adt	MODEL NO.	GS-32HC	SHEET NO	
	DESCRIPTION	Car Charger	ISSUED DATE:	2013/10/22

APPROVAL SIGNATURE
DATE:

Customer：

Model No：GS-32HC

Type ：Car Charger Micro USB

Input Voltage	DC 12V~24V	Output Voltage	5V DC 2.0A
IN NET	點菸器插頭	Output Cable	coiled Cable 1.8M

亞達特科技股份有限公司

2F.-5, No.315, Sec. 3, Minsheng Rd., Banqiao Dist., New Taipei City 220,Taiwan

TEL: 02-22587990 FAX:02-22586990

http://www.adtweb.com.tw

Product Specification

1. Product：Car charger

2. **Product Description：**The switch-mode DC power charger (car charger) is to be used **in** the DC power source application. It is designed for DC input ranged from 12V to 24V with 2A fuse and DC output with rated voltage of 5.0V and rated current of 2000mA.

3. Electrical Characteristic：

3.1 Input :
Rated input voltage：12V ~ 24VDC
Rated input current：1350mA (rms) max. at 12V input rated,
700mA (rms) max at. 24V input rated.

3.2 Output :
Rated Output：DC5.25V~4.60V at rated current 2000mA with resistive loading
No Load Output：Max.5.5 V at no load condition
Max. Output Current：2000mA @ 25℃

3.3 Output port :
With Cable 1500mm ± 50mm and Micro USB connector

3.4 Protection Circuit
Short Circuit protection：Current limit and auto-restart after short circuit remove.

4. Temperature & Humidity

Operating Temperature：－10℃ to ＋40℃
Storage Temperature：－20℃ to ＋70℃, 20 hours, with specified carton-box packaging condition (No functional failure and observable cosmetic defect on the charger.
The wrinkle or yellowness or any cosmetic defect in the packaging material is defect in the packaging material is neglected.)
Relative Humidity：5% to 95% RH (No observable condensation on the charger body)

5. Mechanical Diagram
(as attachment file A)

5.1 Mechanical test :

Drop Test：Free drop on concrete floor at 0.9 meter high, 3 times with 3 faces, (No functional failure and observable crack or damage on the charger body).

Casing：Flame retardant material

5.2 Mechanical Specification:

Symbol	Parameter	Check Item	
		By year Sampleing	**By IQC** Sampleing
Plug type	DC jack	X	X
Color of Case	Dark Black	X	X
Vibration Test	Frequency 10-55-10Hz with amplitude of 1.5mm along 3 direction at Z-Y-Z, each directions vibrate 1hours Function Preserved	X	
Strain Relief Test	Cord & Plug at normal position apply 2kg to input side, 60sec	X	
Cord bending	NA	X	
DC Jack Plug insertion test	5000 times	X	
Drop Test	The adapter must survive drop test from 0.9m on concrete. It shall be dropped 3 times without any packaging. After test completion the adapter must still meet functional specification. No structural damage is allowed. Cosmetic damages such as small dents and scratches are acceptable.	X	X
Dimensions	c.f. drawings on next page	X	
Vibration Test packaged unit	c.f. “Vibration test (8L) Process v1” in NPP Process & Templates database	X	
Shock Test packaged unit	c.f. “Shock test Process v1” in NPP Process & Templates database	X	

6. EMC

EMC Standards…

EN 50498:2010
ISO 7637-2:2011
CISPR 25:2008+A1:2009

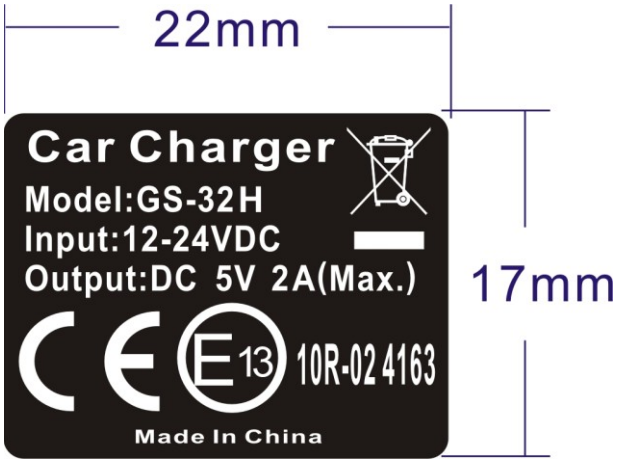
6.1 Safety

UL &VDE is Not Necessary

6.2 Approvals & Marking

CE & . RoHS . E13

6.3 Label



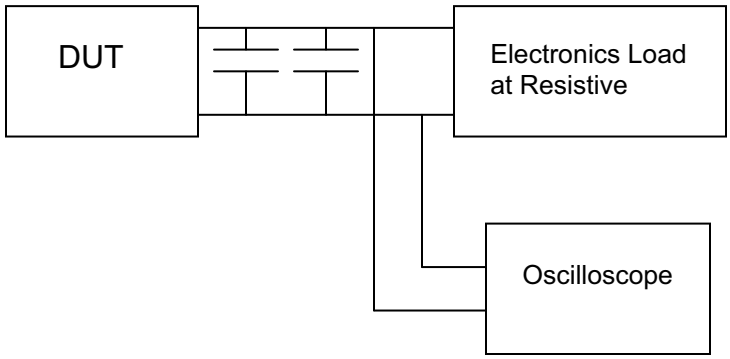
7. Ripple Voltage measurement set up

Set up：Noise and Ripple are measured at the end of output cables which are added a 0.1uF Ceramic Capacitor and 47uF Electrolytic Capacitor.
(The 2 capacitors are a standard connection for measurement of ripple voltage. They are intended to filter out all un-expected noise due to measurement set-up, such as probe or loading wiring. This will not affect the true ripple voltage reading.

