

Ness Ziona, Israel

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VisIC introduces its most efficient 7.2kW bidirectional Totem Pole PFC reference design

D³GaN power switch solution for automotive provides the best performance and cost-effective solution for high power On-Board-Chargers

VisIC Technologies Ltd. is proud to announce its new reference design for Totem Pole PFC aimed at OBC for electric vehicles. This reference design is another step in the ongoing effort to support our customers and improve the power conversion systems to fit the demanding size, cost, and efficiency targets for the automotive market.

Today on-board-chargers embrace the bidirectional requirements of the V2G and G2V by using new topologies such as the Totem Pole PFC.

The new reference design from VisIC is aimed at the higher power segment of 7.2kW with increased efficiency, size, and cost structure.



The 7.2kW bidirectional Totem Pole PFC



VisIC Top cooled V22TC65S1A GaN devices

Based on the VisIC V22TC65S1A 22mohm, 650V, 100A GaN device that is optimized for PFC stage, the design requires a single device per leg and achieves a power density above 130W/inch³ or 8kW/L, operating at 140kHz without paralleling GaN devices and giving an efficiency above 98%.



The reference design kit includes everything needed to operate the unit in both PFC and inverter modes, from the on-board firmware on MCU to the coldplate for high power operation, as well as all the design files.

About VisiC Technologies:

Based in Israel, VisiC Technologies Ltd. was established by experts in Gallium Nitride (GaN) technology to develop and market advanced GaN-based power conversion products. VisiC has successfully developed and is bringing to market high power GaN-based transistors and modules. (GaN is expected to replace most Silicon-based (Si) products currently used in power conversion systems). Its high efficiency and reliable products are designed for high power conversion for hybrid and electric vehicles, Datacenters, renewable energy, and industrial motors. VisiC has been granted keystone patents for GaN technology and has additional patents pending.

For more information about VisiC Technologies, please visit www.visic-tech.com and [LinkedIn](#)

