

CAR12A

Technical Datasheet



Features

- Wide input voltage range from 9V to 32V
- Can be used in cars, trucks and aircraft
- 12W max. output power
- Compact design
- Non-standard output connectors available
- UL listed per UL60950

Applications

- Charging and operation of PDAs, GSM & GPRS navigation systems, payment terminals, portable DVD players etc. from automobile power supply

Specification

Input	
Voltage range	9 - 32VDC
Current	< 1.7A
Input power	< 15W
Standby current	typical 21mA @ 9V input typical 11mA @ 32V input
Input fuse	T3.15A (IEC127)
Protection	Reverse polarity

Output	
Voltage	5 – 8V, see ordering information for details
Current	< 2.4A, see ordering information for details
Power	< 12W
Initial set tolerance	±3% max.
Load regulation ⁽²⁾	-4% max.
Line regulation	±1% max.
Ripple & Noise ⁽³⁾	< 120mV _{pk-pk}
Current Limit	Constant Current Tolerance < ±5% ⁽⁴⁾
Protection	Short circuit Over temperature shutdown

Environmental	
Cooling	convection cooled
Temperature	Operating: -20°C to 40°C Non-operating -40°C to 85°C
Altitude	Operating: 1060hPa to 795hPa -382m to 2000m Non-operating: 1060hPa to 572hPa -382m to 4570m
Humidity	5 to 95% r.H., non-condensing

General	
Input connector	<u>Car/Truck (CT) Version:</u> Cigarette lighter and ISO4165 connector <u>Car/Truck/Air (CTA) Version:</u> Cigarette lighter, ISO4165 and ARINC628 In-Seat Power Connector
Efficiency ⁽⁵⁾	typical 80% at 100% load
MTBF	> 100000h per MIL-HDBK217F
Green procurement	RoHS2002/95/EC WEEE 2002/96/EC
Indicator	LED (green)

Safety & EMC		
Safety standards	Europe USA / Canada International	EN60950 UL60950 / CSA C22.2 No. 60950 IEC60950
Electromagnetic Emissions	Europe USA International Airborne equipment	EN55022, level B FCC15 class B CISPR 22, level B RTCA/DO-160E, Section 21
Electromagnetic Immunity	ESD immunity Radiated immunity EFT / Burst Surge Conducted Immunity Power Frequency Magnetic Fields Airborne equipment	IEC61000-4-2, 4/8kV, performance criteria B IEC61000-4-3, 3V/m, performance criteria A IEC61000-4-4, 1kV, performance criteria B IEC61000-4-5, 1kV, performance criteria B IEC61000-4-6, 10V, performance criteria A IEC61000-4-8, 1A/m, performance criteria A RTCA/DO-160E, Section 20
Regulatory approvals	Europe USA/Canada	e13 per directive 95/54/EC CE EMC directive Low Voltage 73/23/EEC EMC 89/336/EEC Applied standard(s) EN60950 EN55024 cULus per UL60950 and CSA C22.2 No. 60950

Mechanical Details	
Housing dimensions (LxWxH)	60.5 x 40.5 x 28mm, without cables and strain reliefs
Input cable length	approx. 1m
Output cable length	approx. 1m
Weight	146g (CTA version), 135g (CT version). Weight also depends on output connector type.

Notes

1. Ambient temperature $T_A = 20^\circ\text{C}$ unless otherwise noted. Datasheet subject to change without notice.
2. Load regulation is measured at the output connector and includes the voltage drop across the output cable.
3. Measured with a $0.1\mu\text{F}$ ceramic and a $47\mu\text{F}$ tantalum capacitor across the output terminals. The oscilloscope bandwidth is set at 20MHz a co-axial cable will be used to measure it. The test condition is maximum load.
4. Total regulation tolerance includes initial set accuracy, line and load regulation
5. Power losses of input and output cables are not considered here.

Ordering Information

Product code	Voltage	Current	Input connector	Customer Code
CAR12A	XXX	YYY	- CT / CTA	- CC
XXX	Output voltage in tenths of a volt (XXX times 0.1V gives the nominal output voltage)			
YYY	Output current in hundredths of an ampere (YYY times 0.01A gives the nominal output current)			
CT / CTA	Car/Truck or Car/Truck/Air input connector			
CC	RRC reserved			

Germany / Headquarters	France	USA	Hong Kong / China
RRC power solutions GmbH Technologiepark 1 D-66424 Homburg / Saar	RRC power solutions SAS 4, rue de Charenton 2/3/4, Quai Blanqui F-94140 Alfortville	RRC power solutions Inc. 19713 Yorba Linda Blvd. #207 Yorba Linda, CA 92886-3532	RRC power solutions Ltd. 9/F Park Tower, 15 Austin Road Tsim Sha Tsui, Kowloon, Hong Kong
Tel.: +49 0 6841 9809-0 Fax: +49 0 6841 9809-280 E-Mail: sales@rrc-ps.de	Tel.: +33 0 1 3005 6100 Fax: +33 0 1 3005 6101 E-Mail: france@rrc-ps.com	Tel.: +1 714 777 3604 Fax: +1 714 777 3658 E-Mail: usa@rrc-ps.com	Tel.: +852 0 2376 0106 Fax: +852 0 2376 0107 E-Mail: hkrrc@rrc-ps.cn