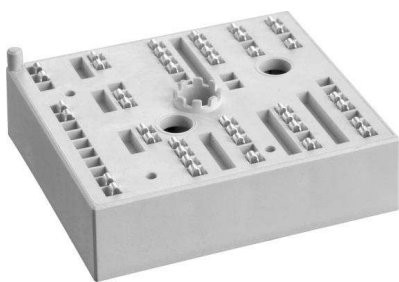


SKiiP 22NAB126V10



MiniSKiiP® 2

3-phase bridge rectifier +
brake chopper + 3-phase
bridge inverter

SKiiP 22NAB126V10

Features

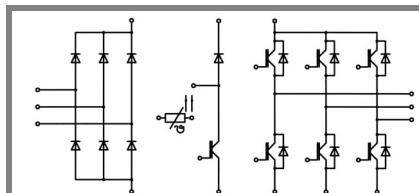
- Fast Trench IGBTs
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

Typical Applications*

- Inverter up to 10 kVA
- Typical motor power 5,5 kW

Remarks

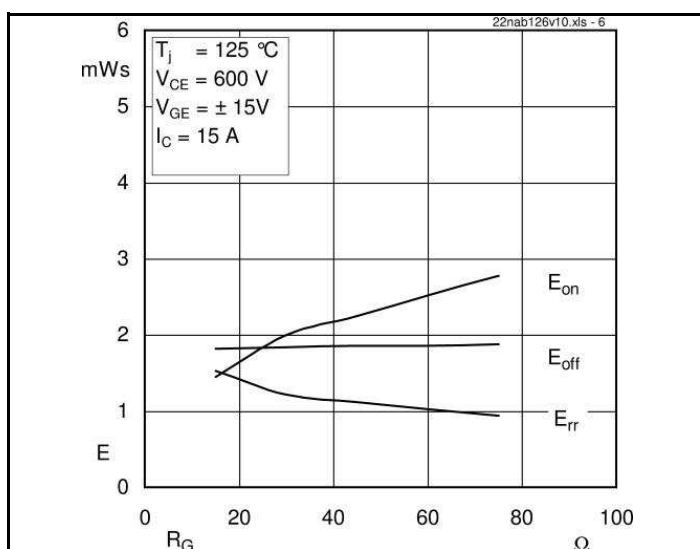
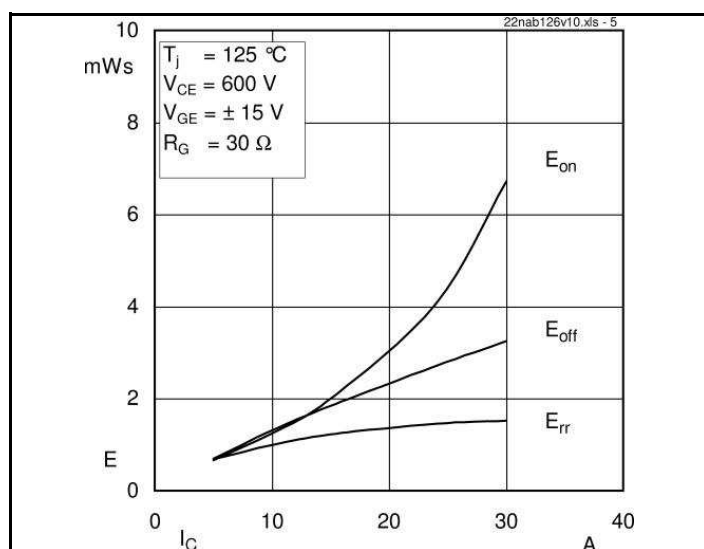
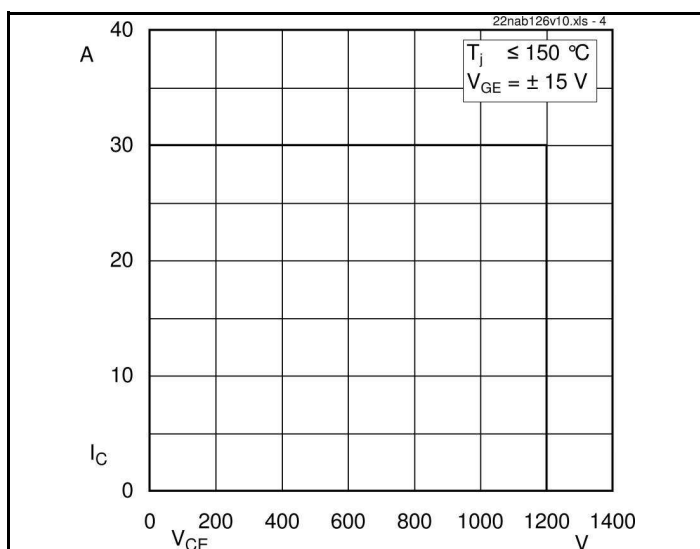
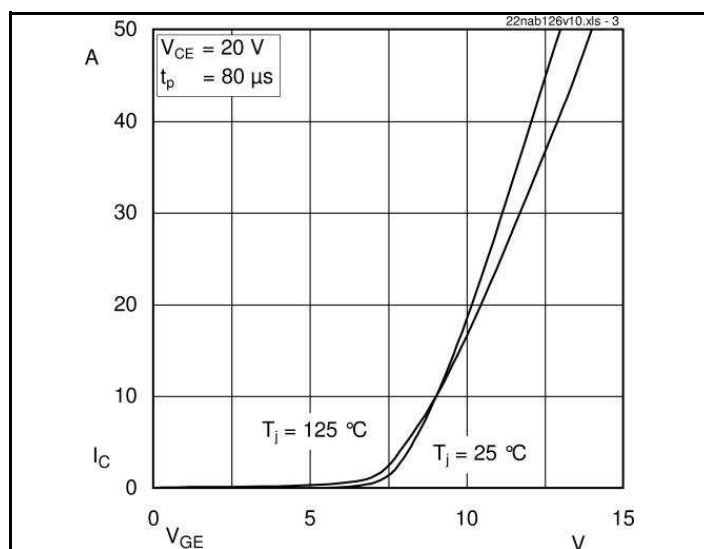
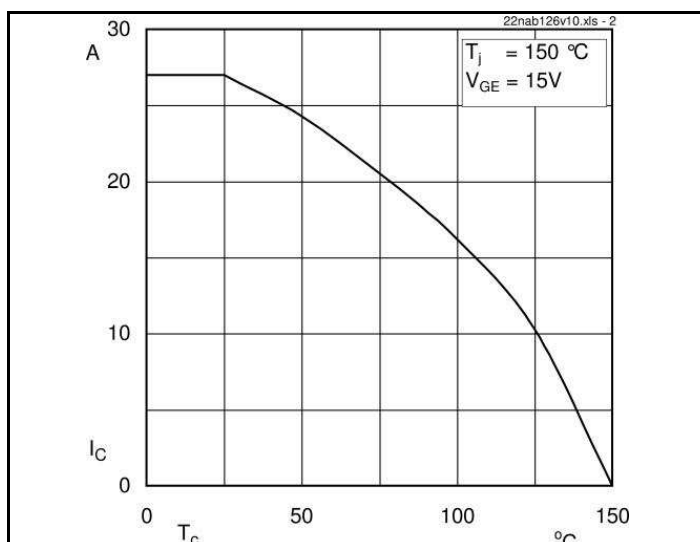
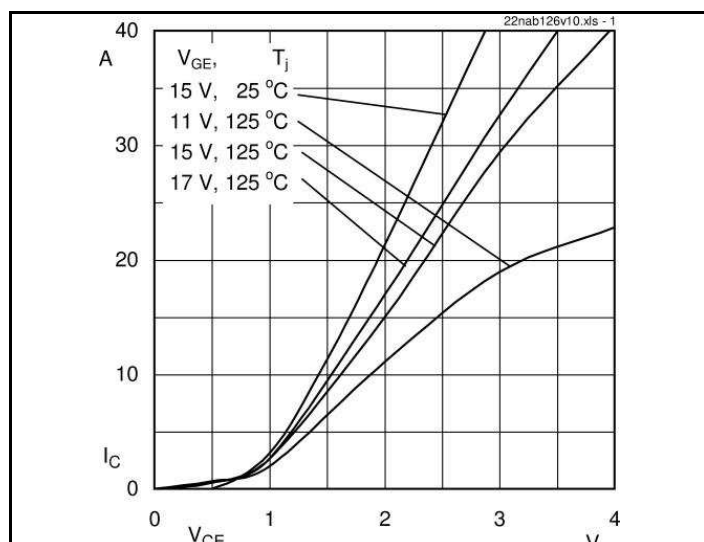
- V_{CEsat} , V_F = chip level value

