

Importance of Incorporating Silicon Fast Recovery Diodes and Silicon Carbide Schottkys in Rectifier Bridges

Power Semiconductors are quite often used in inverter applications with DC-Link. High switching frequencies generate harmonics and line distortion. It is important that electronic circuits in equipments reduce these influences to meet EMI filtering requirements according to EMI/EMC VDE and other international standards.

This noise level can be reduced by up to 10dB when the input rectifier bridges are configured with Fast Recovery Diodes ($T_{rr} = 100 \text{ nsec}$ to 200 nsec) as they enable faster turn off resulting in lower peak recovery currents compared to standard recovery normal rectifier diodes.

This noise level can be further reduced by approximately another 5dB when using rectifier bridges with Ultra Fast Recovery Diodes ($T_{rr} = 35 \text{ nsec}$) and still further when configured with Silicon Carbide Schottky Rectifier Diodes ($T_{rr} < 10 \text{ nsec}$).

These Fast, Ultra Fast Recovery Diodes and Silicon Carbide Schottky Rectifier Diodes result in much lower cost electronic circuits and equipment as the size of the EMI filter networks with its bulky capacitors and inductors is substantially reduced.

The trend today is to replace normal rectifier bridges with Fast, Ultra Fast and Silicon Carbide Schottky Rectifier Bridges to make more compact and lower cost equipment. These are now available for both Single and Three Phase AC use.

The metal housing of Modular Rectifier Bridges is preferred over plastic housing bridges as the cost of heatsink is further reduced or eliminated. Our 25 Amp and 35 Amp Bridges offer up to 5.0 Amp and 8.0 Amp respectively in free air at ambient temperatures up to 45° C .

Metal Case Fast, Ultra Fast and Silicon Carbide Schottky Rectifier Bridges are the clear choice of circuit designers today.

Manufactured by:



SSE[®]



SOLID STATE ELECTRONICS CO. P. LTD.

9/123, Marol Co-op. Industrial Estate, P O Box 7432

Marol Sagbaug, Andheri (East), Mumbai 400 059

Tel: +91 - 22 - 2850-3986 / 2850-8653

Fax: +91 - 22 - 2850 - 6214

Web: www.SolidStateIndia.com



E-mail: sales@SolidStateIndia.com

© Copyright 1985 - 2016. SSE[®]. All Rights Reserved.

TREND SETTERS IN POWER SEMICONDUCTORS