100KHz 0.1V 8mA DC Leakage Inductance (TX@RX): 0.4uH Max. CMRR: -30dB Typ..@100KHz-100MHz Turn Ration: RX=1CT:1CT(±3%); TX=1CT:1CT(±3%).
Mechanical:		
Durability	EIA-364-09 Mate and unmated for 750 cycles at a rate of 20~30 cycles per minute	ΔR=30 milliohms Max. No evidence of physical damage
Mating force	EIA-364-13, Mating connectors at maximum rate of 25.4 mm per minute.	22.24N Max. (Single port)
Housing Locking Mechanism Strength	EIA-364-98 Mating connectors at rate of 25.4 mm per minute.	55N Min.

Environmental:		
Salt spray	EIA-364-26 NaCL solution Concentration: 5±1% Temperature: 35℃+1℃/- 2℃ Duration: (Shell and Fμ", 3μ", 6μ", 15μ", 30μ", 50μ" of the Contact) 24 hours	No evidence of physical damage ΔR=30 milliohms Max.
Humidity	EIA-364-31 Mate connectors; expose to temperature of 40℃ ± 2 ℃ with a relative humidity of 90% to 95% for 96 hours.	After test: 200 megohms Min. ΔR=30 milliohms Max.
Thermal shock	EIA-364-32, test condition I Number of cycles: 10 <1 cycle> Step1: -55 +0/-3 ℃ 30 minutes Step2: +25 +10/-5℃ 5 minutes Max Step3: +85 +3/-0℃ 30 minutes Step4: +25 +10/-5℃ 5 minutes Max	No evidence of physical damage ΔR=30 milliohms Max.
Temperature life	EIA-364-17, method A Temperature: 90℃ ± 2 ℃ Duration: 96 hours	No evidence of physical damage ΔR=30 milliohms Max.
Resistance To Soldering Heat (Infrared Reflow) For High Temperature Thermo Plastic	EIA-364-56B test level 3 Average ramp rate:1~4℃ per second Temperature(board surface): 250+10℃/-0℃ Duration:10 second Max.	Meer Requirements of Additional Test As Specified In Test Sequence.
Solderability	EIA-364-52 The test sample termination shall be immersed to a depth equal to a length from its tip to a location normally not less than 0.5 mm below the connector seating plane. Temperature: 245±5℃ Duration: 4~5 seconds	95% of immersed area must show no volids or pin holes.

5.0 TEST ITEMS AND SEQUENCE:

Test	Test Group							
	1	2	3	4	5	6	7	8
Visual & Examination	1，7	1，5	1，5	1，10	1，3	1，3	1，3	1，4
Low level contact resistance	2，6	2，4		2，9				
Insulation resistance			2，4	3，7				
Dielectric withstanding voltage				4，8				
Mating force	3，5							
Durability	4							
Temperature life			3					
Thermal shock				5				
Salt spray		3						
Impedance					2			
Humidity				6				
Housing Locking Mechanism Strength						2		
HI Pot test							2	
Solderability								2
Resistance To Soldering Heat								3
Sample Quantity	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)