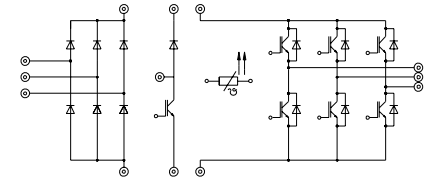


SKiiP 31 NAB 12 T11

Absolute Maximum Ratings			
Symbol	Conditions ¹⁾	Values	Units
Inverter	(Chopper see SKiiP 22 NAB 12 T18)		
V _{CEs}		1200	V
V _{GES}		± 20	V
I _C	T _{heatsink} = 25 / 80 °C	45 / 30	A
I _{CM}	t _p < 1 ms; T _{heatsink} = 25 / 80 °C	90 / 60	A
I _F = -I _C	T _{heatsink} = 25 / 80 °C	38 / 26	A
I _{FM} = -I _{CM}	t _p < 1 ms; T _{heatsink} = 25 / 80 °C	76 / 52	A
Bridge Rectifier			
V _{RRM}		1500	V
I _D	T _{heatsink} = 80 °C	35	A
I _{FSM}	t _p = 10 ms; sin. 180 °, T _J = 25 °C	700	A
I ² t	t _p = 10 ms; sin. 180 °, T _J = 25 °C	2400	A ² s
T _J		- 40 ... + 150	°C
T _{stg}		- 40 ... + 125	°C
V _{isol}	AC, 1 min.	2500	V

MiniSKiiP 3 SEMIKRON integrated intelligent Power SKiiP 31 NAB 12 T11 3-phase bridge rectifier + braking chopper 3-phase bridge inverter

Case M3



UL recognized file no. E63532

Options

- also available with powerful chopper. For characteristics please refer to Inverter IGBT

Characteristics					
Symbol	Conditions ¹⁾	min.	typ.	max.	Units
IGBT - Inverter					
V _{CEsat}	I _C = 30 A T _J = 25 (125) °C	-	2,5(3,1)	3,0(3,7)	V
t _{d(on)}	V _{CC} = 600 V; V _{GE} = ± 15 V	-	55	110	ns
t _r	I _C = 30 A; T _J = 125 °C	-	55	110	ns
t _{d(off)}	R _{gon} = R _{goff} = 39 Ω	-	400	600	ns
t _f	inductive load	-	45	90	ns
E _{on} + E _{off}		-	7,8	-	mJ
C _{ies}	V _{CE} = 25 V; V _{GE} = 0 V, 1 MHz	-	2,0	-	nF
R _{thjh}	per IGBT	-	-	0,7	K/W
IGBT - Chopper *					
V _{CEsat}	I _C = 15 A T _J = 25 (125) °C	-	2,5(3,1)	3,0(3,7)	V
t _{d(on)}	V _{CC} = 600 V; V _{GE} = ± 15 V	-	55	110	ns
t _r	I _C = 15 A; T _J = 125 °C	-	45	90	ns
t _{d(off)}	R _{gon} = R _{goff} = 82 Ω	-	400	600	ns
t _f	inductive load	-	70	100	ns
E _{on} + E _{off}		-	4,0	-	mJ
C _{ies}	V _{CE} = 25 V; V _{GE} = 0 V, 1 MHz	-	1,0	-	nF
R _{thjh}	per IGBT	-	-	1,4	K/W
Diode ²⁾ - Inverter (Diode ²⁾ - Chopper see SKiiP 22 NAB 12 T18)					
V _F = V _{EC}	I _F = 25 A T _J = 25 (125) °C	-	2,0(1,8)	2,5(2,3)	V
V _{TO}	T _J = 125 °C	-	1,0	1,2	V
r _T	T _J = 125 °C	-	32	44	mΩ
I _{RRM}	I _F = 25 A, V _R = - 600 V	-	25	-	A
Q _{rr}	di _F /dt = - 500 A/μs	-	4,5	-	μC
E _{off}	V _{GE} = 0 V, T _J = 125 °C	-	1,0	-	mJ
R _{thjh}	per diode	-	-	1,2	K/W
Diode - Rectifier					
V _F	I _F = 35 A T _J = 25 °C	-	1,2	-	V
R _{thjh}	per diode	-	-	1,6	K/W
Temperature Sensor					
R _{TS}	T = 25 / 100 °C		1000 / 1670		Ω
Mechanical Data					
M ₁	Mounting torque	2	-	2,5	Nm
Case			M3		

