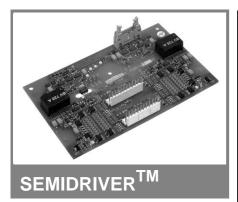
SKHI 27W ...



PCB IGBT Driver

SKHI 27W

Preliminary Data

Features

- Dual Driver Circuit for very high power IGBTs
- Suitable for all SEMIKRON IGBTs up to 1700 V
- · CMOS compatible input buffers
- Short circuit protection by V_{CE}-monitoring and slow turn off
- Drive interlock top/bottom
- · Isolation by transformers
- Supply undervoltage protection (13 V)
- Output connection monitoring by opto coupler
- Error latch/output
- Internal isolated power supply

Typical Applications

- Driver for IGBT and MOFET modules in bridge circuits, in choppers, inverter drives and SMPS
- High power UPS
- DC bus voltage up to 1200 V
- 1) The temperature range is only limited by the signal fibre optic cable.
- External gate input resitor has to be determined by the customer
 - -I _{outPEAK} per output = I_{outPEAK} / n (n: total number of outputs)
 - $I_{outPEAK}$ per output has to be considered, when fixing individual values of $R_{Gon(int)}$ and $R_{Goff(int)}$
 - Please note: (R_Gon(int) +R_Goff(int))/n \geq 1,1 Ω

Absolute Maximum Ratings						
Symbol	Conditions	Values	Units			
V_S	Supply voltage primary	18	V			
V_{iH}	Input signal voltage (HIGH)	V _S ± 0,3	V			
I _{outPEAK}	Output peak current	± 30	Α			
I _{outAVmax}	Output average current (max.; T _{amb} = 25 °C)	± 150	mA			
f _{max}	switching frequency (max.)	10	kHz			
Q _{out/pulse}	Max. rating for output charge per pulse	± 30	μC			
V _{CE}	Collector emitter voltage	1700	V			
dv/dt	Rate of rise and fall of voltage	75	kV/μs			
	(secondary to primary side)					
V _{isol IO}	Isolation test volt. IN-OUT (2 sec. AC)	4000	V			
T _{op}	Operationg temperature	- 25 + 85	°C			
T _{stq}	Storage temperature	- 25 + 85	°C			

Characteristics T _a = 25 °C, unless otherwise specified						
Symbol	Conditions	min.	typ.	max.	Units	
V _s	Supply voltage primary side	14,4	15	15,6	V	
Is	Supply current primary side (no load)		250		mA	
I _{so}	Supply current primary side (operation)			640	mA	
V_{iT+}	Input threshold voltage (HIGH)	12,9			V	
V_{iT-}	Input threshold voltage (LOW)			2,1	V	
V _{G(on)}	Turn-on gate voltage output		+15		V	
V _{G(off)}	Turn-off gate voltage output		- 8		V	
td(on) _{IO}	Input-output turn-on propagation time		1 + t _{TD}		μs	
td(off) _{IO}	Input-output turn-off propagation time		1		μs	
t _{TD}	Dead time		3		μs	
t _{pon-error}	propag. delay time - on error		6		μs	
t _{pRESET}	Min. pulse with error memory RESET		5		μs	
Ŕ _{in}	Input resistance		10		kΩ	
R _{Gon(int)}	Internal gate resistance R _{Gon(int)} per output ²⁾		1,1		Ω	
$R_{Goff(int)}$	Internal gate resistance R _{Goff(int)} per output ²⁾		1,1		Ω	
R_{GE}	Internal gate-emitter resistance		10		kΩ	
t _{d(err)}	Error input-output propagation time		1		μs	
V _{CEstat}	Reference voltage for V _{CE} -monitoring	5,3		6,3	V	
C _{ps}	Coupling capacitance primary-secondary		8,0		pF	
MTBF	Mean Time Between Failure T _a = 40°C		0,65		10 ⁶ h	
W	approx.		150		g	
HxBxT	Dimensions		200x120x27		mm	

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