SKYPER 32/01 R

SKYPER®

IGBT Driver Core

Order Nr.: L6100103

SKYPER 32/01 R

Features

- Two output channels
- Integrated potential free power supply
- Under voltage protection
- Driver interlock top / bottom
- Dynamic short circuit protection
- Shut down input
- Failure management
- IEC 60068-1 (climate) 40/085/56, no condensation and no dripping water permitted, non-corrosive, climate class 3K3 acc. EN60721
- Coated with varnish

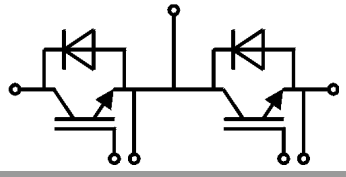
Typical Applications*

- Driver for IGBT modules in bridge circuits in industrial application
- DC bus voltage up to 1200V

Footnotes

with external high voltage diode
Please Note: the insulation test is not performed as a series test at SEMIKRON and must be performed by the user according to VDE 0110-20
can be expanded to 6,3µQ with boost capacitors

Isolation coordination in compliance with EN50178 PD2
Operating temperature is real ambient temperature around the driver core
Degree of protection: IP00



Driver Core

Absolute Maximum Ratings

Symbol	Conditions	Values	Unit
V_s	Supply voltage primary	16	V
V_{iH}	Input signal voltage (HIGH)	Vs + 0.3	V
V_{iL}	Input signal voltage (LOW)	GND - 0.3	V
$Iout_{PEAK}$	Output peak current	15	A
$Iout_{AVmax}$	Output average current	50	mA
f_{max}	Max. switching frequency	50	kHz
V_{CE}	Collector emitter voltage sense across the IGBT	1700	V
dv/dt	Rate of rise and fall of voltage secondary to primary side	50	kV/µs
$V_{isol\ IO}$	Insulation test voltage input - output (AC, rms, 2s)	4000	V
V_{isolPD}	Partial discharge extinction voltage, rms, $Q_{PD} \leq 10pC$	1500	V
V_{isol12}	Insulation test voltage output 1 - output 2 (AC, rms, 2s)	1500	V
$R_{Gon\ min}$	Minimum rating for external R_{Gon}	1.5	Ω
$R_{Goff\ min}$	Minimum rating for external R_{Goff}	1.5	Ω
$Q_{out/pulse}$	Max. rating for output charge per pulse	2.5	µC
T_{op}	Operating temperature	-40 ... 85	°C
T_{stg}	Storage temperature	-40 ... 85	°C

Characteristics

Symbol	Conditions	min.	typ.	max.	Unit
V_s	Supply voltage primary side	14.4	15	15.6	V
I_{S0}	Supply current primary (no load)		80		mA
	Supply current primary side (max.)			450	mA
V_i	Input signal voltage on / off		15 / 0		V
V_{IT+}	Input threshold voltage (HIGH)			12.3	V
V_{IT-}	Input threshold voltage (LOW)	4.6			V
R_{IN}	Input resistance (switching/HALT signal)		10		kΩ
$V_{G(on)}$	Turn on output voltage		15		V
$V_{G(off)}$	Turn off output voltage		-7		V
f_{ASIC}	Asic system switching frequency		8		MHz
$t_{d(on)IO}$	Input-output turn-on propagation time		1.1		µs
$t_{d(off)IO}$	Input-output turn-off propagation time		1.1		µs
$t_{d(err)}$	Error input-output propagation time	5.4		7.9	µs
t_{pRESET}	Error reset time		0.009		ms
t_{TD}	Top-Bot interlock dead time		3	4.3	µs
C_{ps}	Coupling capacitance prim sec		12		pF
w	weight		28		g
MTBF	Mean Time Between Failure		2.5		10^6h

This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, chapter IX.

***IMPORTANT INFORMATION AND WARNINGS**

The specifications of SEMIKRON products may not be considered as guarantee or assurance of product characteristics ("Beschaffenheitsgarantie"). The specifications of SEMIKRON products describe only the usual characteristics of products to be expected in typical applications, which may still vary depending on the specific application. Therefore, products must be tested for the respective application in advance. Application adjustments may be

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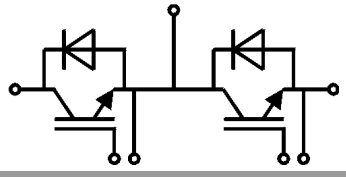

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