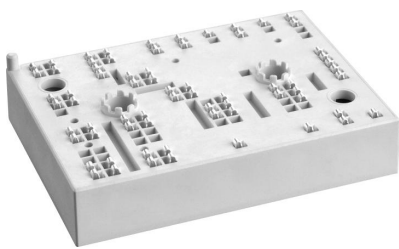


SKiiP 35NAB12T4V1



MiniSKiiP® 3

3-phase bridge rectifier +
brake chopper + 3-phase
bridge inverter
SKiiP 35NAB12T4V1

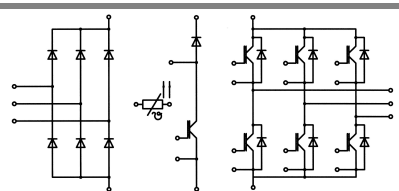
Target Data

Features

- Fast Trench IGBTs
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

Remarks

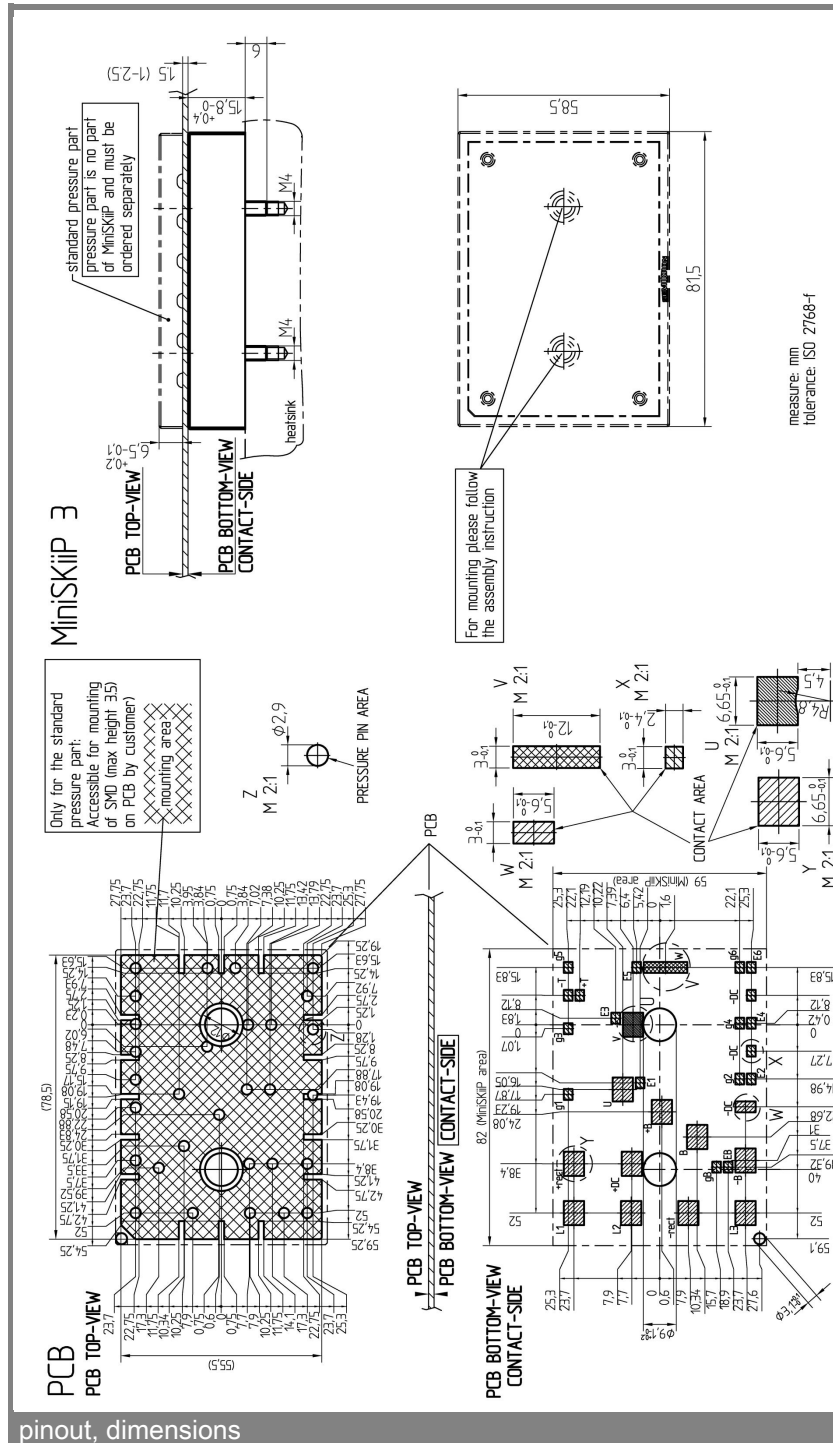
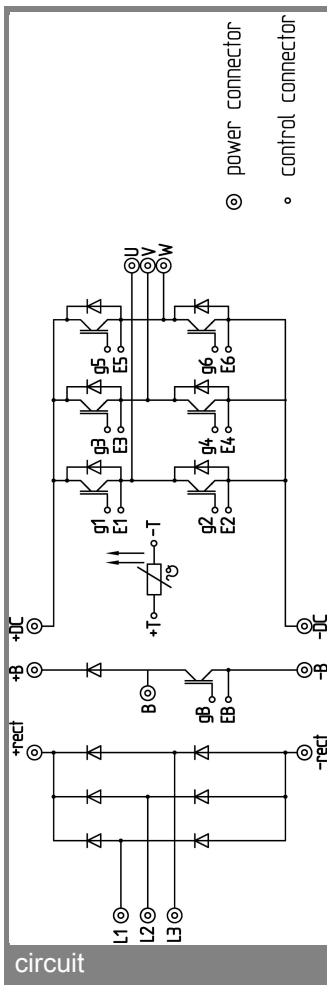
- V_{CEsat} , V_F = chip level value



