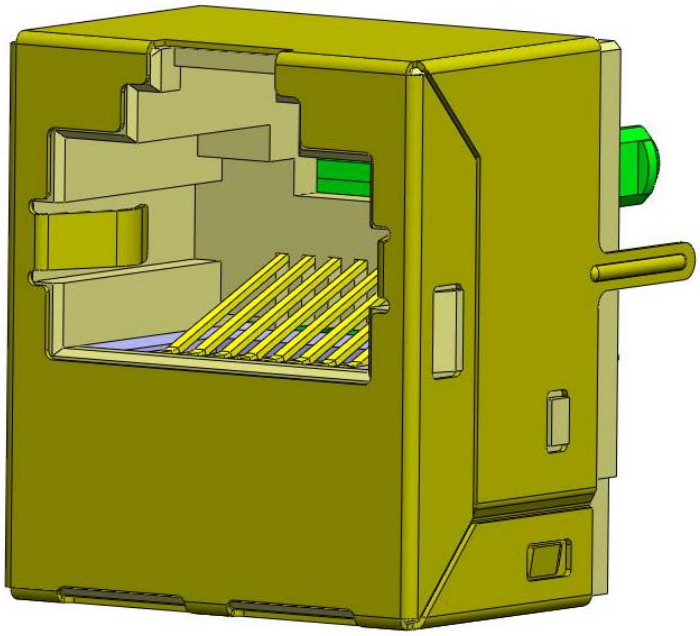
PRODUCT SPECIFICATION



GDI54-N3-060X300

育鼎精密工業股份有限公司

ACRON PRECISION INDUSTRIAL CO., LTD

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REVISION:	ECR/ECN INFORMATION:		PRODUCT NO	GDI54-N3-060X300	SHEET No
A	EC No:	D140010	PRODUCT NAME	Low Profile Vertical RJ45 10/100 Base-T	1 of 9
	DATE:	2014/02/28			

DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
PS-GD-0027	Lian	YANG.BIN	KIMI.HSU

1.0 SCOPE

This Product Specification covers the performance requirements for Low Profile Vertical RJ45 10/100 Base-T connector series.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

Low Profile Vertical RJ45 10/100 BASE-T series.
Nuconn part No:
GDI54-N3-060X300

2.2 PLATING SPECIFICATION TO EXPLAIN

See appropriate sales drawings.

2.3 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See appropriate sales drawings for details on dimensions ,materials , plating and markings.

2.4 SAFETY AGENCY APPROVALS

The product weight is 4.35g

2.5 PRODUCING PLANT FACTORY AND ADDRESS

Producing plant factory: Nuconn Industry CORP.
DongGuan Nuconn Industry CORP. Address:
Nr.32,RongFu Rd.,3rd Industrial District,ShangSha Village,,ChangeAn Town,DonGuan City,GuangDong

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

Please refer to the Sales Drawings , and other sections of this Specification for specific references to applicable documents and specifications. In cases where the Product Specification differs from the Sales Drawings, the Sales Drawing will take precedence

3.1 TURNS RATIO:

(P2-P3) : (J1-J2) : 1CT:1CT±5%
(P4-P5) : (J3-J6) : 1CT:1CT±5%

3.2 OPEN CIRCUIT INDUCTANCE:

(P2-P3) : 350uH Min @0.1V,100KHz, 8mA DC Bias
(P4-P5) : 350uH Min @0.1V,100KHz, 8mA DC Bias

3.3 INTER-WINDING CAPACITANCE :

(P1,P2,P3) TO (J1,J2) :35pf MAX, @1MHz
(P4,P5,P6) TO (J3,J6) :35pf MAX, @1MHz

3.4 DC RESISTANCE:

(J1-J2) and (J3-J6) : 1.2 ohms MAX

3.5 RETURN LOSS（LOAD 100 OHM ）

1~30MHz:-18dB MIN

30~ 60MHz : -16dB MIN
60~ 80MHz : -12dB MIN

3.6. INSERTION LOSS
1~100MHz :-1.0dB Max

3.7. CROSS TALK:
1-100 MHz : -35dB MIN

3.8. COMMON TO COMMON MODE REJECTION:
1~100MHz : -30dB MIN

3.9. HI-POT:
UTP SIDE TO CHIP SIDE : 2250VDC 60SEC@60Hz

3.10 TEMPERATURE

Operating Temperature Range: 0°C to +70°C

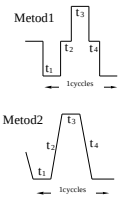
Storage Temperature Range: - 40°C to + 85°C