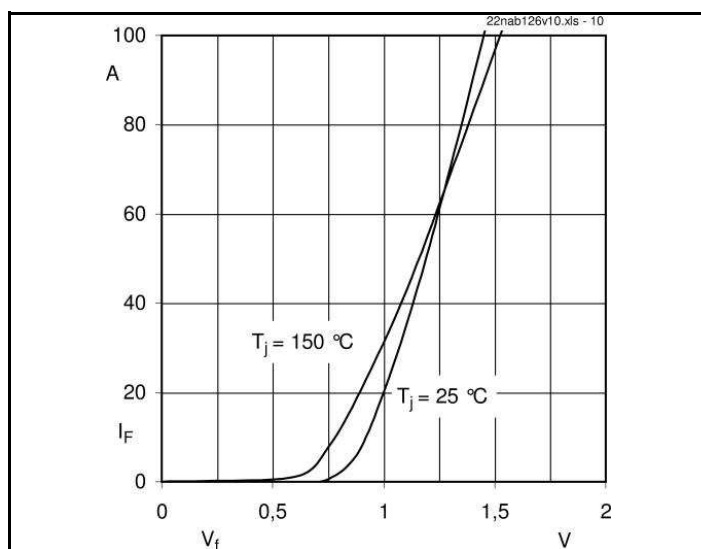
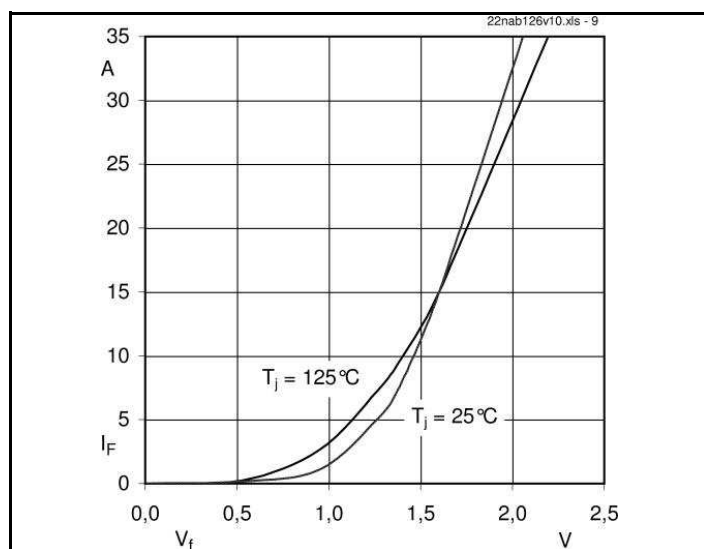
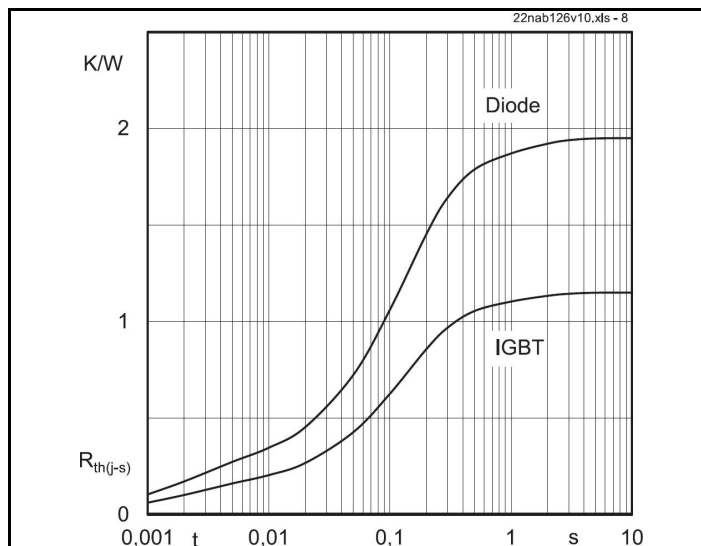
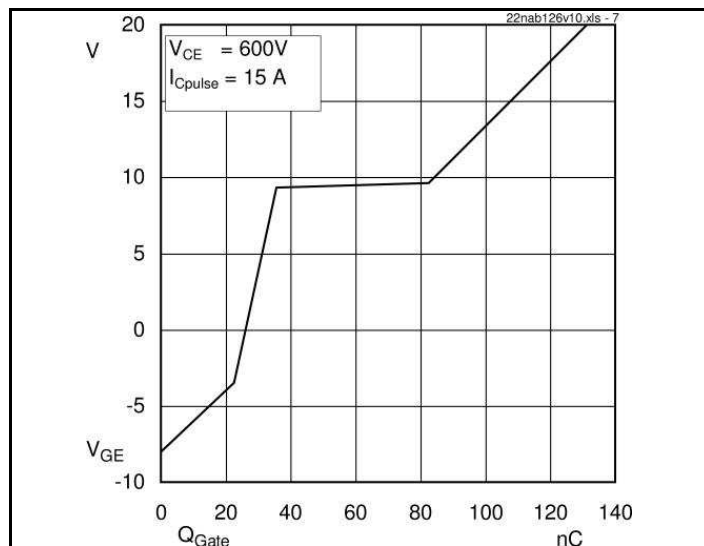


