

SKiiP 28ANB16V2



MiniSKiiP[®] 2

3-phase bridge rectifier + brake chopper

SKiiP 28ANB16V2

Features

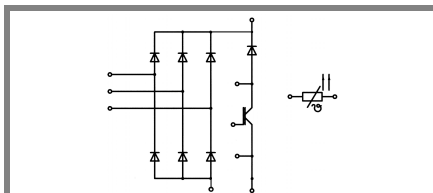
- Fast Trench IGBTs
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

Typical Applications

- Input bridge for Inverter up to 39 kVA

Remarks

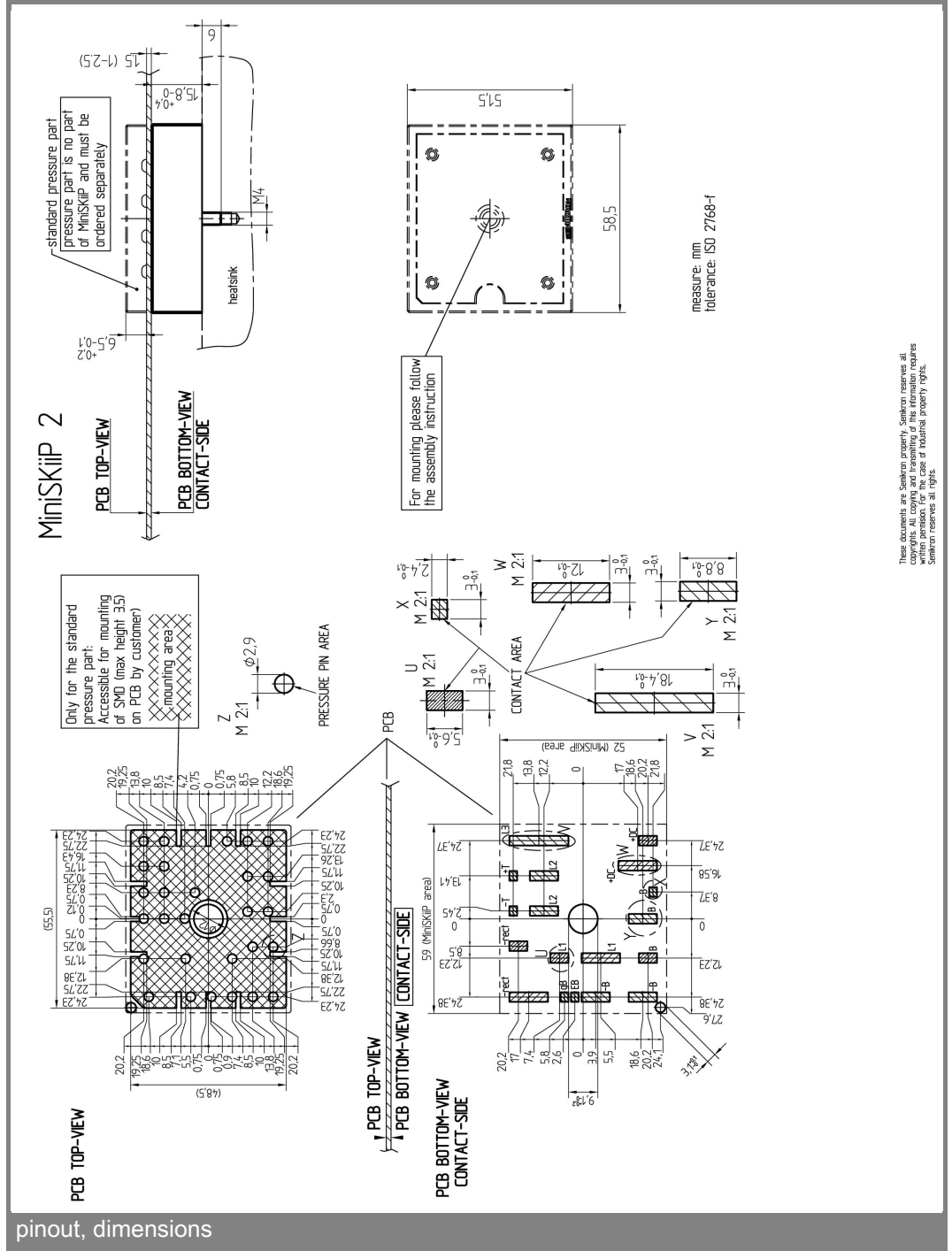
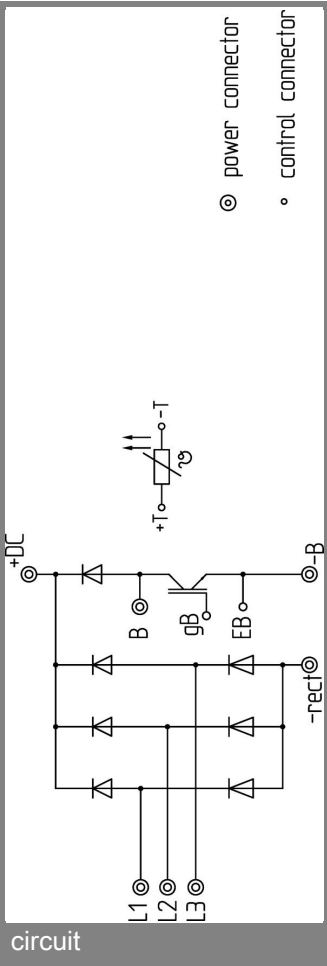
- V_{CEsat} , V_F = chip level value