4.0 PERFORMANCE

Item	Test Items	Requirement	Procedures
1	**Examination of Product**	Meets requirements of product drawing. No physical damage.	Visual, dimensional and functional per applicable quality inspection plan.
Electrical Requirements			
2	**Low Level Contact Resistance**	50 mΩ max initial ΔR = 50 mΩ max final	Mate subject connector with compatible connector. EIA-364-23B
3	**Insulation Resistance**	1000MΩ min initial 50 MΩ min final	Apply 100±10% Volts DC between adjacent contacts of mated connectors for one minute. EIA-364-21
4	**Dielectric Withstanding Voltage**	No discharge, flashover or breakdown. Current leakage: 1 mA max	For mated specimens, 2250VDC between connected RJ interface contacts and all PCB tails connected together with shield. 1 milliamp ere cutoff current, 500Volts per second maximum ramp. EIA-364-20

Mechanical Requirements			
5	**Mating and Un-mating Forces**	nsertion Force:22N max Unlatched Withdrawal Force: 22N max Latched Withdrawal Force: 89N min	Measure force necessary to mate and un-mate connectors using the free floating fixtures at rate of 25mm/min. EIA-364-05B
6	**Solder ability**	Wetting must occur over at least 95% of the solder immersion surface	Solder 245℃±2℃; Immersion depth 2mm; Immersion time 3S
7	**Soldering Temperature Resistace**	Detrimental damage affecting to the performance shall not occur.No flux creeping which affects performance of connector	Reflow soldering:Peak Temp:260℃±5℃ 5sec Max
8	**Durability**	750 cycles with no function damage for RJ-45. Low Level Contact Resistance: ΔR = 30mΩ max final	The sample should be mounted in the tester and fully mated and unmated 750 times per hour at the rate of 25mm/min. EIA-364-09C

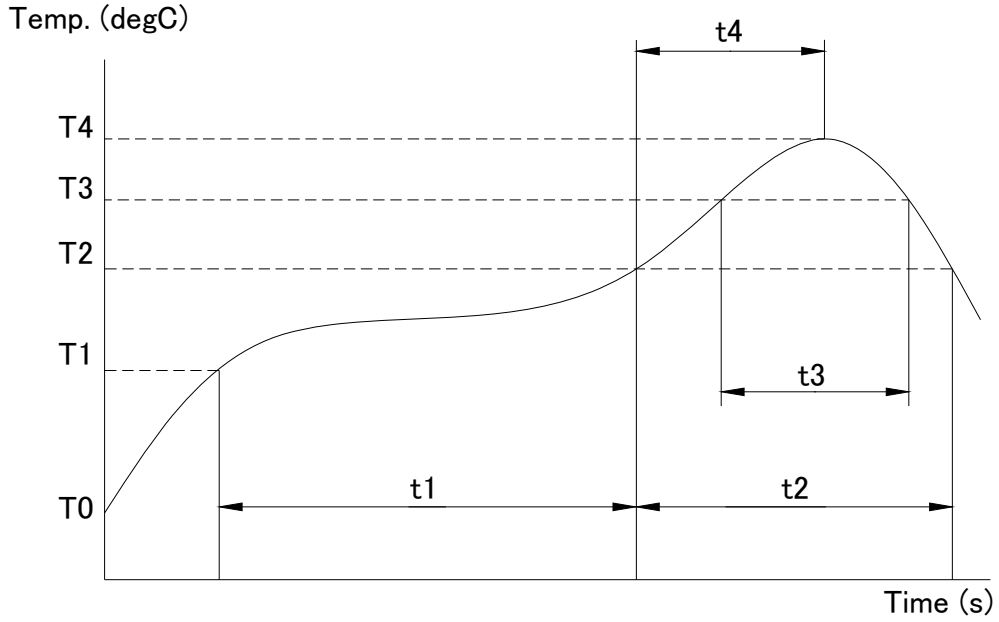
Environment Requirements			
9	**Thermal Shock (Simulate Non-Operating State)**	△R: 50mΩ max (change from initial) & Appearance: no damage	Subject mated connectors to 10 cycles between -40℃and 85℃, 30 minutes duration at both temperature extremes. EIA-364-32C
10	**Humidity-Temperature Cycling**	△R: 50mΩ max (change from initial) & Appearance: no damage	Mated connectors placed in humidity chamber (Humidity 80-98%, Temperature 20-65℃) for 96Hrs. EIA-364-31B, Method IV, Except 7a
11	**Temperature Life (Heat Aging)**	△R: 50mΩ max (change from initial) & Appearance: no damage	Subject mated connectors to temperature life at 85℃ for 96 hours. EIA-364-17B, Method A
12	**Temperature Life (Cold Aging)**	△R: 50mΩ max (change from initial) & Appearance: no damage	Subject mated connectors to temperature life at-40℃for 96 hours EIA-364-17B, Method A

