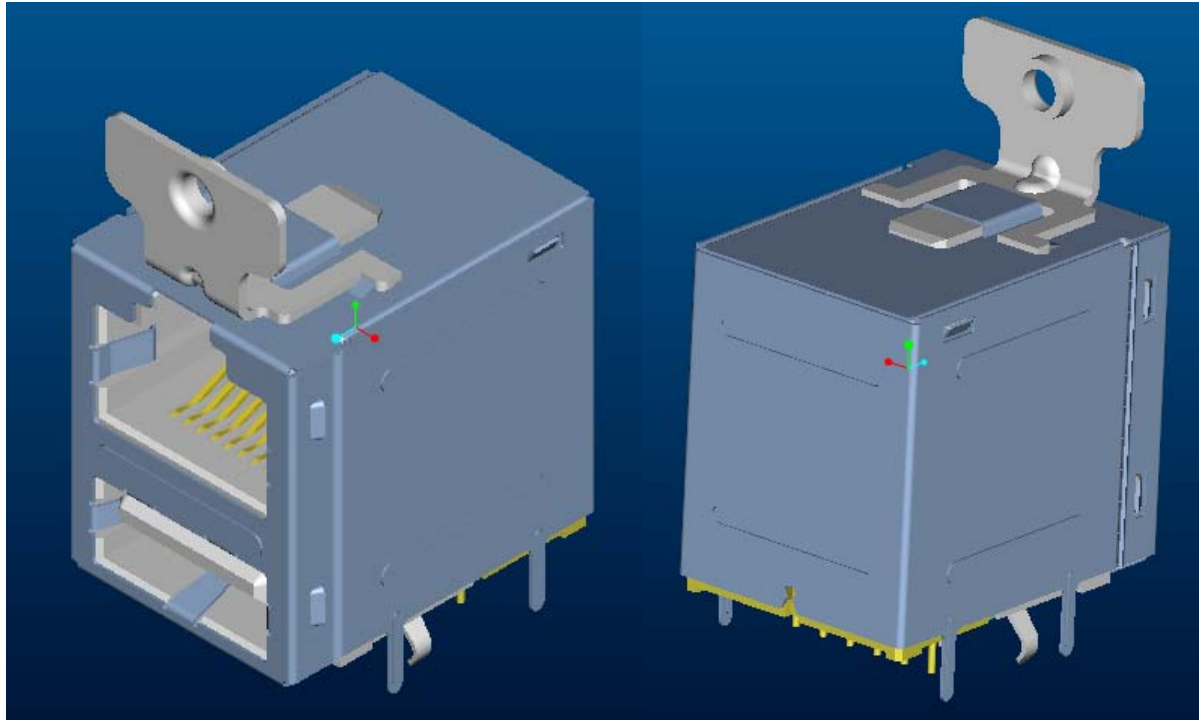




# PRODUCT SPECIFICATION



ACRON P/N:GDP06-N3-1009300

育鼎精密工業股份有限公司

ACRON PRECISION INDUSTRIAL CO., LTD

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(ACRON)

☒ 東莞愷興電子科技電子有限公司  
(NUCONN)

REVISION:	ECR/ECN INFORMATION:		PRODUCT NO	GDP06-N3-1009300	SHEET No
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DOCUMENT NUMBER:		CREATED / REVISED BY:		CHECKED BY:	APPROVED BY:
<b>PS-RJ-0003</b>		<b>BRIAN.TAN</b>		<b>JEFF.YANG</b>	<b>KIMI.HSU</b>



# PRODUCT SPECIFICATION

## 1.0 SCOPE

This Product Specification covers the performance requirements for RJ45+USB stack with transformer connector series.

## 2.0 PRODUCT DESCRIPTION

### 2.1 PRODUCT NAME AND SERIES NUMBER(S)

RJ45+USB stack with transformer

GDP06 Series

### 2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

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

### 2.3 SAFETY AGENCY APPROVALS

See appropriate sales drawings

### 2.4 PRODUCING PLANT FACTORY AND ADDRESS

Producing plant factory: Nuconn Industry CORP

Coil plant factory: DongGuan Nuconn Industry CORP.or MinXin Electronic CORP  
or Vetak Electronic CORP .