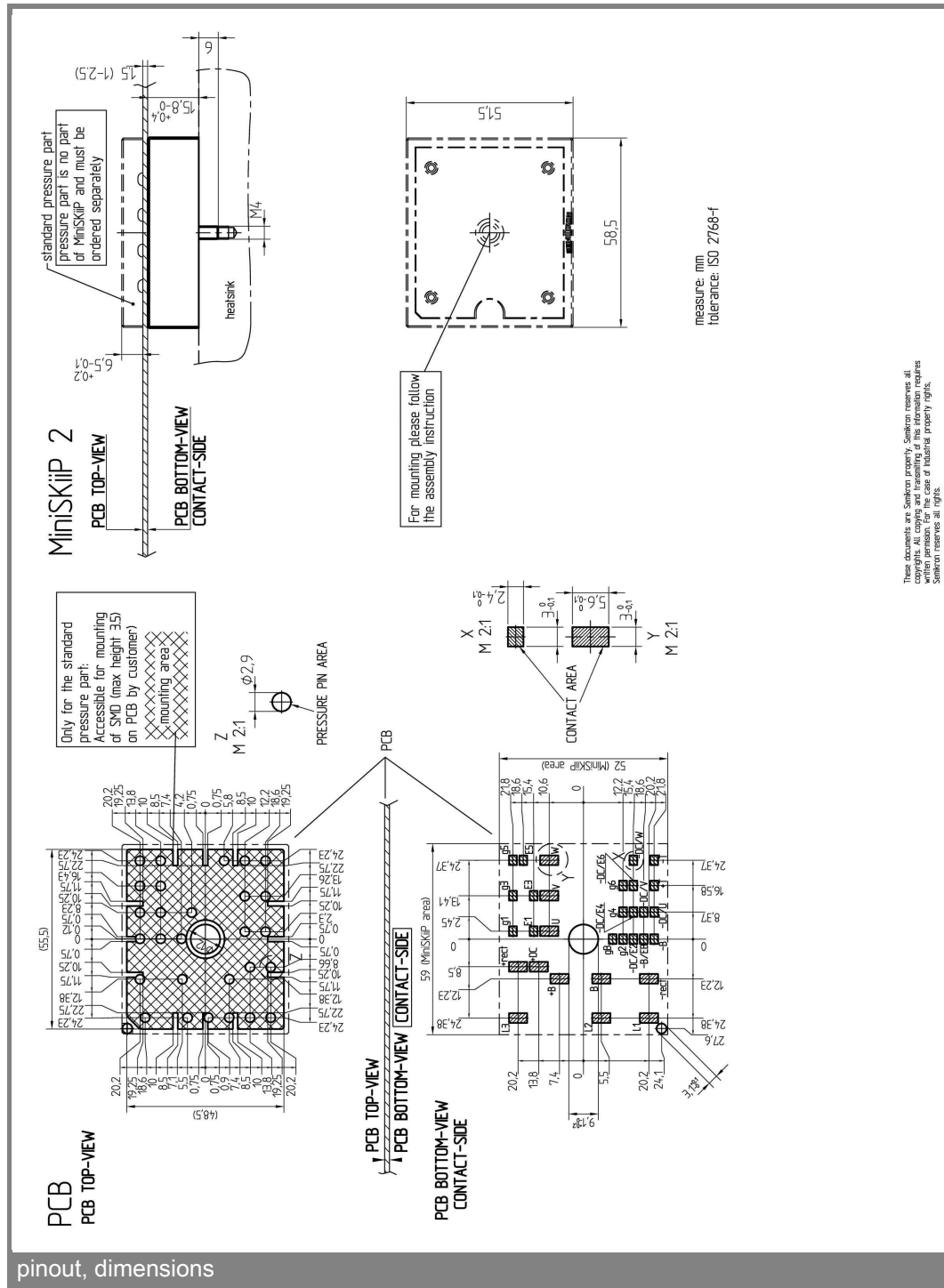
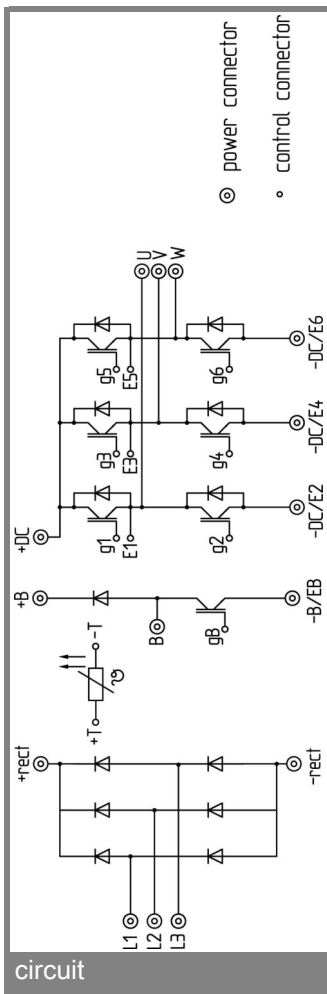
NAB