13	**Salt Spray**	△R: 50mΩ max (change from initial) & Appearance: no damage	48hours Atmosphere: salt spray from a 5% solution. Temperature: 35 +1/-2°C EIA 364-26
14	**Damp Heat, Steady State**	JIS C 0022 JEC Pub.68 2-3 Ca MIL-STD-202 103B	Test Temp :40±2℃ Relative Humidity:90～95%RH Test time:96Hrs
15	**Change of Temperature**	JIS C 0025 JEC Pub.68 2-14 NA MIL-STD-202 102A (Unless otherwise specified, either method 1or method 2. is to be closen)	 (Both Method 1and2 are be performed under following conditions) Stage / Temp / Time t1 / -40° / 30min t2 / 5~35℃ / Less than 5min t3 / 85° / 30min t4 / 5~35℃ / Less than 5min Number of test cycles:100cycles
16	**Ammonia**	Appearance: no damage	Hydrogen Ion Exponent Index (PH)=10 Test Temperature:15~35℃ Test Time:72±4hrs
17	**Soldering Heat**	1: Electrical and mechanical performance must be satisfactory in specifications 2:There must no conspicuous changes in appearance(For example warping , swelling, cracking, indication)	MATERIALS Solder : Sn/99Ag/0.3/Cu0.7(Weight&) If no doubts araise in judgment, it is ok to use another SOLDER TEST CONDITION 1 : TEST A: Flow Soldering (Partly Heating) 260±3℃ 10S≦ 2 : TEST B: Hand Soldering 400℃(Soldering iron tiop) 3S≦

5.0 PACKAGING

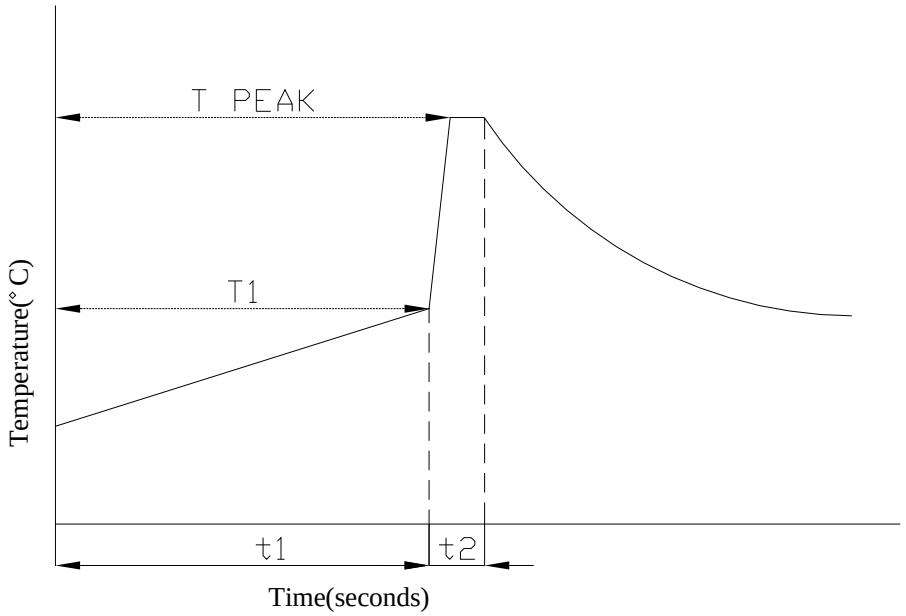
Parts shall be packaged to protect against damage during handling, transit and storage. See packaging appropriate drawings

