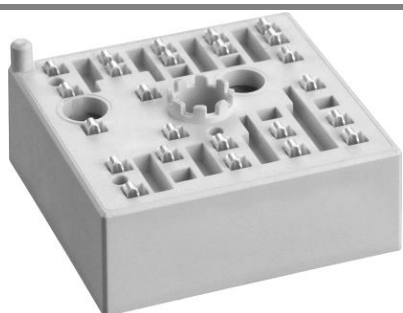




MiniSKiiP® 1

3-phase bridge inverter

SKiiP 04ACB066V1

Target Data

Features

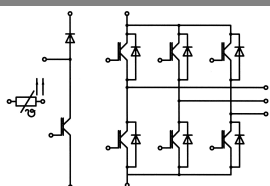
- Trench IGBT's
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

Typical Applications

- Inverter up to 6,3 kVA
- Typical motor power 4,0 kW

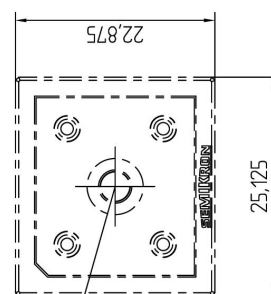
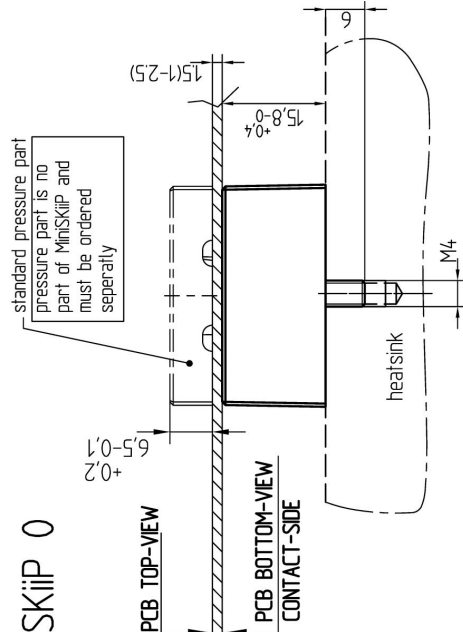
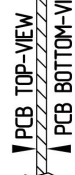
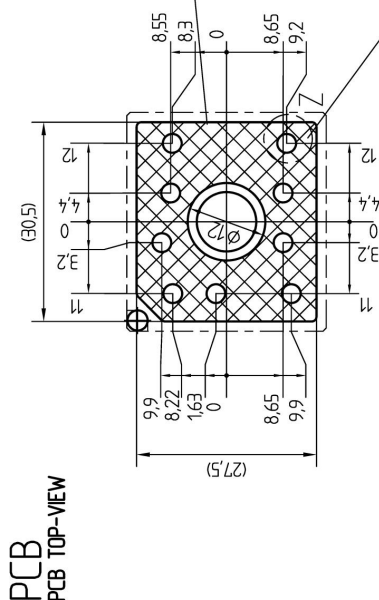
Absolute Maximum Ratings		$T_s = 25\text{ °C}$, unless otherwise specified	
Symbol	Conditions	Values	Units
IGBT - Inverter			
V_{CES}		600	V
I_C	$T_s = 25\text{ (70) °C}$		A
I_{CRM}	$T_s = 25\text{ (70) °C}$, $t_p \leq 1\text{ ms}$		A
V_{GES}		± 20	V
T_j		- 40 ... + 175	°C
Diode - Inverter			
I_F	$T_s = 25\text{ (70) °C}$		A
I_{FRM}	$T_s = 25\text{ (70) °C}$, $t_p \leq 1\text{ ms}$		A
T_j		- 40 ... + 175	°C
I_{tRMS}	per power terminal (20 A / spring)	40	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 - Inverter					
V_{CEsat}	$I_C = 20\text{ A}$, $T_j = 25\text{ (125) °C}$		1,65 (1,7)	1,9 (2,1)	V
$V_{GE(th)}$	$V_{GE} = V_{CE}$, $I_C = 0,5\text{ mA}$		5,9		V
$V_{CE(TO)}$	$T_j = 25\text{ (125) °C}$		0,9 (0,85)	1 (0,9)	V
r_T	$T_j = 25\text{ (125) °C}$		28 (43)	45 (60)	mΩ
C_{ies}	$V_{CE} = 25\text{ V}$, $V_{GE} = 0\text{ V}$, $f = 1\text{ MHz}$		-		nF
C_{oes}	$V_{CE} = 25\text{ V}$, $V_{GE} = 0\text{ V}$, $f = 1\text{ MHz}$		-		nF
C_{res}	$V_{CE} = 25\text{ V}$, $V_{GE} = 0\text{ V}$, $f = 1\text{ MHz}$		-		nF
$R_{th(j-s)}$	per IGBT		1,6		K/W
$t_{d(on)}$	under following conditions		-		ns
t_r	$V_{CC} = 300\text{ V}$, $V_{GE} = \pm 15\text{ V}$		-		ns
$t_{d(off)}$	$I_C = 20\text{ A}$, $T_j = 125\text{ °C}$		-		ns
t_f	$R_{Gon} = R_{Goff} = 15\text{ Ω}$		-		ns
E_{on}	inductive load		0,75		mJ
E_{off}			0,65		mJ
Diode - Inverter					
$V_F = V_{EC}$	$I_F = 20\text{ A}$, $T_j = 25\text{ (125) °C}$		1,7 (1,75)	1,6	V
$V_{(TO)}$	$T_j = 25\text{ (150) °C}$		1,03 (0,85)		V
r_T	$T_j = 25\text{ (150) °C}$		20 (28)		mΩ
$R_{th(j-s)}$	per diode		2,5		K/W
I_{RRM}	under following conditions		-		A
Q_{rr}	$I_F = 20\text{ A}$, $V_R = 300\text{ V}$		-		μC
E_{rr}	$V_{GE} = 0\text{ V}$, $T_j = 125\text{ °C}$ $di_F/dt = 1350\text{ A/μs}$		-		mJ
Temperature Sensor					
R_{ts}	3 %, $T_r = 25\text{ (100) °C}$		1000(1670)		Ω
Mechanical Data					
m			35		g
M_s	Mounting torque	2		2,5	Nm

