RECTIFIER TECHNOLOGIES

More Than Just Reliable Power Supplies

Business Outlook

RECTIFIER TECHNOLOGIES LTD (RFT)

Annual General Meeting 2022

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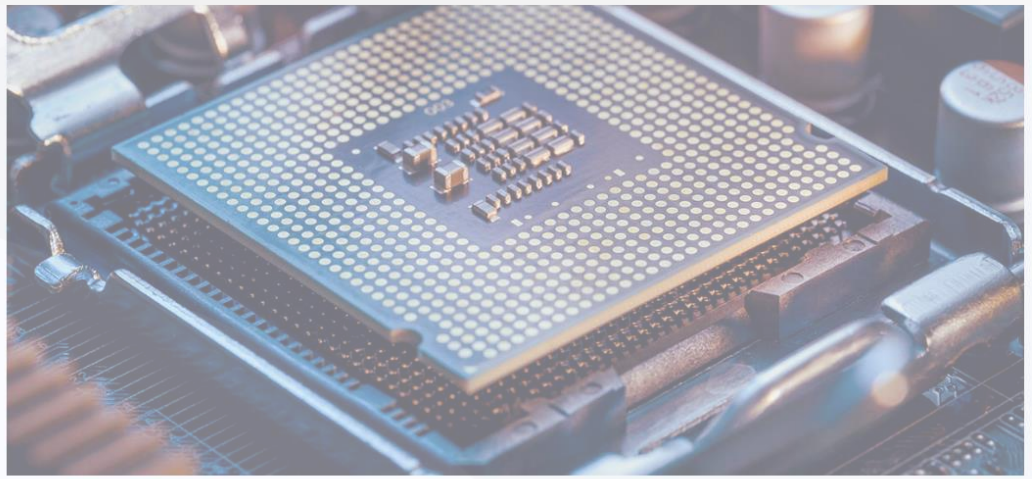
Component Shortages

Chip demand declines – shortages in the automotive industry remain

Market news | November 16, 2022

By Christoph Hammerschmidt

- Too much of some, too few of others.
- Not fully recovered but showing some signs of recovery.
- Affects margins and delivery time.
- Strengthening RT supply chain –
  - ❑ Qualifying suitable substitute components
  - ❑ Supply chain manager (recent hire)
  - ❑ Component engineer (advertised)



IC Market Repeats History While Auto and Chipmakers Work to Break the Cycle - November 25, 2022

https://www.sourcengine.com/blog/electronic-component-shortages-update
https://www.eenewseurope.com/en/chip-demand-declines-shortages-in-the-automotive-industry-remain/

Order Books and Production Capacity

- Booked orders have increased.
  - 09 Feb 2022 – USD20M (Tritium)
  - 16 Nov 2022 – USD22M (i-Charging)
- Planned factory modifications to facilitate increased orders.
  - Additional equipment and test stations
  - At present 140 staff members in RTM -
    - 180 by end of 2022
    - 205 (by June 2023) and more.....
  - Leased one additional warehouse
- No anticipated production capacity constraints.

RT22 50kW Charger Module

- IN PRODUCTION. Volume orders received, mass production in progress.
- Scaling up RTM (production facility) to support this increase.
- External Certification – UL 2202 completed, other certifications in progress.
- Component shortages impeding product sample build up in-spite of promising market response. Purchase order fulfilment is prioritised.

About RT22

High operating efficiency 96% .

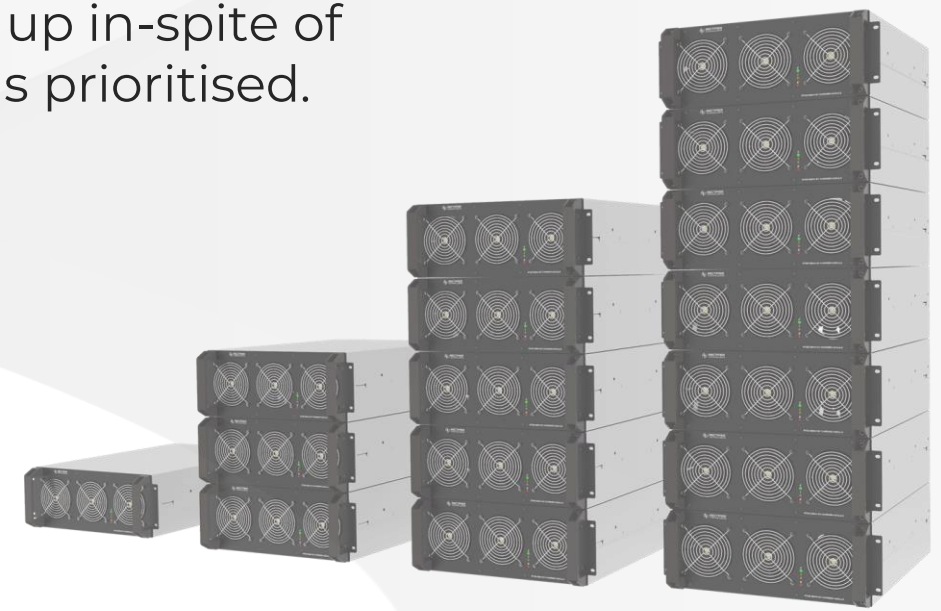
Wide output voltage range + uninterrupted output slope.

Made to Last. Improved product lifetime by using plastic capacitors.

Built in reactive power control for VDE–AR-N 4100 grid compatibility.

50kW sized for high power charging.

Getting ready for megawatt charging (MCS).



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Megawatt Charging System

Rectifier Technologies is a core-member of CharIN and contributes to the Megawatt Charging System task force.

Megawatt chargers are spec-ed up to 3000kW(3MW)

Most high-powered chargers today go up to 350kW.

1250VDC or 1500VDC 🤔

Includes bidirectional charging

We're gearing up for this !

The CharIN Task Force "Megawatt Charging System (MCS)" was formed with the **following Purpose Statement:**

"Work out requirements for **a new commercial vehicle high power charging solution** to maximize customer flexibility when using fully electric commercial vehicles. The scope of the technical recommendation is to be limited to the connector, and any related requirements for the EVSE, the vehicle, communication, and related hardware."

CHARIN

https://www.charin.global/technology/mcs/

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Bidirectional Charging

"The Future of the Grid" on "*What Innovations Do We Need to see for V2G?* "

1. Trials and standardisation underway.
2. Useful resource to help support grid load.
3. Still too early for large scale commercialisation.

Highbury DC – Status

1. Supply Equipment Control Card (SECC) still in development.
2. Other product developments to be prioritized.
3. Highbury DC was exhibited at EVS35 (Oslo, Norway).
4. Competitors shared similar views on the topic of bidirectional charging.

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Project RT21

Project code – RT21

Application – Defense industry

10kW modular power-supply unit

690VAC AC input and high-efficiency

Year of project commencement - 2021

Expected commercialisation – 2023/2024

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Other Activities

RT22 Campaign

- 2 x Product videos on YouTube & other social media.
- Featured on YouTube channel ‘Smart Energy Lab’ (*out soon*).
- Exhibited at EVS35 Oslo, Norway.
- iAwards Finalist (Technology Category).

Exhibitions & Conferences

- Attended EVS35 Oslo Norway.
- Spoke at Move Asia, discussing V2G.
- Spoke at The Future of the Grid conference.

Brand Audit

- 9 month brand audit exercise with a brand agency.
- Customers and employees were surveyed.
- New website developed.

https://youtu.be/Z45hdEnzmaI

https://youtu.be/HeOVCGjUfkM

Thank you...