6.0RECOMMENDED REFLOW SOLDERING PROFILE



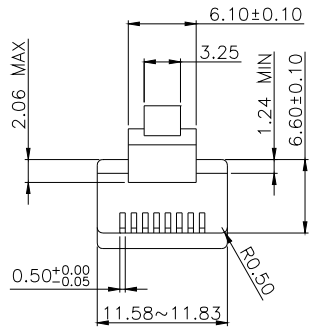
Start temperature		T0	35degC(Reference)
Preheating	Temperature	T1-T2	150-195degC
	Time	t1	160sec.
Heating time		t2/T2	115sec./195degC
		t3/T3	60sec./225degC
Peak temperature		T4	260degC
Time to peak temperature		T4	40-90sec.
Rate of rising temperature		T0-T1	1-5degC/sec.
		T2-T4	1-3degC/sec.
Peak temperature(Soldering points)			230degC
Number of tests			3times

7.0 RECOMMENDED WAVE SOLDERING PROFILE

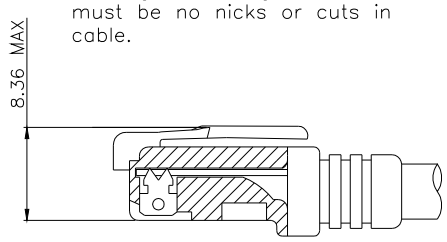


PARAMETER	REFERENCE	LEAD FREE SPECIFICATION
PREHEAT TEMPERATURE GRADIENT		+1~4℃/sec
PREHEAT TIME	t1	70 sec
PREHEAT TEMPERATURE	T1	100~120℃
SOLDER POT TEMPERATURE	T PEAK	260℃
DWELL TIME	t2	5 SEC
PEAK BOARD TOP TEMPERATURE		190℃
COOLING TEMPERATURE GRADIENT		-6℃/SEC MAX.

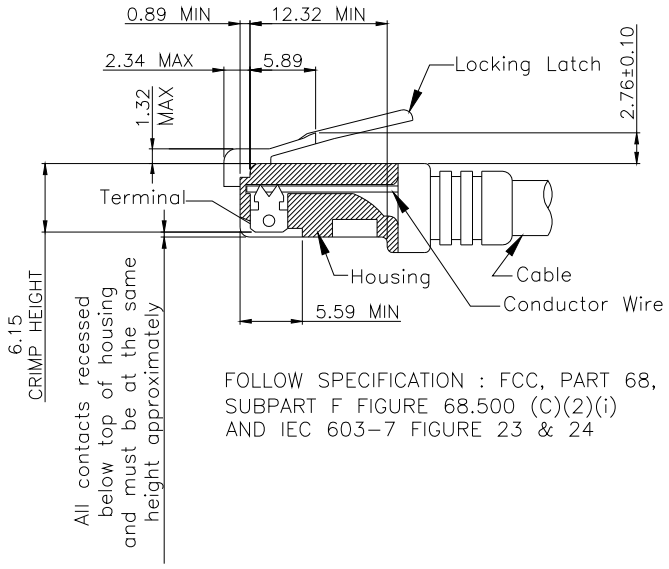
8.0 RECOMMENDED RJ PLUG SPECIFICATION



* There must be no damage to housing or locking latch.There must be no nicks or cuts in cable.



FOLLOW SPECIFICATION : FCC, PART 68, SUBPART F FIGURE 68.500 (C)(2)(ii)



FOLLOW SPECIFICATION : FCC, PART 68, SUBPART F FIGURE 68.500 (C)(2)(i) AND IEC 603-7 FIGURE 23 & 24