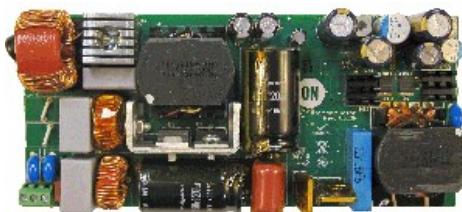




NCP1397GANGEVB: High Performance Integrated High Voltage Driver Evaluation Board

The NCP1397GANGEVB reference design provides a 12 V/20 A power supply using Gallium Nitride (GaN) HEMTs as the switching devices. The front-end of the power converter converts a universal AC line to a 385 V dc bus while achieving near unity power factor. The second stage is a DC-DC stage that converts the 385 V DC bus to a 12 V output with a max rated load current of 20 A.



The Boost PFC stage employs ON Semiconductor's NCP1654 CCM controller. The second stage is an isolated DC-DC converter that converts the 385 V dc bus to a 12 V dc voltage output and employs ON Semiconductor's NCP1397 LLC controller. Synchronous rectification is achieved with the NCP4304 synchronous controller on the secondary side to improve efficiency. The NCP432 is utilized in the feedback path to regulate the output voltage. The board utilizes GaN HEMTs as the switching devices in both the PFC stage and in the primary side of the LLC stage.

Evaluation/Development Tool Information

Product	Status	Compliance	Short Description	Parts Used	Action
NCP1397GANGEVB	Active	Pb-free	High Performance Integrated High Voltage Driver Evaluation Board	NCP1397BDR2G , NCP1654BD200R2G , NCP4304BDR2G	» Contact Local Sales Office » Inventory

Technical Documents

Type	Document Title	Document ID/Size	Rev
Design Notes	Utilizing GaN HEMTs in an All-in-One Workstation Power Supply	DN05067/D - 534 KB	1
Eval Board: BOM	NCP1397GANGEVB Bill of Materials ROHS Compliant	NCP1397GANGEVB_BOM_ROHS.pdf - 163 KB	2
Eval Board: Gerber	NCP1397GANGEVB Gerber Layout Files (Zip Format)	NCP1397GANGEVB_GERBER.zip - 102 KB	0
Eval Board: Schematic	NCP1397GANGEVB Schematic	NCP1397GANGEVB_SCHEMATIC.pdf - 255 KB	0
Eval Board: Test Procedure	NCP1397GANGEVB Test Procedure	NCP1397GANGEVB_TEST_PROCEDURE.pdf - 111 KB	0
Video	High Performance Integrated High Voltage Driver Evaluation Board - NCP1397GANGEVB	WVD17504/D	

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