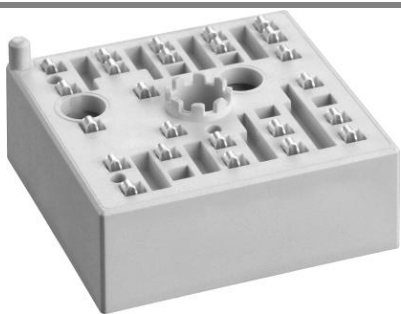


SKiiP 11NAB126V1



MiniSKiiP® 1

3-phase bridge rectifier +
brake chopper + 3-phase
bridge inverter
SKiiP 11NAB126V1

Features

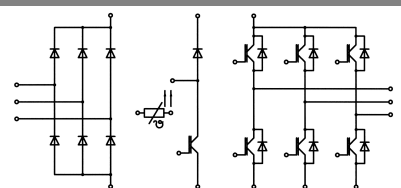
- Fast Trench IGBTs
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

Typical Applications

- Inverter up to 8 kVA
- Typical motor power 4 kW

Remarks

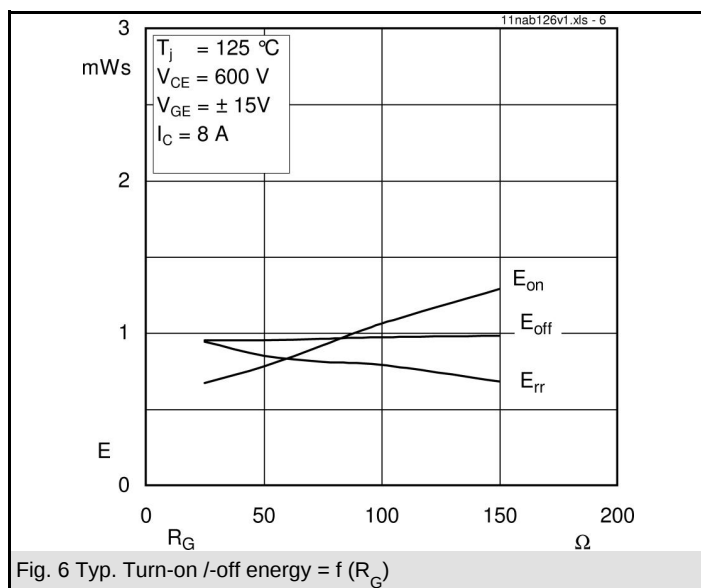
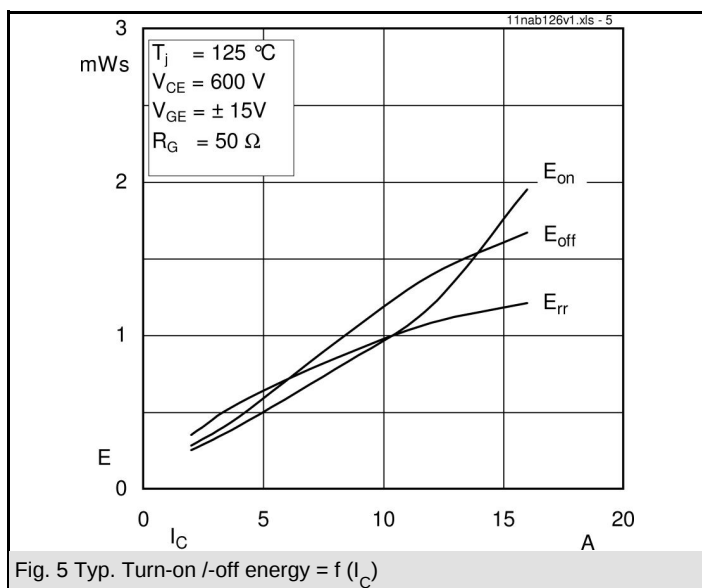
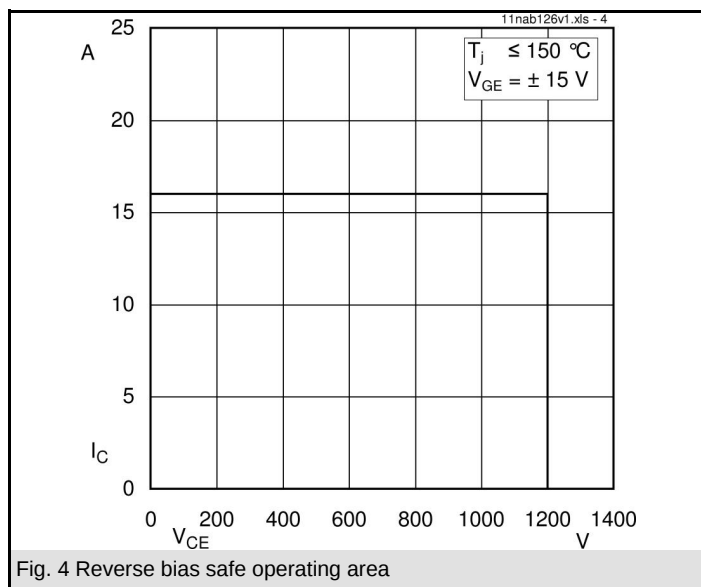
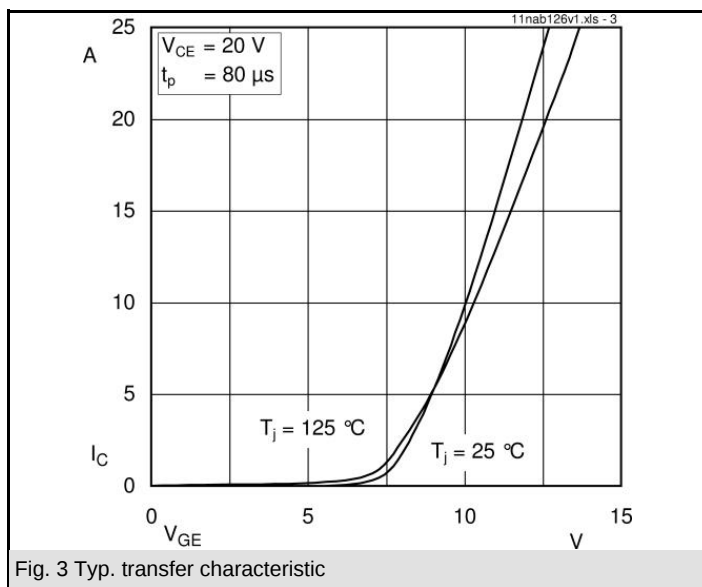
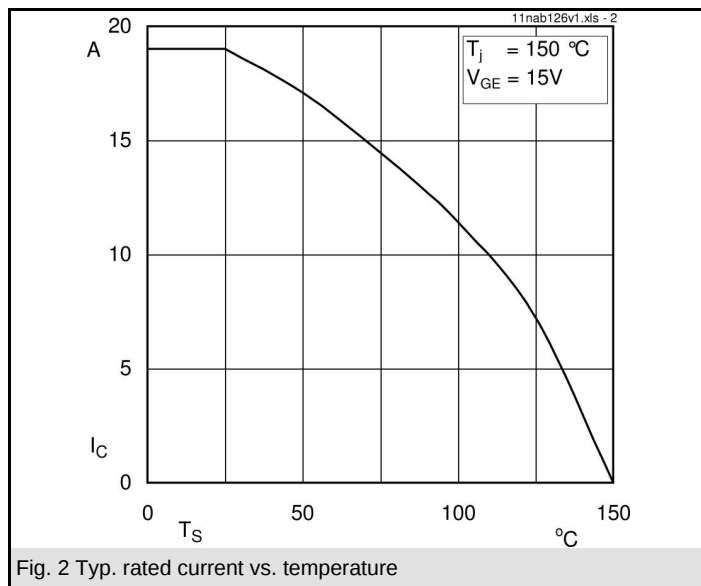
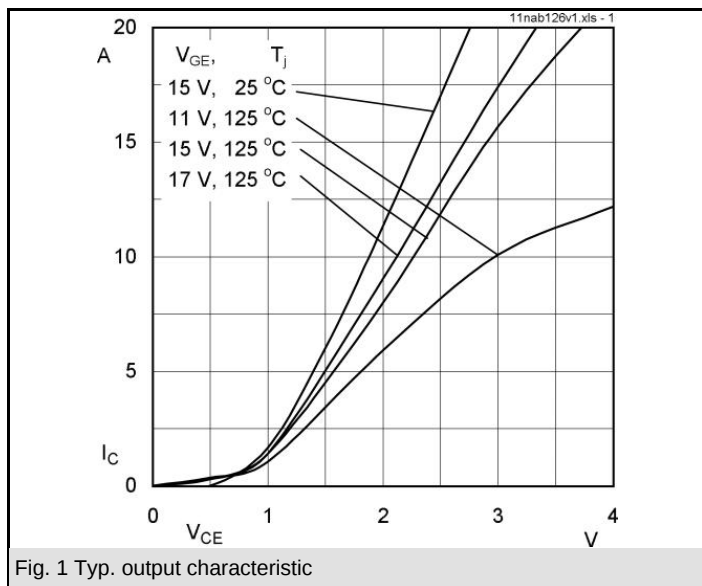
- V_{CEsat} , V_F = chip level value

