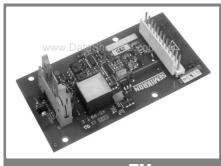
SKAI 100 E / U



SEMIDRIVER ΤM

Brake Chopper Driver

SKAI 100 E / U

Preliminary Data

Features

- Driver for dc link chopper circuits
- US Version (SKAI 100 U) and European Version (SKAI 100 E)
- Standard logic compatible input buffers
- Short circuit protection by V_{CE}
 Chopper frequency up to 5kHz
- Adjustable values for hysteresis and max. dc link voltage
- · Isolation by transformers Supply undervoltage protection (13 V)
- Available in standard SKiiPs and optional in standard modules
- External Reset possible

Typical Applications

DC link voltage controller

Absolute Maximum Ratings						
Symbol	Conditions	Values	Units			
Vs	Supply voltage primary	18	V			
V _{iH}	Input signal voltage (HIGH)	5 + 0,3	V			
I _{outPEAK}	Output peak current @ 10 µs	1,5	А			
I _{outAVmax}	Output average current (f _{sw} = 5 kHz)	90	mA			
f _{max}	switching frequency (max.)	5	kHz			
V _{CE}	Collector-Emitter voltage	1700	V			
dv/dt	Rate of rise and fall of voltage	50	kV/µs			
	secondary to primary side					
V _{isolIO}	Isol. test voltage input-output (2 sec. AC)	3500	V			
R _{Gonmin}	Minimum rating for R _{Gon}	1,5	Ω			
R _{Goffmin}	Minimum rating for R _{Goff}	1,5	Ω			
T _{op}	Operating temperature	- 25 + 85	°C			
T _{stq}	Storage temperature	- 40 + 85	°C			

Characteristics T _a = 25 °C, unless otherwise specified					
Symbol	Conditions	min.	typ.	max.	Units
V _S	Supply voltage primary side (regulated)	14,4	15	15,6	V
	Supply voltage primary side (unregulated)	20	24	30	V
I _{so}	Supply current primary side (no load)		67		mA
	Supply current primary side		77		mA
	(operation, f _{swmax} = 5 kHz)				
R _{GE}	Internal gate-emitter resistance		22		kΩ
t _{d(on)IO}	Input-output turn-on propagation time			20	μs
t _{d(off)IO}	Input-output turn-off propagation time			25	μs
t _{d(err)}	Error input-output propagation time		10		μs
t _{pERRRESET}	Error reset time		300		ms
	Input IGBT extern On (Open Collector)				
V _{iOn}	Chopper On @ I _{iOn} > 5 mA			5	V
V _{iOff}	Chopper Off @ I _{iOff} < 1 mA	11,5			V
	Input Error Reset (Open Collector)				
V _{iResetActive}	RESET active			2	V
V _{iResetNoAct}	RESET inactive	12			V
	Output IGBT				
V _{G(on)}	Turn-On Gate Voltage	13,8	14,5	15,2	V
V _{G(off)}	Turn-Off Gate Voltage			0,6	V
R _{Gon}	Gate On Resistance		15		Ω
R _{Goff}	Gate Off Resistance		15		Ω
Qout/pulse	max. rating for output charge per pulse			5	μC
	DC-Link voltage threshold (SKAI 100 E)				
V _{ChopperOn}	Chopper On	661	681	701	V
V _{ChopperOff}	Chopper Off	647	667	687	V
V _{ChopperError}	Chopper Error	725	730	735	V
	DC-Link voltage threshold (SKAI 100 U)				
V _{ChopperOn}	Chopper On	779	802	826	V
V _{ChopperOff}	Chopper Off	762	786	809	V
V _{ChopperError}	Chopper Error	854	860	866	V
θ _{Fault}	over temperature	110	115	120	°C
C _{ps}	Coupling capacity primary-secondary		12		pF
w	weight		44		g
ТхВхН	Dimensions		125x62x27		mm

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SKAI 100 E / U

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