ANB

Absolute Maximum Ratings		$T_s = 25\text{ °C}$, unless otherwise specified		
Symbol	Conditions	Values	Units	
IGBT - Chopper				
V_{CES}	$T_s = 25\text{ (70) °C}$ $t_p \leq 1\text{ ms}$	1200	V	
I_C		118 (88)	A	
I_{CRM}		210	A	
V_{GES}		± 20	V	
T_j		- 40 ... + 150	°C	
Diode - Chopper				
I_F	$T_s = 25\text{ (70) °C}$ $t_p \leq 1\text{ ms}$	118 (88)	A	
I_{FRM}		210	A	
T_j		- 40 ... + 150	°C	
Diode - Rectifier				
V_{RRM}	$T_s = 70\text{ °C}$	1600	V	
I_F		83	A	
I_{FSM}		$t_p = 10\text{ ms, sin } 180\text{ °, } T_j = 25\text{ °C}$	1000	A
i^2t		$t_p = 10\text{ ms, sin } 180\text{ °, } T_j = 25\text{ °C}$	6600	A ² s
T_j		- 40 ... + 150	°C	
I_{tRMS}	per power terminal (20 A / spring)	120	A	
T_{stg}	$T_{op} \leq T_{stg}$	- 40 ... + 125	°C	
V_{isol}	AC, 1 min.	2500	V	

Characteristics		$T_s = 25\text{ °C}$, unless otherwise specified			
Symbol	Conditions	min.	typ.	max.	Units
IGBT - Chopper					
V_{CEsat}	$I_{Cnom} = 105\text{ A, } T_j = 25\text{ (125) °C}$		1,7 (2)	2,1 (2,4)	V
$V_{GE(th)}$	$V_{GE} = V_{CE}, I_C = 3\text{ mA}$	5	5,8	6,5	V
$V_{CE(TO)}$	$T_j = 25\text{ (125) °C}$		1 (0,9)	1,2 (1,1)	V
r_T	$T_j = 25\text{ (125) °C}$		6,7 (10)	8,6 (12)	mΩ
C_{ies}	$V_{CE} = 25\text{ V, } V_{GE} = 0\text{ V, } f = 1\text{ MHz}$		8,4		nF
C_{oes}	$V_{CE} = 25\text{ V, } V_{GE} = 0\text{ V, } f = 1\text{ MHz}$		1,5		nF
C_{res}	$V_{CE} = 25\text{ V, } V_{GE} = 0\text{ V, } f = 1\text{ MHz}$		1,1		nF
$R_{th(j-s)}$	per IGBT		0,4		K/W
$t_{d(on)}$	under following conditions		65		ns
t_r	$V_{CC} = 600\text{ V, } V_{GE} = \pm 15\text{ V}$		30		ns
$t_{d(off)}$	$I_{Cnom} = 105\text{ A, } T_j = 125\text{ °C}$		465		ns
t_f	$R_{Gon} = R_{Goff} = 5,1\text{ Ω}$		95		ns
E_{on}	inductive load		10,1		mJ
E_{off}			13,6		mJ
Diode - Chopper					
$V_F = V_{EC}$	$I_{Fnom} = 105\text{ A, } T_j = 25\text{ (125) °C}$		1,6 (1,6)	1,8 (1,8)	V
$V_{(TO)}$	$T_j = 25\text{ (125) °C}$		1 (0,8)	1,1 (0,9)	V
r_T	$T_j = 25\text{ (125) °C}$		5,7 (7,6)	6,7 (8,6)	mΩ
$R_{th(j-s)}$	per diode		0,55		K/W
I_{RRM}	under following conditions		180		A
Q_{rr}	$I_{Fnom} = 105\text{ A, } V_R = 600\text{ V}$		26		μC
E_{rr}	$V_{GE} = 0\text{ V, } T_j = 125\text{ °C}$		11,8		mJ
	$di_F/dt = 4350\text{ A/μs}$				
Diode - Rectifier					
V_F	$I_{Fnom} = 75\text{ A, } T_j = 25\text{ °C}$		1,2		V
$V_{(TO)}$	$T_j = 150\text{ °C}$		0,8		V
r_T	$T_j = 150\text{ °C}$		7		mΩ
$R_{th(j-s)}$	per diode		0,7		K/W
Temperature Sensor					
R_{ts}	3 %, $T_r = 25\text{ (100) °C}$		1000(1670)		Ω
Mechanical Data					
w			65		g
M_s	Mounting torque	2		2,5	Nm



These documents are Semikron property. Semikron reserves all
copyrights. All copies and transmissions of this information requires
written permission. For the case of industrial property rights,
Semikron 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.