DongGuan Nuconn Industry CORP. Address:

Nr.32,RongFu Rd.,3<sup>rd</sup> Industrial District,ShangSha Village,,ChangeAn Town,DonGuan  
City,GuangDong,

MinXin Electronic CORP.Address:

Qianwei City industrial park,SiChuan

Vetak Electronic CORP. Address

XinZhai Village, Sansui city , GuiZhou,

## 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

### EIA-364 TEST METHODS FOR ELECTRICAL CONNECTORS

## 4.0 RATINGS

### 4.1 TEMPERATURE

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

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

### 4.2 USB Ratings

4.2.1 Insulation Resistance: 1000 M Ohm(MIN)

4.2.2 Contact Resistance : 30 m Ohm(MAX)

4.2.3 Dielectric Withstanding Voltage: 750 VAC

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## 5.0 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	30 m $\Omega$ max initial $\Delta R = 30$ m $\Omega$ max final	Mate subject connector with compatible connector. EIA-364-23B
3	Insulation Resistance	1000 M $\Omega$ min initial 50 M $\Omega$ min final	Apply 100 $\pm$ 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, 500 Volts per second maximum ramp. EIA-364-20

### Mechanical Requirements

5	Mating and Un-mating Forces	Insertion 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:SN/3.0Ag/0.5Cu,Flux:ROSIN 25%,IPA75%.High Temp Storage:150 $^{\circ}$ C 1 hour, PCT: 105 $^{\circ}$ C 100% 1.22*10 <sup>5</sup> Pa 4 hours. Solder 240 $^{\circ}$ C $\pm$ 2 $^{\circ}$ C; Immersion depth 2mm; Immersion time 3S
7	Terminal Strength	Appearance meet requirement	Gravitation 500g , Winding 90 angle 2-3sec
8	KOJIRI Strength	Appearance meet requirement	Left: 100N, push 15sec Right: 100N, push 15sec Up: 100N, push 15sec Down : 100N, push 15se

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9	Solder Joint Strength Test	(1) The variation must be 50 % $\leq$ of the initial value (2) After test measured items must be 75 % $\leq$ of solder (Pb/Sn) item	(1)Temp Cycle Test Min Temp: -40°C. MAX TEMP:+125°C TIME : Each 30 min. CYCLES:200 (2) Measurement Item: Component with LEAD: Tension Test (EIAJED-4702); Component without LEAD: Bend Test (EIAJED-4702) (3) Measurement cycle: INITIAL,(100) 200 (4) Measurement SMPL: Component with LEAD: 5LEADS $\leq$ Component without LEAD: 5POINTS $\leq$ To calculate Average
10	Physical Shock	No electrical discontinuity greater than 1 $\mu$ second. Shall meet visual requirements, and show no physical damages.	Subject mated connectors to 50 G's (peak value) half-sine shock pulses of 11 milliseconds duration. Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks). The electrical load condition shall be 100mA maximum for all contacts. EIA-364-27B
11	Durability	1000 cycles with no function damage for RJ-45. Low Level Contact Resistance: $\Delta R = 30m\Omega$ max final	The sample should be mounted in the tester and fully mated and unmated 300 times per hour at the rate of 25mm/min. EIA-364-09C
12	Random Vibration	No electrical discontinuity greater than 1 $\mu$ second. Shall meet visual requirements, and show no physical damages.	The electrical load condition shall be 100mA maximum for all contacts. Subject to a simple harmonic motion having amplitude of 0.76mm (1.52mm maximum total excursion) in frequency which being varied uniformly between the approximate limits of 10 and 55 Hz. The entire frequency range, from 10 to 55 Hz and return to 10 Hz, shall be traversed in approximately 1 minute. This motion shall be applied for 2 hours in each of three mutually perpendicular directions. EIA-364-28D

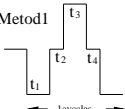
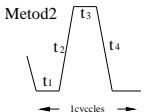
## Environment Requirements

