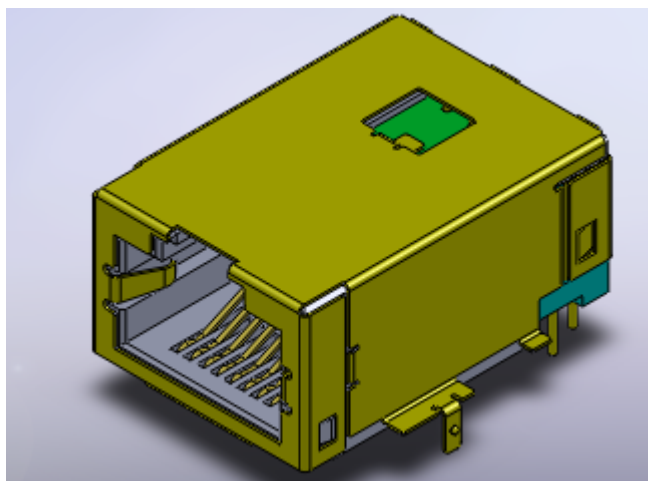
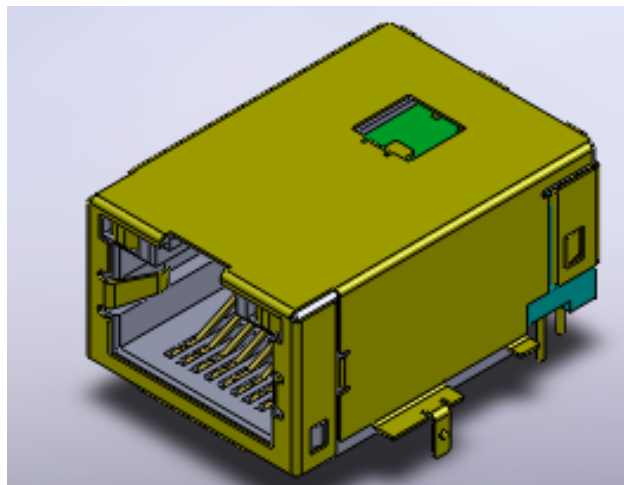




PRODUCT SPECIFICATION



(WITHOUT LED)



(WITH LED)

Acron P/N:GDI60-N3-11**300

育鼎精密工業股份有限公司

ACRON PRECISION INDUSTRIAL CO., LTD

桃園縣八德市廣德里新興路 55 號

No.55, SinSing Road., Bade City, Taoyuan County 334, Taiwan(R.O.C)

TEL : 886-3-3629889 FAX : 886-3-3664917

☐ 東莞睦永電子五金廠
(AMMI)

☐ 東莞育鼎電子五金廠
(ACRON)

☒ 東莞愷興電子科技電子有限公司
(NUCONN)

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|-------------------|----------------------|-------------------|-----------------------|--|-----------------|
| REVISION: | ECR/ECN INFORMATION: | | PRODUCT NO | GDI60-N3-11**300 | SHEET No |
| B | EC No: | RC-T170017 | PRODUCT NAME | Low profile single port RJ45 10/100 Base-T | 1 of 9 |
| DATE: | | 2017-01-12 | | | |
| DOCUMENT NUMBER: | | | CREATED / REVISED BY: | CHECKED BY: | APPROVED BY: |
| PS-GD-0028 | | | ANDELEE.YANG | JERRY.TUNG | KIMI.HSU |



PRODUCT SPECIFICATION

1.0 SCOPE

This Product Specification covers the performance requirements for Low profile single port RJ45 10/100 Base-T connector series.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

Low profile single port RJ45 10/100 BASE-T series. Nuconn part No: GDI60-N3-11XX300,