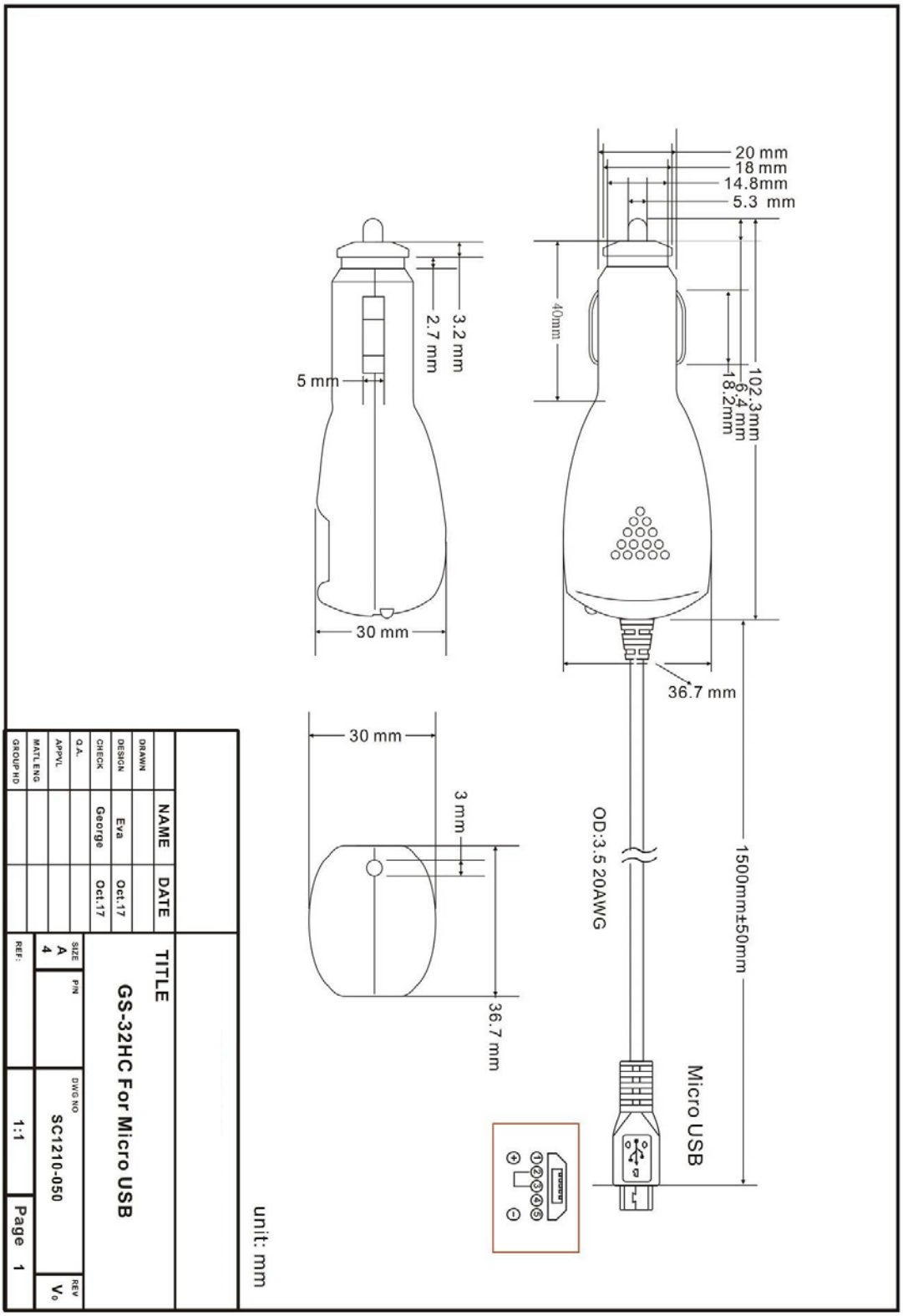
Condition：Input：12-24Vdc
Output：Load at 2000mA (E-Load at resistive mode)
Specification：peak-to-peak voltage should be less than 100mV

Connection Block Diagram：

Appendix： Connection diagram for ripple voltage measurement



A.


20 mm
18 mm
14.8mm
5.3 mm
40mm
102.3mm
6.4 mm
18.2mm
3.2 mm
2.7 mm
5 mm
30 mm
36.7 mm
30 mm
3 mm
36.7 mm
OD:3.5 20AWG
1500mm±50mm
Micro USB
unit: mm
TITLE
GS-32HC For Micro USB
DRAWN
DESIGN
CHECK
Q.A.
APPVL
MAT'L ENG
GROUP HD
NAME
DATE
Eva
Oct.17
George
Oct.17
SIZE
A4
DWG NO
SC1210-050
REV
V0
P/N
REF:
1:1
Page 1