13	Thermal Shock (Simulate Non-Operating State)	$\Delta R$ : 30m $\Omega$ max (change from initial) & Appearance: no damage	Subject mated connectors to 5 cycles between -55°C and 85°C, 30 minutes duration at both temperature extremes. EIA-364-32C
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14	Humidity-Temperature Cycling	$\Delta R$ : 30m $\Omega$ max (change from initial) & Appearance: no damage	Mated connectors placed in humidity chamber (Humidity 80-98%, Temperature 20-65 $^{\circ}$ C) for 240 Hrs. EIA-364-31B, Method IV, Except 7a															
15	Temperature Life (Heat Aging)	$\Delta R$ : 30m $\Omega$ max (change from initial) & Appearance: no damage	Subject mated connectors to temperature life at 70 $^{\circ}$ C for 500 hours. EIA-364-17B, Method A															
16	Temperature Life (Cold Aging)	$\Delta R$ : 30m $\Omega$ max (change from initial) & Appearance: no damage	Test Temp $-40\pm 3^{\circ}$ C Test Time: 500hrs															
17	Salt Spray	$\Delta R$ : 30m $\Omega$ max (change from initial) & Appearance: no damage	Duration: 48 hours exposure; Atmosphere:salt spray from a 5% solution. Temperature: 35 +1/-2 $^{\circ}$ C EIA 364-26															
18	Damp Heat, Steady State	JIS C 0022 JEC Pub.68 2-3 Ca MIL-STD-202 103B	Test Temp :40 $\pm 2^{\circ}$ C  Relative Humidity:90 $\sim$ 95%RH Test time:500Hrs															
19	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)	<div><div><div>Metod1</div></div><div><div>Metod2</div></div></div> <div>(Both Method 1and2 are performed under following conditions)</div> <table><thead><tr><th>Stage</th><th>Temp</th><th>Time</th></tr></thead><tbody><tr><td>t1</td><td>Tetgmin</td><td>30min</td></tr><tr><td>t2</td><td>5<math>\sim</math>35<math>^{\circ}</math>C</td><td>Less than 5min</td></tr><tr><td>t3</td><td>Tetgmax</td><td>30min</td></tr><tr><td>t2</td><td>5<math>\sim</math>35<math>^{\circ}</math>C</td><td>Less than 5min</td></tr></tbody></table> <div>Number of test cycles:100cycles</div>	Stage	Temp	Time	t1	Tetgmin	30min	t2	5 $\sim$ 35 $^{\circ}$ C	Less than 5min	t3	Tetgmax	30min	t2	5 $\sim$ 35 $^{\circ}$ C	Less than 5min
Stage	Temp	Time																
t1	Tetgmin	30min																
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t3	Tetgmax	30min																
t2	5 $\sim$ 35 $^{\circ}$ C	Less than 5min																
20	Ammonia	Appearance: no damage	Hydrogen Ion Exponent Index (PH)=10 Test Temperature:15 $\sim$ 35 $^{\circ}$ C Test Time:72 $\pm$ 4hrs															
21	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 arise in judgment, it is ok to use another SOLDER TEST CONDITION 1 : TEST A: Flow Soldering (Partly Heating) 260 $\pm 3^{\circ}$ C 10S $\leq$ 2 : TEST B: Hand Soldering 400 $^{\circ}$ C (Soldering iron tiop) 3S $\leq$															

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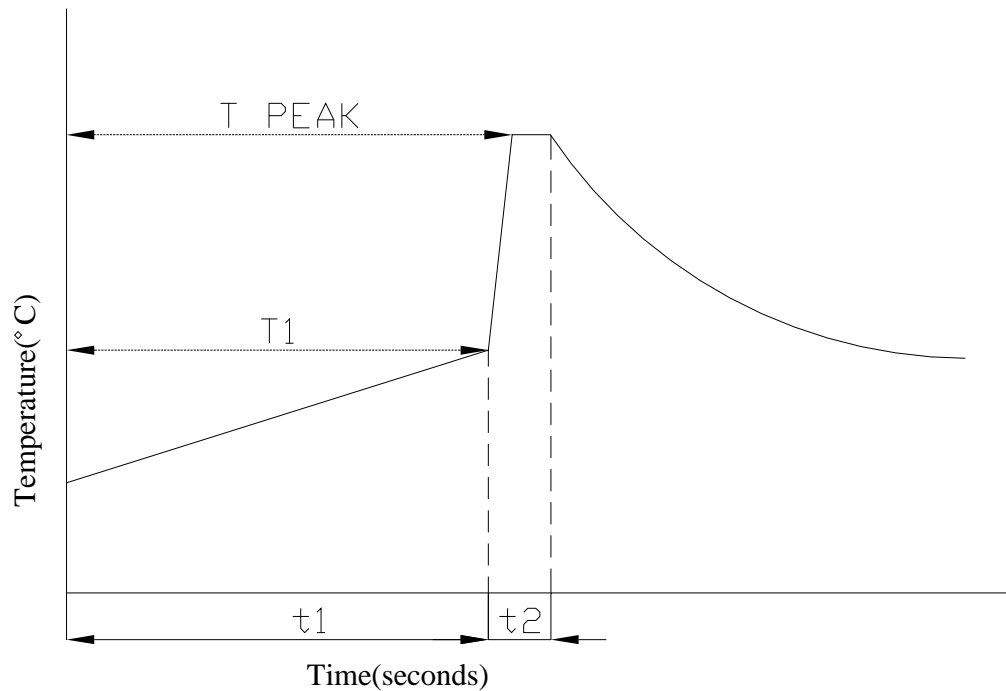


