# ASDAK

Augmented Switching<sup>™</sup> Accelerated Development Kit Digital Programmable Gate Drivers

### **Unlock the Full Potential of SiC**

Microchip's Accelerated Silicon Carbide Development Kit includes the hardware and software elements required to rapidly optimize the performance of SiC modules and systems.

This new tool enables designers to adjust system performance through software upgrades using the AgileSwitch<sup>®</sup> Intelligent Configuration Tool (ICT) and a Device Programmer. No soldering required.

The ICT offers configuration of different drive parameters including on/off gate voltages, DC link and temperature fault levels and Augmented Switching™ profiles.

Small changes to the Augmented Switching profiles can yield dramatic improvements in switching efficiency, overshoot, ringing and short-circuit protection.



## Intelligent Configuration Tool – ICT

#### **Optimize with a Keystroke**

nt Configuration Tool	- 6
Core Settings	
Control Side Options	Gate Driver Options
Device Rating:	O 1700 V Gate Options
Gate Driver Reset: @Auto C	○ Controller LO Side Select: ○ CHI @ CH2
DC Link Voltage Pault:  On (	Colf Full On Gate Voltage Level (+Vgs): 15
Temperature Fault:   On (	O Off Full Off Gate Votage Level (-Vgs):v
	Non-isolated
Fault Output Active Level: Dlow	O High Normal Operation
Dead Time: 280 ms	Top-Level Turn-Off: @Enabled O Disabled
Auto Reset Time Delay: 5	🖞 ms Teorievel Tum-Off Voltage: 5.5 🗘 V
DC Link Fault Level 950	v Teo Level Turn Off Time: 400 ♀ ns
Temperature Fault Level: 25 °C	V DSAT Operation
Actions	Muti-Level Turn Off @Enabled Obsabled
Load Settings	Voltage Level/Blanking Time: ap v = 500 ps
Load settings	
Save Settings	
	First Turn-Off Time: 450
Compile	Second Turn-Off Voltage Level: g
Configuration Part Number	Second Turn-Off Time: 800
SOFT- 05010 -V 01 Assembly # Version #	
Comple	Fault Detection
compre	Under/Over-Votage Fault Detection: @Enabled ODisabled

Available for download at www.AgileSwitch.com/program.html

## **Each Kit Includes**

- 3× 2ASC Series Cores
- 1× Module Adapter Board
- 1× ASBK-014 Device Programmer Kit
- 1× ICT Software

## **Kit Part Numbers**

#### ASDAK-2ASC-12A1HP-62

- 3× 2ASC-12A1HP 1200V Core
- 1× 62CA1 1200V 62 mm Module Adapter

#### ASDAK-2ASC-17A1HP-62

- 3× 2ASC-17A1HP 1700V Core
- 1× 62CA4 1700V 62 mm Module Adapter

#### ASDAK-2ASC-12A1HP-SP6LI

- 3× 2ASC-12A1HP 1200V Core
- 1× SP6CA1 SP6LI Module Adapter

SiC Module Not Included

Most individual components may be ordered separately Programming Kit may differ from shown

## **Compatible SiC Manufacturers**



The Microchip name and logo, the Microchip logo and AgileSwitch are registered trademarks of Microchip Technology Incorporated in the U.S.A. and other countries. All other trademarks mentioned herein are property of their respective companies.
© 2020, Microchip Technology Incorporated. All Rights Reserved. 7/20
DS00003536A

**IPLAB** 



## www.microchip.com