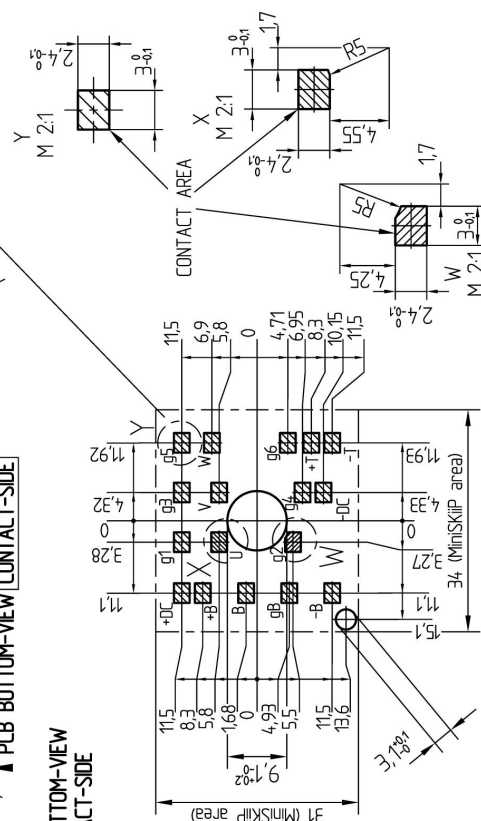


ACB

Only for the standard pressure part:
Accessible for mounting of SMD (max height 3.5) on PCB by customer)



measure: mm
tolerance: ISO 2768-f



For mounting please follow the assembly instruction

pinout, dimensions

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