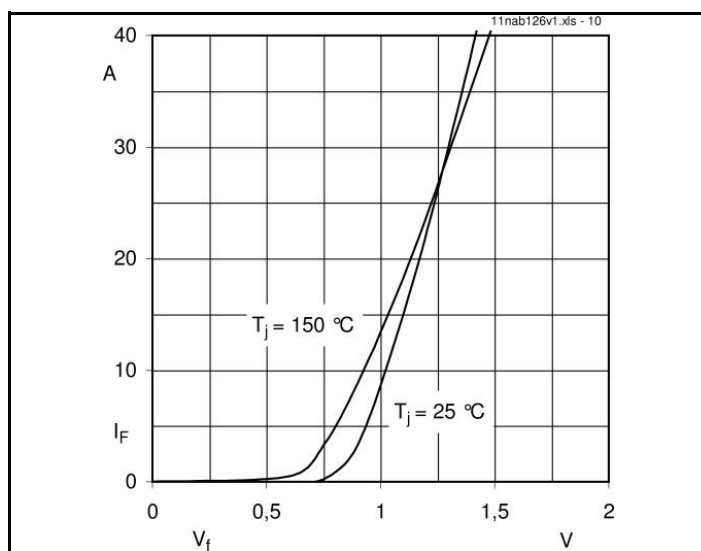
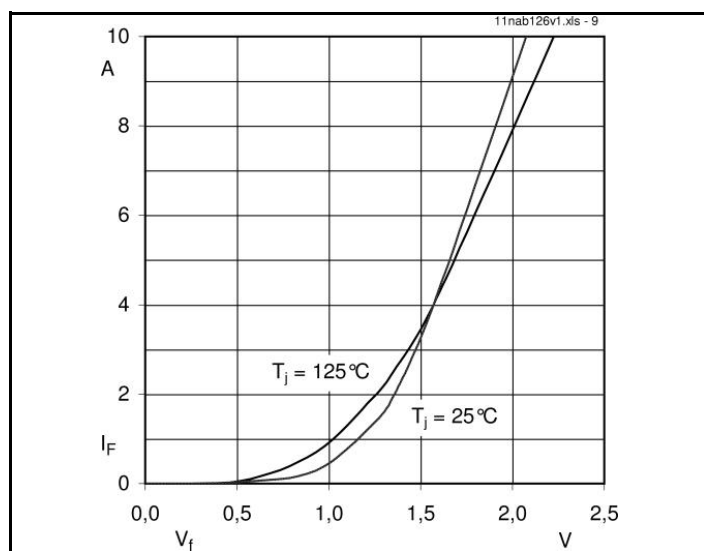
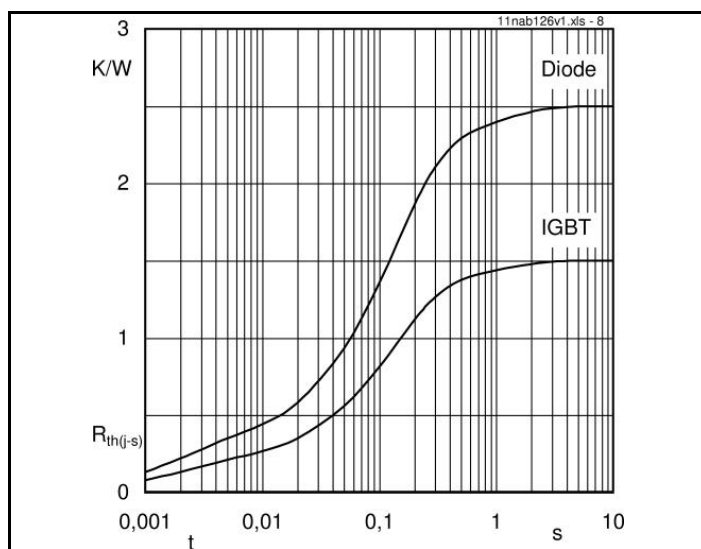
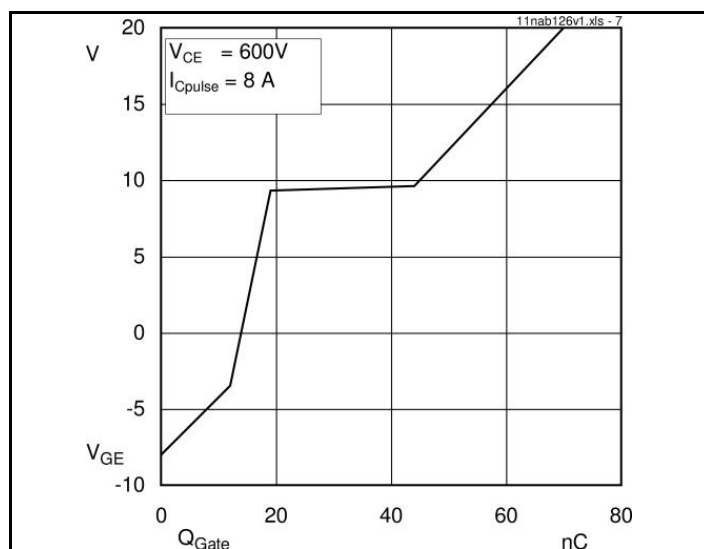