NAB

Absolute Maximum Ratings		T _s = 25 °C, unless otherwise specified	
Symbol	Conditions	Values	Units
IGBT - Inverter, Chopper			
V _{CES}	T _s = 25 (70) °C t _p ≤ 1 ms	1200	V
I _C		72 (59)	A
I _{CRM}		150	A
V _{GES}		± 20	V
T _j		- 40 ... + 175	°C
Diode - Inverter, Chopper			
I _F	T _s = 25 (70) °C t _p ≤ 1 ms	56 (45)	A
I _{FRM}		150	A
T _j		- 40 ... + 175	°C
Diode - Rectifier			
V _{RRM}	T _s = 70 °C t _p = 10 ms, sin 180 °, T _j = 25 °C t _p = 10 ms, sin 180 °, T _j = 25 °C	1600	V
I _F		61	A
I _{FSM}		700	A
i ² t		2400	A²s
T _j		- 40 ... + 150	°C
I _{tRMS}		per power terminal (20 A / spring)	80
T _{stg}	T _{op} ≤ T _{stg}	- 40 ... + 125	°C
V _{isol}	AC, 1 min.	2500	V

Characteristics		T _s = 25 °C, unless otherwise specified			
Symbol	Conditions	min.	typ.	max.	Units
IGBT - Inverter, Chopper					
V _{CEsat}	I _{Cnom} = 50 A, T _j = 25 (150) °C		1,85 (2,25)	2,05 (2,45)	V
V _{GE(th)}	V _{GE} = V _{CE} , I _C = 2 mA	5	5,8	6,5	V
V _{CE(TO)}	T _j = 25 (150) °C		1,1 (1)	1,3 (1,2)	V
r _T	T _j = 25 (150) °C		15 (25)	15 (25)	mΩ
C _{ies}	V _{CE} = 25 V, V _{GE} = 0 V, f = 1 MHz		-		nF
C _{oes}	V _{CE} = 25 V, V _{GE} = 0 V, f = 1 MHz		-		nF
C _{res}	V _{CE} = 25 V, V _{GE} = 0 V, f = 1 MHz		-		nF
R _{th(j-s)}	per IGBT		0,65		K/W
t _{d(on)}	under following conditions		-		ns
t _r	V _{CC} = 600 V, V _{GE} = ± 15 V		-		ns
t _{d(off)}	I _{Cnom} = 50 A, T _j = 150°C		-		ns
t _f	R _{Gon} = R _{Goff} = - Ω		-		ns
E _{on}	inductive load		6		mJ
E _{off}			4		mJ
Diode - Inverter, Chopper					
V _F = V _{EC}	I _{Fnom} = 50 A, T _j = 25 (150) °C		2,25 (2,2)	2,55 (2,5)	V
V _(TO)	T _j = 25 (150) °C		1,3 (0,9)	1,5 (1,1)	V
r _T	T _j = 25 (150) °C		19 (26)	21 (28)	mΩ
R _{th(j-s)}	per diode		1,05		K/W
I _{RRM}	under following conditions		-		A
Q _{rr}	I _{Fnom} = 50 A, V _R = 600 V		-		μC
E _{rr}	V _{GE} = 0 V, T _j = 150 °C		3,75		mJ
	di _F /dt = - A/μs				
Diode - Rectifier					
V _F	I _{Fnom} = 35 A, T _j = 25 °C		1,1		V
V _(TO)	T _j = 150 °C		0,8		V
r _T	T _j = 150 °C		11		mΩ
R _{th(j-s)}	per diode		0,9		K/W
Temperature Sensor					
R _{ts}	3 %, T _r = 25 (100) °C		1000(1670)		Ω
Mechanical Data					
w			95		g
M _s	Mounting torque	2		2,5	Nm



These documents are Senkon property. Senkon reserves all copyrights. All copying and transmitting of this information requires written permission. For the case of industrial property rights, Senkon reserves all rights.

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

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