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 PRODUCT WEIGHT

The product weight is 5.72g

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 \pm 5%

(P4-P5) : (J3-J6) : 1CT:1CT \pm 5%

3.2 OPEN CIRCUIT INDUCTANCE:

(P2-P3) : 360~580uH . @0.1V,100KHz, 8mA DC Bias

(P4-P5) : 360~580uH . @0.1V,100KHz, 8mA DC Bias

3.3 LEAKAGE INDUCTANCE:

P1-P2(Short J1-J2) : 0.5 uH MAX, @1MHz

P4-P5(Short J3-J6) : 0.5 uH MAX, @1MHz

3.4 INTER-WINDING CAPACITANCE :

(P1,P2,P3) TO (J1,J2) :35pf MAX, @1MHz

(P4,P5,P6) TO (J3,J6) :35pf MAX, @1MHz

| | | | | |
|--------------------------------|---------------------------------------|---------------------------|--------------------------|--|
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| DOCUMENT NUMBER: PS-GD-0028 | CREATED / REVISED BY: ANDELEE.YANG | CHECKED BY: JERRY.TUNG | APPROVED BY: KIMI.HSU | 2 of 9 |



PRODUCT SPECIFICATION

3.5 DC RESISTANCE:

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

3.6 RETURN LOSS (LOAD 100 OHM)

1~30MHz:-18dB MIN

30~ 60MHz : -16dB MIN

60~ 80MHz : -12dB MIN

3.7. INSERTION LOSS

1~100MHz :-1.0dB Max

3.8. CROSS TALK:

1-100 MHz : -30dB MIN

3.9. COMMON TO COMMON MODE REJECTION:

1~100MHz : -35dB MIN

3.10. HI-POT:

UTP SIDE TO CHIP SIDE : 1500 Vrms or 2250VDC 60SEC@60Hz

3.11 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 Contact Resistance Level | 30 mΩ max initial ΔR = 30 mΩ max final | Mate subject connector with compatible connector. EIA-364-23B |
| 3 | Insulation Resistance | 1000 MΩ min initial 50 MΩ min final | Apply 100±10% Volts DC between adjacent contacts of mated connectors for one minute. EIA-364-21 |

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|------------------|----------------------|-----------------------|--------------|--|--------------|
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PRODUCT SPECIFICATION

| | | | |
|---|--|--|---|
| 4 | Dielectric Withstanding Voltage | No discharge, flashover or breakdown. Current leakage: 1 mA max | For mated specimens, 2250VDC or 1500Vrms 60 sec, between connected RJ interface contacts and all PCB tails connected together with shield. 1 milliampere 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%, IPA 75%. High Temp Storage: 150°C 1 hour, PCT: 105°C 100% 1.22*10 ⁵ Pa 4 hours. Solder 240°C ± 2°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 |
| 9 | Physical Shock | No electrical discontinuity greater than 1µsecond. 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 |
| 10 | Durability | 200 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 300 times per hour at the rate of 25mm/min. EIA-364-09C |

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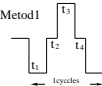
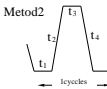
PRODUCT SPECIFICATION

| | | | |
|----|------------------|--|--|
| 11 | Random Vibration | No electrical discontinuity greater than 1μsecond. 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

| | | | |
|----|---|--|---|
| 12 | Thermal Shock (Simulate Non-Operating State) | ΔR: 30mΩ max (change from initial) & Appearance: no damage | Subject mated connectors to 100 cycles between -40℃ and 85℃, 30 minutes duration at both temperature extremes. EIA-364-32C |
| 13 | Humidity-Temperature Cycling | ΔR: 30mΩ max (change from initial) & Appearance: no damage | Mated connectors placed in humidity chamber (Humidity 80-98%, Temperature 20-65℃) for 500 Hrs. EIA-364-31B, Method IV, Except 7a |
| 14 | Temperature Life (Heat Aging) | ΔR: 30mΩ max (change from initial) & Appearance: no damage | Subject mated connectors to temperature life at 85℃ for 500 hours. EIA-364-17B, Method A |
| 15 | Temperature Life (Cold Aging) | ΔR: 30mΩ max (change from initial) & Appearance: no damage | Subject mated connectors to temperature life at -40℃ for 500 hours EIA-364-17B, Method A |
| 16 | Salt Spray | ΔR: 30mΩ max (change from initial) & Appearance: no damage | 48hours Atmosphere: salt spray from a 5% solution. Temperature: 35 ±1/-2℃ EIA 364-26 |
| 17 | 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:500Hrs |

| | | | | | |
|------------------|----------------------|-----------------------|--------------|--|--------------|
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| PS-GD-0028 | | ANDELEE.YANG | | JERRY.TUNG | KIMI.HSU |