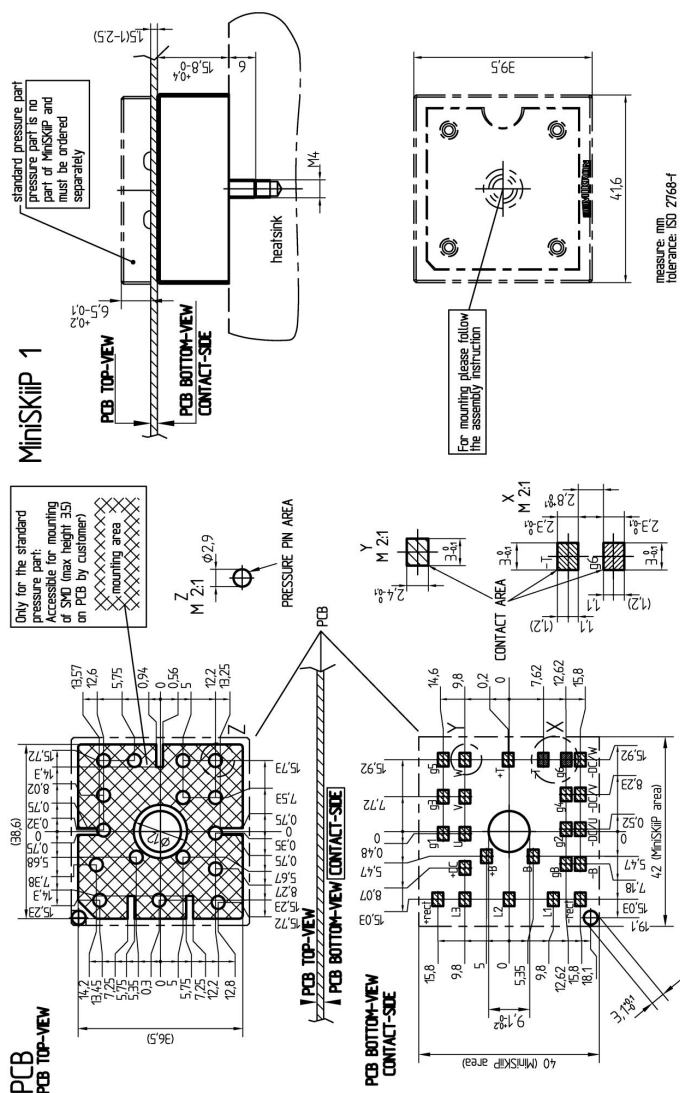
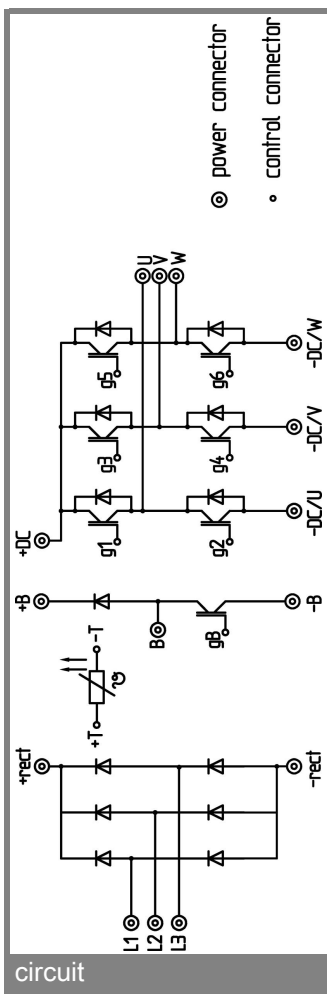
NAB

