



*ATW TECH. CO., LTD.*

## PRODUCT SPECIFICATION

### PRODUCT NAME

**5V1.5A CAR CHARGER**

### PART NUMBER

**G12PCL-688-0021**

**ATW-688c**

**DOC. NO.:** WI-CA-235

**AUTHOR:** Y.Q.LI

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**REV.:** 0

### APPROVED

**SIGNED: H.S\_CHEN**

**DATE: 2012.3.7**

### CHECKED

**SIGNED: X.H\_ZHENG**

**DATE: 2012.3.7**





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**1. SCOPE**

This document describes mechanical , electrical and environmental test specifications for the CLA G12PCL-688-0021 .

All tests should , if nothing else is stated , be made on CLA conditioned minimum 24 hours at 25°C±2°C , with 40~60% RH , Input Voltage 13.8V .

**2. APPLICABLE DOCUMENTS AND SPECIFICATIONS**

See drawings and any other sections of this specification for the relevant reference documents . In cases where the product specification differs from the product drawings , the product drawings take precedence .

**Part No.**

**Description**

**G12PCL-688-0021**

**5V1.5A microUSB**

**3. OPERATIONAL CONDITIONS**

<b>3.1. Rated Input Voltage</b>	DC10.8V~24V
<b>3.2. Rated Input Current</b>	no load: <30mA
<b>3.3. Rated Output Characteristic</b>	DC 5.0V/1500mA
<b>3.4. Operating Temperature</b>	0°C to +55°C
<b>3.5. Storage Temperature</b>	-25°C to +80°C
<b>3.6. Environment Friendly Requirement</b>	Meets ROHS



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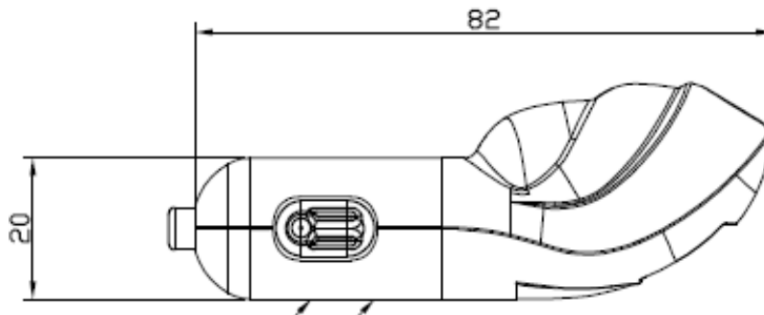
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#### 4. APPEARANCE/DIMENSION INSPECTION SPECIFIED

4.1. Appearance : see the drawing ◦



#### 5. MECHANICAL EVALUATION TEST SPECIFICATIONS

Item	Conditions	Requirement
5.1	<b>Drop test</b> <ul style="list-style-type: none"><li>- Height : 0.75M</li><li>- Floor type : Carpet</li><li>- Times : 6</li></ul>	<ul style="list-style-type: none"><li>- no crack and components loose</li><li>- pass function test defined in 6.1</li></ul>



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## 6. ENVIRONMENTAL TEST SPECIFICATIONS

Item	Conditions	Requirement
6.1	<b>Function Test</b> <ul style="list-style-type: none"> <li>- Input voltage : 10.8VDC~24VDC</li> <li>- Ambient temperature : 25±5°C</li> </ul>	<b>1) output voltage</b> <ul style="list-style-type: none"> <li>- no load : 4.70V~5.30V</li> <li>- Max. load (1500mA) : 4.70V ~ 5.30V</li> </ul> <b>2) No load input current : under 30mA</b>
6.2	<b>Output Ripple &amp; Noise</b> <ul style="list-style-type: none"> <li>- Input voltage : 10.8VDC~24VDC .</li> <li>- Load : Max. load and no load</li> <li>- Operating temperature : 0~55°C</li> <li>- Band width : 20MHz</li> <li>- By pass the end of connector with 10uF electrolytic and 0.1uF ceramic capacitor</li> </ul>	- <100mVpp.
6.3	<b>Reverse Input Voltage Protection</b> <ul style="list-style-type: none"> <li>- Input : -14.0VDC</li> <li>- Time : 30 second</li> </ul>	<ul style="list-style-type: none"> <li>- output voltage will not exceed -1 V</li> <li>- fuse is allowed to blow</li> </ul>
6.4	<b>Power on Output Current Settling Time</b> <ul style="list-style-type: none"> <li>- Input : 12VDC</li> <li>- Load : Max. Load</li> </ul>	- stabilize in less than 60ms
6.5	<b>Conducted and Radiated Emissions</b> <ul style="list-style-type: none"> <li>- Input : 12V Battery * 2</li> <li>- Load : Max. Load</li> </ul>	At least -3 dB under CE requirement
6.6	<b>Electrostatic Discharging</b> <ul style="list-style-type: none"> <li>- Charging gun capacitor and discharging resistor 150pF/330Ω</li> <li>- Contact test : 8KVA , 10 discharges</li> <li>- Air test : 8KVA , 10 discharges</li> </ul>	No components damage and pass 6.1 function tests