# PRODUCT SPECIFICATION

## 6.0 PACKAGING

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

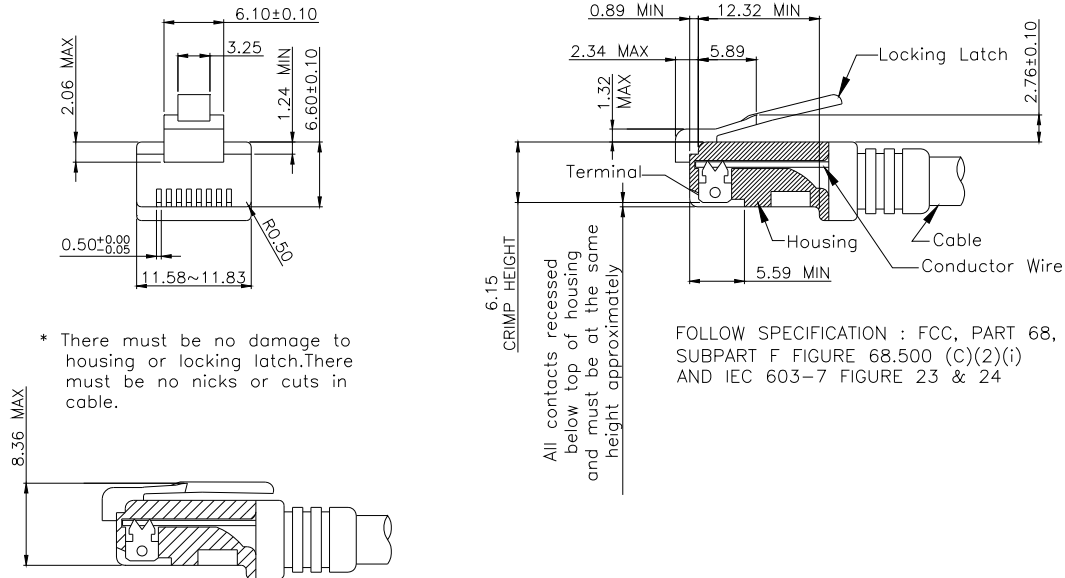
## 7.0 RECOMMENDED WAVE SOLDERING PROFILE



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

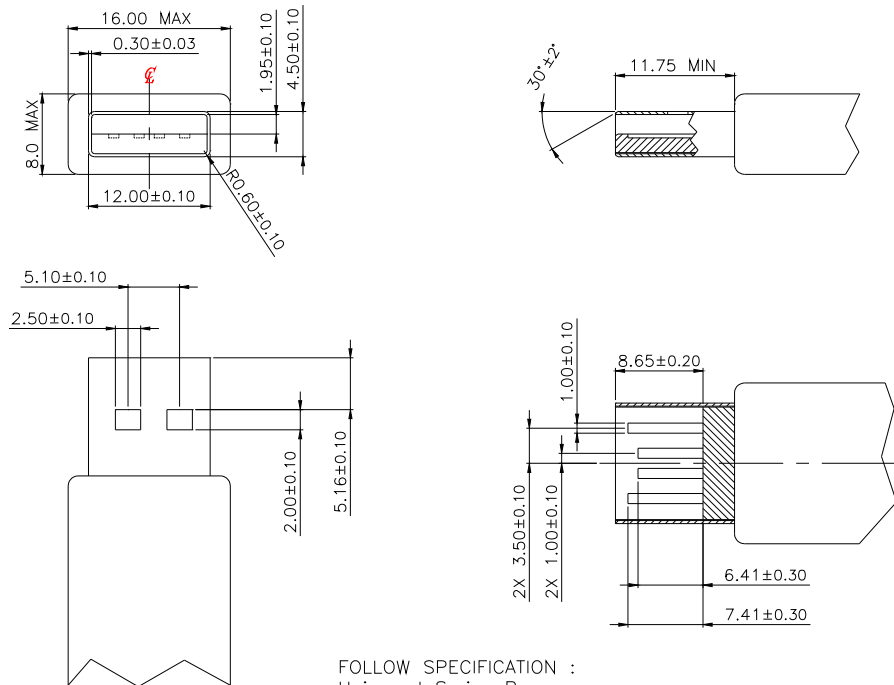
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## 8.0 RECOMMENDED RJ PLUG SPECIFICATION



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

## 9.0 RECOMMENDED USB PLUG SPECIFICATION



FOLLOW SPECIFICATION :  
Universal Series Bus  
Figure 6-9. USB Series A Plug  
Interface Drawing

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