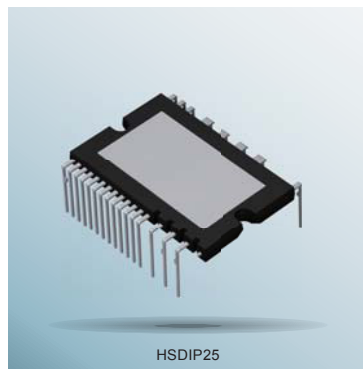


High Efficiency 600V/15A MOS IPM with PrestoMOS™

BM65364S-VA / BM65364S-VC



HSDIP25

Integrated high performance PrestoMOS™* contributes to increased energy savings in AC systems

Product Outline

With the trend towards increasing awareness for greater energy savings and environmental protection comes a need to minimize power consumption in AC systems, which is typically the largest consumer of energy in the home. More specifically, it is important to improve loss during steady state operation at low loads as well as large power loads to the IPM during AC startup. ROHM's BM65364S integrates a gate driver, bootstrap diodes, and bootstrap current control function into a single module that simplifies inverter system design along with a low ON resistance Super Junction MOSFET (PrestoMOS™) in the inverter block to achieve class-leading power consumption and significant energy savings - particularly during steady state operation

*PrestoMOS is a registered trademark of ROHM Co., Ltd.
(‘Presto’ is an Italian musical term meaning ‘extremely quick’.)

■ Modular design makes configuring inverter systems easy

Features

- PrestoMOS™ delivers class-leading ON resistance for greater energy savings (improved APF*)
- Simplifies the design of inverter systems
- Multiple protection functions provide worry-free use
- Pin-compatibility with ROHM's IGBT IPM allows for common board designs
- High quality system ensured through integrated production at the chip level

*APF (Annual Performance Factor)
Based on the energy consumption efficiency when operating a home AC system for an entire year

MOS-IPM Configuration

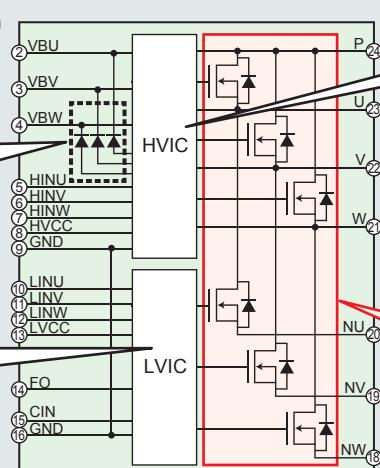
Bootstrap Diodes

Fast Recovery types
 $t_{rr}=80\text{ns}@0.1\text{A}$



LVIC (Low Side Gate Driver)

- Multiple protection functions
UVLO: Under Voltage Lock Out
SCP: Short-Circuit Protection
TSD: Thermal Shut Down
- Fault signal output



HVIC (High Side Gate Driver)

- 600V Gate driver
- SOI (Silicon-On-Insulator) process
- UVLO: Under Voltage Lock Out (Floating power supply)
- Bootstrap diode current limiting function



Inverter

- 600V/15A PrestoMOS™
- Low ON resistance
- Low VF high-speed trr body diode

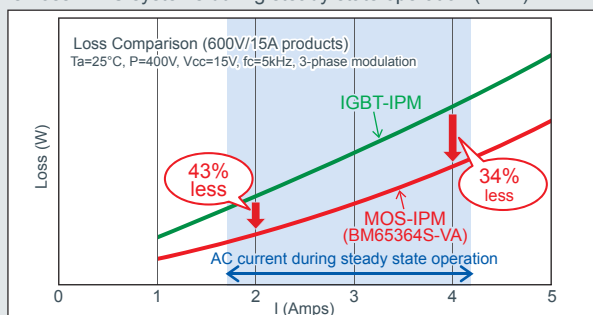


Gate drivers (LVIC, HVIC), bootstrap diodes, and a Super Junction MOSFET (PrestoMOS™) integrated into a single package

■ Reduces steady state loss

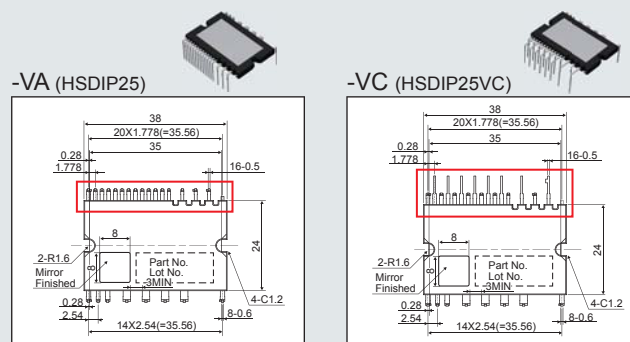
IGBT-IPM vs MOS-IPM Energy Loss Comparison

Compared to IGBT IPMs, ROHM's new MOS IPM significantly reduces power loss in AC systems during steady state operation (2-4A)



IGBT-IPM : IGBT used in the inverter block
MOS-IPM : MOSFET (PrestoMOS™) used in the inverter block

■ Offered in 2 package types



In addition to the standard HSDIP25 type, the HSDIP25VC package is available featuring staggered control pins that make dip soldering easier and provide better board isolation

The content specified herein is for the purpose of introducing ROHM's products (hereinafter "Products"). If you wish to use any such Product, please be sure to refer to the specifications, which can be obtained from ROHM upon request. Great care was taken in ensuring the accuracy of the information specified in this document. However, should you incur any damage arising from any inaccuracy or misprint of such information, ROHM shall bear no responsibility for such damage. The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM and other parties. ROHM shall bear no responsibility whatsoever for any dispute arising from the use of such technical information. If you intend to export or ship overseas any Product or technology specified herein that may be controlled under the Foreign Exchange and the Foreign Trade Law, you will be required to obtain a license or permit under the Law.

The content specified in this document is correct as of 30th March, 2015.