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## 7. ENVIRONMENTAL TEST SPECIFICATIONS

Item	Conditions	Requirement
7.1	<b>Low Temperature Storage Test</b> <ul style="list-style-type: none"><li>- Temperature : - 40°C</li><li>- Time : 72 Hours</li></ul>	<ul style="list-style-type: none"><li>- appearance no crack , loose</li><li>- pass function test (6.1) when samples go back to operation temperature range</li></ul>
7.2	<b>High Temperature Storage Test</b> <ul style="list-style-type: none"><li>- Temperature : +80°C</li><li>- Time : 72 Hours</li></ul>	<ul style="list-style-type: none"><li>- appearance no crack , loose</li><li>- pass function test (6.1) when samples go back to operation temperature range</li></ul>



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## 8. PRODUCT DRAWING

**ROHS**

Product Drawing:

**Special Requirement:**

1. Remove all burrs and sharp edges.
2. Dimensions apply before plating.
3. Part to be packaged to prevent damage.
4. Overmolds must withstand 5.4kgf (12pound), axial pull test on housing/strain relief Interface, and 3.6kgf (8pound) axial pull test on the connector/strain relief Interface
5. Insulation resistance : >10M Ohms/DC/200V.
6. Conductor resistance : <2 Ohms.
7. A (reference) dimension is for Information purposes only and has no tolerance implied.
8. Bending test over 900g/2500 cycle at an angle of 180 degree 40 cycle per minute
9. 環境物質要求符合ROHS標準
10. 上下蓋合模斷差(全周)必須小於0.15mm,
11. 上下蓋合模美工縫(SR端)必須小於0.3mm,
12. Electrical specification:

**Connectors & Components:**

Item	Part No.	Specification & Description	Qty	Part No.	Material	Overmold	Tooling No.	Part No.	Material
1.	G4700C0407	Micro USB Plug	1					ST17-000	PC/PC/PC/ABS
2.	G4200C002	TOP COVER	1						
3.	G4200C002	Bottom Cover	1						
4.	G4100C0010	彈簧	1						
5.	G4100C0010	彈簧	1						
6.	G4100C0010	彈簧	1						
7.	G4200C002	彈簧	1						
8.	G4200C002	彈簧	1						
9.	G4100C0010	彈簧	1						
10.	G4100C0010	彈簧	1						
11.	G4100C0010	彈簧	1						
12.	G4100C0010	彈簧	1						

**Cables:**

Item	Part No.	Qty	Gauge	Conductors	Cond. Matl	SHIELDING	Part No.	Material	Overmold	Tooling No.	Part No.	Material
A.	G4000C1221	1	#22	2C	PC	None						

**Detail Specification**

UNIT'S	mm	GENERAL TOLERANCE	mm
SCALE	1:1	X ± 0.15	
DATE	2012/01/10	X ± 0.15	
SHEET	1 of 1	X ± 0.15	
CAD NO.		X ± 0.15	
FINISH		X ± 0.15	
REV.	0	X ± 0.15	

**Wiring Diagram:**

Wire No.	Color	Function
5	BLACK	NC
4	BLACK	NC
3	BLACK	NC
2	RED	+
1	RED	+
P1	COLOR	NC
P2	COLOR	NC

**WIRE CONNECTION TABLE**

REV.	EDN NO.	Version	Issued	DATE
Δ				
Δ				
Δ				
Δ				
Δ				

**ATW Technology, Inc.**





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**9. PACKAGE**

**STANDARD RoHS PE PACKAGE**