

2SD300C17

SCALE™-2 IGBT Gate Driver Core

2SD300C17

Second Source Dual-Channel Driver Core.

Fully Pin and Function-Compatible.

PRODUCT DESCRIPTION

The 2SD300C17 SCALE™-2 dual-driver core is a second source solution and is fully pin and function-compatible. It targets high reliability applications.

The use of Power Integrations highly integrated SCALE™-2 chipset uses 63 % fewer components than other market available solutions.

This results in a significant improvement in reliability (both calculated MTBF and measured) and reduced costs. The 2SD300C17 combines a complete two-channel driver core with all components required for driving, such as an isolated DC/DC converter, short-circuit protection, failure soft shut down, short pulse suppression as well as supply voltage monitoring. Each of the two output channels is electrically isolated from the primary side and the other secondary channel.

The driver provides a gate voltage swing of ± 15 V. An output current of 30 A and 4 W drive power is available per channel.

Excellent EMC performance with a dv/dt strength of more than 50 V/ns allows safe and reliable operation even in demanding industrial applications.

APPLICATIONS

- Traction
- Solar
- Wind-power converters
- Medium-voltage converters/drives
- Motor drives
- IGBTs up to 1700 V

KEY BENEFITS

Pin compatible product with drastically reduced component count.

KEY FEATURES

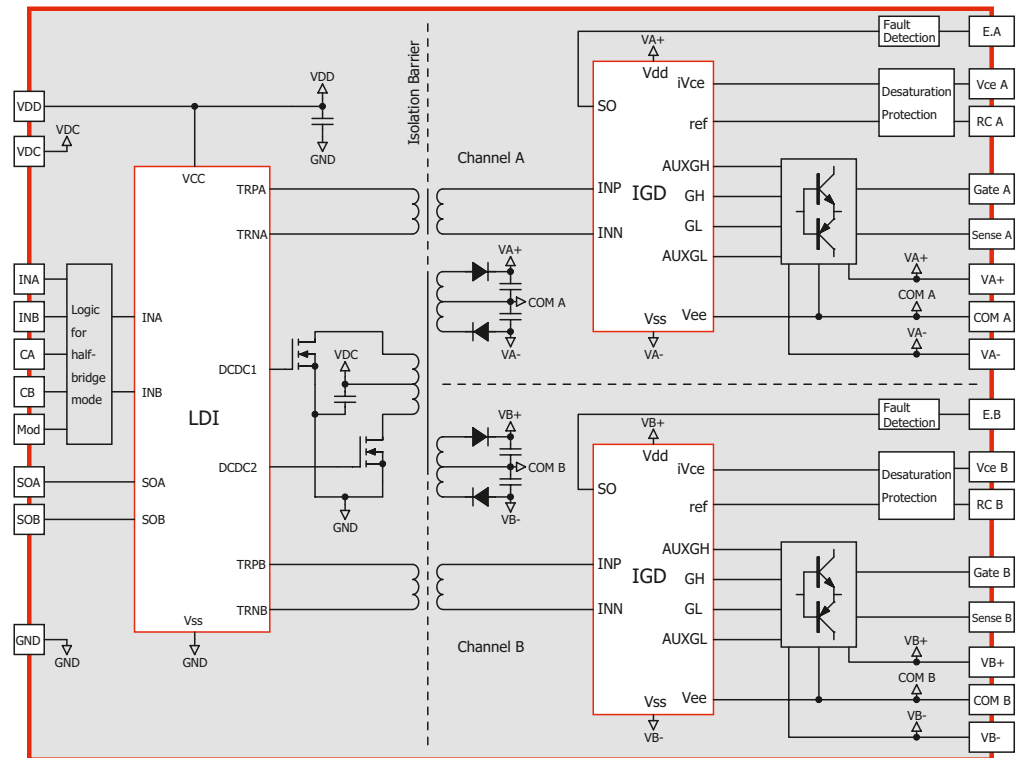
- Dual-channel driver core
- Second source solution
- Blocking voltages up to 1700 V
- Switching frequency up to 60 kHz
- Short pulse suppression 400 ns
- Delay time <700 ns
- Gate current ± 30 A
- Gate voltage ± 15 V
- 15 V logic interface
- Direct and half-bridge modes
- IGBT short-circuit protection
- Failure soft shut down
- Isolated DC/DC converter
- 2 x 4 W output power
- Supply under-voltage lockout

KEY DATA OVERVIEW

Parameter	Min	Typical	Max	Unit
Nominal supply voltage f_{IN}		15		V
Supply current @ f_{IN} 0 Hz		65		mA
Supply current @ f_{IN} 60 Hz		21		mA
Output power		4		W
Gate voltage		± 15		V
Peak output current (gate current)	-30		30	A
Switching frequency f_{IN} ¹⁾			60	kHz
Duty cycle	0		100	%
Turn-on delay		630		ns
Turn-off delay		490		ns
Operating temperature	-40		85	degC

¹⁾ Maximum switching frequency depends on the IGBT gate charge. See data sheet for actual value of specific driver

BASIC SCHEMATIC OF THE 2SD300C17



ORDERING INFORMATION 2SD300C17 SCALE™-2 GATE DRIVER CORE

	Type Designation	Description	Lead free
2SD300C17	2SD300C17A1	Standard Version	no
	2SD300C17A2	Lead free Version	yes