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		16 (15)	A
I _{CRM}		16	A
V _{GES}		± 20	V
T _j		- 40 ... + 150	°C
Diode - Inverter, Chopper			
I _F	T _s = 25 (70) °C	14 (11)	A
I _{FRM}		16	A
T _j		- 40 ... + 150	°C
Diode - Rectifier			
V _{RRM}	T _s = 70 °C	1600	V
I _F		35	A
I _{FSM}		220	A
i ² t		240	A ² s
T _j		- 40 ... + 150	°C
Module			
I _{tRMS}	per power terminal (20 A / spring)	20	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} = 8 A, T _j = 25 (125) °C	5	1,7 (2)	2,1 (2,4)	V
V _{GE(th)}	V _{GE} = V _{CE} ; I _C = 0,3 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		87 (138)	113 (162)	mΩ
C _{ies}	V _{CE} = 25 V, V _{GE} = 0 V, f = 1 MHz		0,7		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		1,5		K/W
t _{d(on)}	under following conditions		35		ns
t _r	V _{CC} = 600 V, V _{GE} = ± 15 V		25		ns
t _{d(off)}	I _{Cnom} = 8 A, T _j = 125°C		365		ns
t _f	R _{Gon} = R _{Goff} = 50 Ω		105		ns
E _{on}	inductive load		0,8		mJ
E _{off}			1		mJ
Diode - Inverter, Chopper					
V _F = V _{EC}	I _{Fnom} = 8 A, T _j = 25 (125) °C		1,9 (2)	2,2 (2,4)	V
V _(TO)	T _j = 25 (125) °C		1 (0,8)	1,1 (0,9)	V
r _T	T _j = 25 (125) °C		112 (150)	138 (187)	mΩ
R _{th(j-s)}	per diode		2,5		K/W
I _{RRM}	under following conditions		12		A
Q _{rr}	I _{Fnom} = 8 A, V _R = 600 V		1,8		μC
E _{rr}	V _{GE} = 0 V, T _j = 125 °C		0,9		mJ
	di _F /dt = 520 A/μs				
Diode - Rectifier					
V _F	I _{Fnom} = 15 A, T _j = 25 °C		1,1		V
V _(TO)	T _j = 150 °C		0,8		V
r _T	T _j = 150 °C		20		mΩ
R _{th(j-s)}	per diode		1,5		K/W
Temperature Sensor					
R _{ts}	3 %, T _r = 25 (100) °C		1000(1670)		Ω
Mechanical Data					
w			35		g
M _s	Mounting torque	2		2,5	Nm







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

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