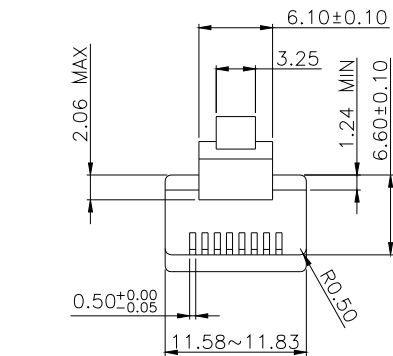
| 18 | Change of Temperature | JIS C 0025 JEC Pub.68 2-14 NA MIL-STD-202 102A (Unless otherwise specified, either method 1 or method 2. is to be chosen) | <div><div><div>Metod1</div></div><div><div>Metod2</div></div></div> <div><p>(Both Method 1 and 2 are performed under following conditions)</p><table><tr><th>Stage</th><th>Temp</th><th>Time</th></tr><tr><td>t1</td><td>-40°</td><td>30min</td></tr><tr><td>t2</td><td>5~35 °C</td><td>Less than 5min</td></tr><tr><td>t3</td><td>85°</td><td>30min</td></tr><tr><td>t4</td><td>5~35 °C</td><td>Less than 5min</td></tr></table><p>Number of test cycles:100cycles</p></div> | Stage | Temp | Time | t1 | -40° | 30min | t2 | 5~35 °C | Less than 5min | t3 | 85° | 30min | t4 | 5~35 °C | Less than 5min |
|-------|-----------------------|--|---|-------|------|------|----|------|-------|----|---------|----------------|----|-----|-------|----|---------|----------------|
| Stage | Temp | Time | | | | | | | | | | | | | | | | |
| t1 | -40° | 30min | | | | | | | | | | | | | | | | |
| t2 | 5~35 °C | Less than 5min | | | | | | | | | | | | | | | | |
| t3 | 85° | 30min | | | | | | | | | | | | | | | | |
| t4 | 5~35 °C | Less than 5min | | | | | | | | | | | | | | | | |
| 19 | Ammonia | Appearance: no damage | Hydrogen Ion Exponent Index (PH)=10 Test Temperature:15~35°C Test Time:72±4hrs | | | | | | | | | | | | | | | |
| 20 | 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±3°C 10S ≡ 2 : TEST B: Hand Soldering 400°C (Soldering iron tip) 3S ≡ | | | | | | | | | | | | | | | |

5.0 PACKAGING

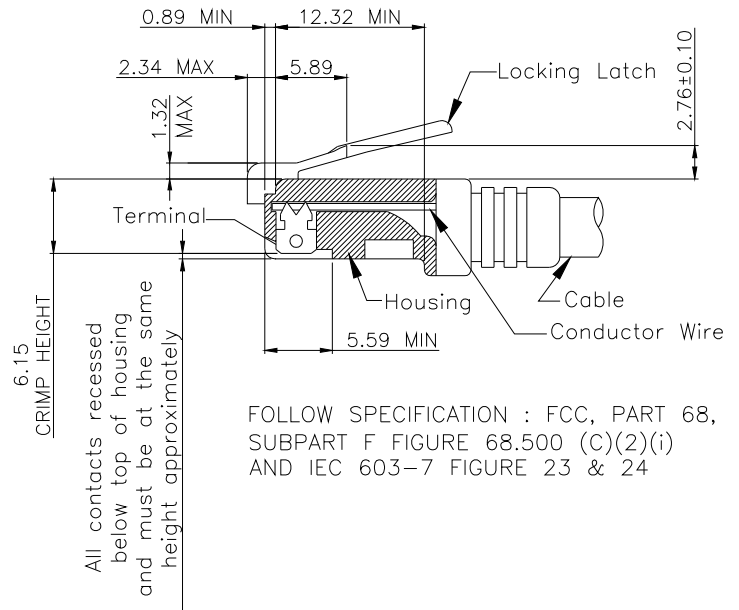
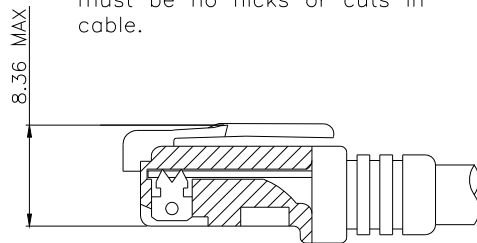
Parts shall be packaged to protect against damage during handling, transit and storage. See packaging appropriate drawings

