Title:	A grid-tied photovoltaic transformer-less inverter with reduced leakage current
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Published Journal Name:	IOP Conference Series: Earth and Environmental Science
Type of Publication:	Journal
Volume:	673 Issue 1
Publisher:	IOPSCIENCE
Publication Date:	02/03/2021
ISSN:	1755-1315
DOI:	10.1088/1755-1315/673/1/012016
URL:	https://iopscience.iop.org/article/10.1088/1755-1315/673/1/012016/meta
Other Related Info.:	Page 1-10, Scopus indexed

Abstract:

The importance of transformer-less inverters has been increased since these are highly efficient, less costly, reduced in weight compared to conventional inverters for PV systems connected to grid. This fact led researchers to propose various topologies of transformer-less inverters, which have been validated for only injection of real power towards grid. However, recently new regulation has been imposed by all international power regulatory agency is that these PV inverters integrated with grid should have the capability of handling flow of a certain quantity of reactive power. By considering this point, a noble topology of transformer-less inverter has been developed for grid integrated PV system. Unlike previous topologies during reactive power injection, the new topology does not face reverse recovery issues, which helps to enhance the efficiency of the proposed inverter by exploiting MOSFET switches. Moreover, leakage current becomes low by keeping the common mode (CM) voltage at input DC voltage's midpoint.