

• **Editorial-Chief**

Hideyuki Ichiyama

• **Editorial Advisors**

*Hisao Takahashi
Omi Kuriwaki
Daisuke Kashibuchi
Masayuki Sato
Hiroaki Sakai
Takahiro Otsuka
Tetsuo Kojima
Makoto Sato
Takao Ikai
Kunihiko Egawa
Mineo Okada
Keita Urayama
Eunjin Choi
Kazuki Yamanaka
Ryo Ikehara
Toshihiro Kurita*

• **Vol. 172 Feature Articles Editor**

Toru Matsuoka

• **Editorial Inquiries**

Hideyuki Ichiyama
Corporate Productivity Engineering &
Logistics Dept.
Fax: +81-3-3218-2465

Mitsubishi Electric Advance is published on line quarterly (in March, June, September, and December) by Mitsubishi Electric Corporation. Copyright © 2020 by Mitsubishi Electric Corporation; all rights reserved. Printed in Japan.

The company names and product names described herein are the trademarks or registered trademarks of the respective companies.

CONTENTS

Technical Reports

Overview1
by *Yukio Yasuda*

Development of SiC-MOSFET Chip Technology2
by *Masayuki Imaizumi*

Development of Wiring Technologies to Improve Power Module Performance5
by *Yoshihisa Uchida and Arata Iizuka*

2000 V Class IGBT Concept for Renewable Energy Converter ..9
by *Satoshi Miyahara and Masaomi Miyazawa*

Humidity Robustness Verification Test for HVIGBT Modules ..13
by *Kenji Hatori and Keichi Nakamura*

Development of Surface-mount IPM17
by *Shuhei Yokoyama and Shogo Shibata*

Precis

Mitsubishi Electric's power modules, which employ the latest chip and package technology, realize ideal power electronics systems thanks to their high quality, low loss, and excellent noise performance.