| | | | | |
|-------------------|-----------------------|--|-------------------------|--|
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| PS-GD-0028 | ANDELEE.YANG | JERRY.TUNG | KIMI.HSU | |

6.0 RECOMMENDED RJ PLUG SPECIFICATION



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

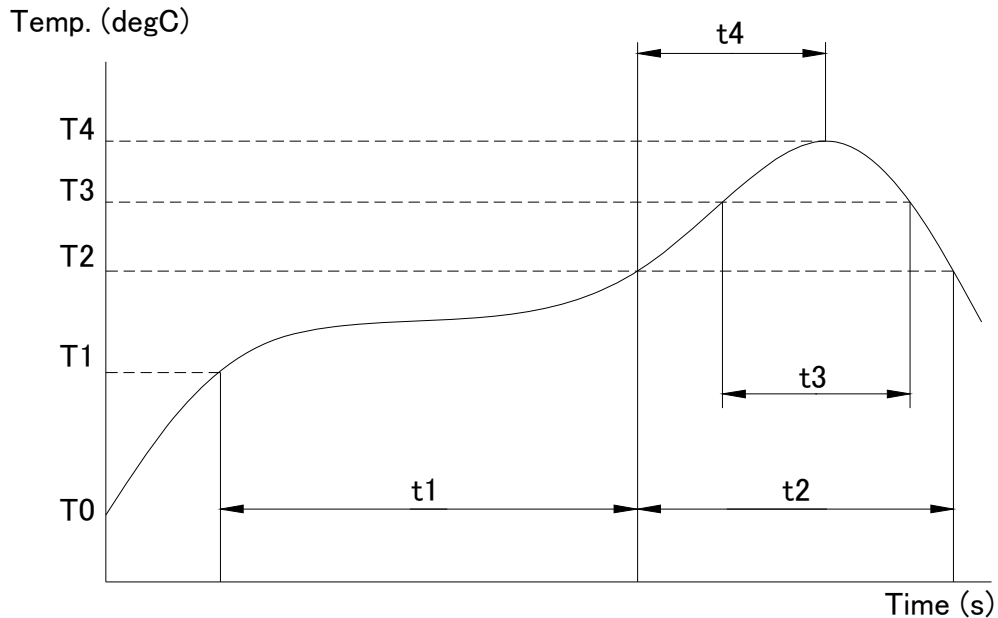


FOLLOW SPECIFICATION : FCC, PART 68, SUBPART F FIGURE 68.500 (C)(2)(i) AND IEC 603-7 FIGURE 23 & 24

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

| | | | | | |
|-------------------|----------------------|-----------------------|--------------|--|-----------------|
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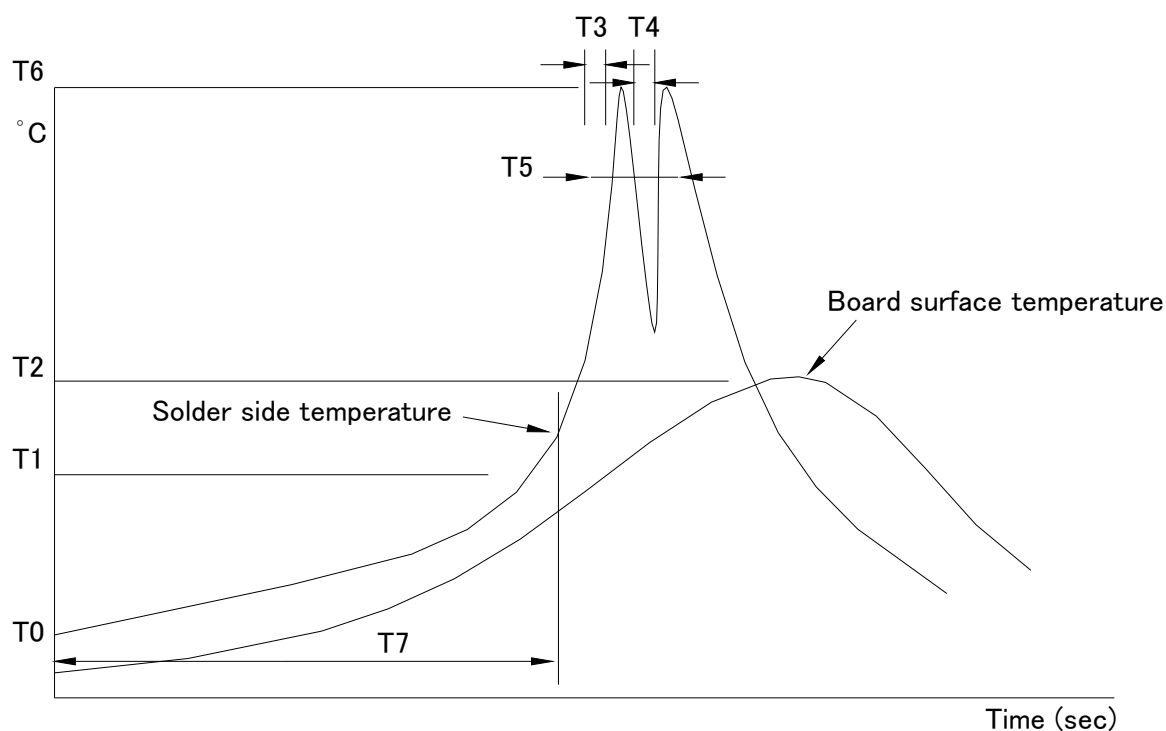
7.0 RECOMMENDED REFLOW SOLDERING PROFILE



| | | | |
|------------------------------------|-------------|-------|-------------------|
| 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 |

8.0 RECOMMENDED WAVE SOLDERING PROFILE

| | | | | | |
|------------------|----------------------|-----------------------|--------------|--|--------------|
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| | | | |
|--------------------------------------|----|-----------------------------|----------------------|