¹⁾ T_{heatsink} = 25 °C, unless otherwise specified

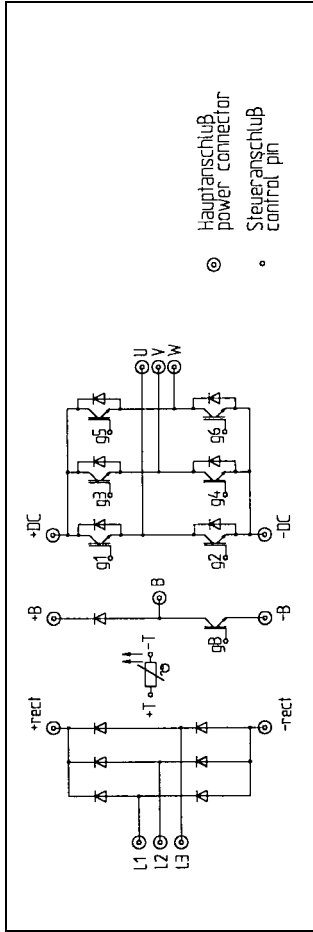
²⁾ CAL = Controlled Axial Lifetime Technology (soft and fast recovery)

* For diagrams of the Chopper IGBT please refer to SKiiP 22 NAB 12 T18

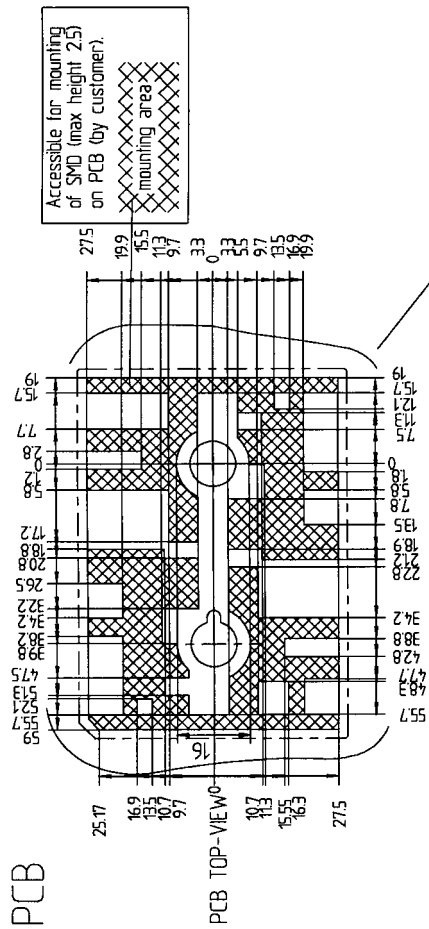
This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.

MiniSkiIP 3

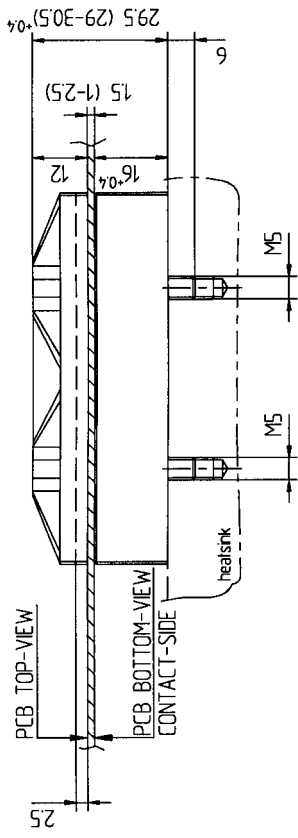
- SKiIP 30 NAB 12 T10
- SKiIP 31 NAB 12 T11
- SKiIP 32 NAB 12 T1



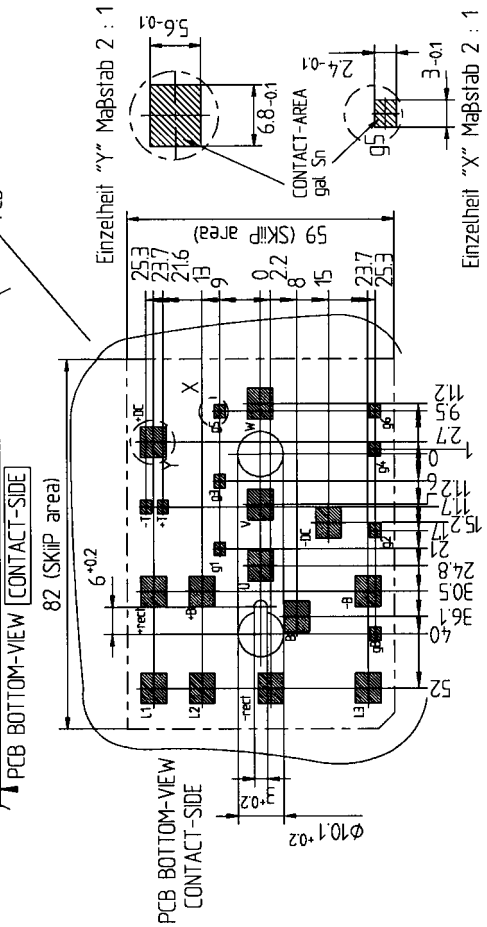
PCB



Mini-SkiIP 3



PCB TOP-VIEW PCB BOTTOM-VIEW CONTACT-SIDE



Bitte beachten Sie die
 Montagevorschrift
 For mounting please follow
 the assembly instruction

Tolerance: ISO 2768-f