Absolute Maximum Ratings		T _s = 25 °C, unless otherwise specified	
Symbol	Conditions	Values	Units
IGBT - Inverter, Chopper			
V _{CES}	T _s = 25 (70) °C	1200	V
I _C		28 (22)	A
I _{CRM}		30	A
V _{GES}		± 20	V
T _j		- 40 ... + 150	°C
Diode - Inverter, Chopper			
I _F	T _s = 25 (70) °C	26 (20)	A
I _{FRM}		30	A
T _j		- 40 ... + 150	°C
Diode - Rectifier			
V _{RRM}	T _s = 70 °C	1600	V
I _F		61	A
I _{FSM}		700	A
i ² t		2400	A ² s
T _j		- 40 ... + 150	°C
Module			
I _{rRMS}	per power terminal (20 A / spring)	40	A
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} = 15 A, T _j = 25 (125) °C	5	1,7 (2)	2,1 (2,4)	V
V _{GE(th)}	V _{GE} = V _{CE} , I _C = 0,6 mA		5,8	6,5	V
V _{CE(TO)}	T _j = 25 (125) °C		1 (0,9)	1,2 (1,1)	V
r _T	T _j = 25 (125) °C		47 (73)	60 (87)	mΩ
C _{ies}	V _{CE} = 25 V, V _{GE} = 0 V, f = 1 MHz		1		nF
C _{oes}	V _{CE} = 25 V, V _{GE} = 0 V, f = 1 MHz		0,1		nF
C _{res}	V _{CE} = 25 V, V _{GE} = 0 V, f = 1 MHz		0,1		nF
R _{th(j-s)}	per IGBT		1,15		K/W
t _{d(on)}	under following conditions		25		ns
t _r	V _{CC} = 600 V, V _{GE} = ± 15 V		25		ns
t _{d(off)}	I _{Cnom} = 15 A, T _j = 125°C		385		ns
t _f	R _{Gon} = R _{Goff} = 30 Ω		90		ns
E _{on}	inductive load		2		mJ
E _{off}			1,9		mJ
Diode - Inverter, Chopper					
V _F = V _{EC}	I _{Fnom} = 15 A, T _j = 25 (125) °C		1,6 (1,6)	1,8 (1,8)	V
V _(TO)	T _j = 25 (125) °C		1 (0,8)	1,1 (0,9)	V
r _T	T _j = 25 (125) °C		40 (53)	47 (60)	mΩ
R _{th(j-s)}	per diode		1,95		K/W
I _{RRM}	under following conditions		25		A
Q _{rr}	I _{Fnom} = 15 A, V _R = 600 V		3		μC
E _{rr}	V _{GE} = 0 V, T _j = 125 °C		1,1		mJ
	di _F /dt = 900 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







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 necessary. The user of SEMIKRON products is responsible for the safety of their applications embedding SEMIKRON products and must take adequate safety measures to prevent the applications from causing a physical injury, fire or other problem if any of SEMIKRON products become faulty. The user is responsible to make sure that the application design is compliant with all applicable laws, regulations, norms and standards. Except as otherwise explicitly approved by SEMIKRON in a written document signed by authorized representatives of SEMIKRON, SEMIKRON products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury. No representation or warranty is given and no liability is assumed with respect to the accuracy, completeness and/or use of any information herein, including without limitation, warranties of non-infringement of intellectual property rights of any third party. SEMIKRON does not assume any liability arising out of the applications or use of any product; neither does it convey any license under its patent rights, copyrights, trade secrets or other intellectual property rights, nor the rights of others. SEMIKRON makes no representation or warranty of non-infringement or alleged non-infringement of intellectual property rights of any third party which may arise from applications. Due to technical requirements our products may contain dangerous substances. For information on the types in question please contact the nearest SEMIKRON sales office. This document supersedes and replaces all information previously supplied and may be superseded by updates. SEMIKRON reserves the right to make changes.