| | T0 | 25~35 °C (Room temperature) | |
| Start temperature | T1 | 90~120 °C | |
| Pre-heat time | T7 | MAX 180s | |
| Soldering time(solder side) | T6 | MAX 260+3 °C | |
| Soldering temperature(board surface) | T2 | MAX 150 °C | cradle use |
| Soldering temperature(board surface) | T2 | MAX 170 °C | cradle no use |
| Soldering time | T3 | 1st wave 1±0.5s | MAX temperature time |
| | T4 | 2nd wave 3±1s | MAX temperature time |
| Max temperature arrival time | T7 | 180~210(MAX) s | |
| 225 °C over time | T5 | 3~15 s | |
| solder time | | two time | |

| | | | | | |
|-------------------|----------------------|-----------------------|--------------|--|-----------------|
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AdRoN 文件制訂、修訂、廢止申請單

RD-PS-A-001-220

| | | | | | |
|--|--|------|-------------------|----|-----------|
| 文件編號 | PS-GD-0028 | 文件名稱 | GDZ60-N3-1/1**300 | | |
| 申請部門 | SD | 申請人 | Tiana | 日期 | 1.12.2017 |
| 制訂單位 | 研發部 | 制訂人 | Amelie | 日期 | 1.12.2017 |
| <input type="checkbox"/> 制訂 <input checked="" type="checkbox"/> 修訂 <input type="checkbox"/> 廢止原因說明 | EC No. RC-T170017 (Rev. B-). Salt Spray for 48 hours. | | | | |
| 相關單位審查 | Tiana 1/12. Amelie 1/12 1/12 | | | | |
| 核准 | Simon 1/12 | | | | |