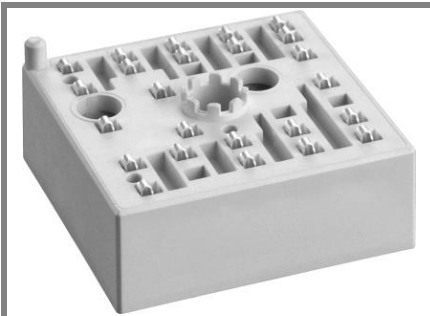


# SKiiP 04ACB066V1



MiniSKiiP<sup>®</sup> 1

## 3-phase bridge inverter

### SKiiP 04ACB066V1

#### Target Data

#### Features

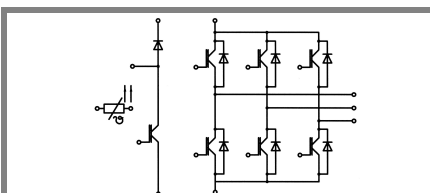
- Trench IGBT's
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

#### Typical Applications

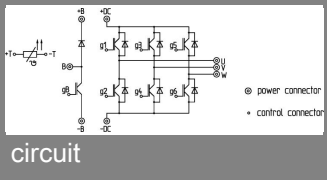
- Inverter up to 6,3 kVA
- Typical motor power 4,0 kW

Absolute Maximum Ratings		$T_s = 25\text{ }^\circ\text{C}$ , unless otherwise specified	
Symbol	Conditions	Values	Units
<b>IGBT - Inverter</b>			
$V_{CES}$		600	V
$I_C$	$T_s = 25\text{ (70) }^\circ\text{C}$		A
$I_{CRM}$	$T_s = 25\text{ (70) }^\circ\text{C}$ , $t_p \leq 1\text{ ms}$		A
$V_{GES}$		$\pm 20$	V
$T_j$		- 40 ... + 175	$^\circ\text{C}$
<b>Diode - Inverter</b>			
$I_F$	$T_s = 25\text{ (70) }^\circ\text{C}$		A
$I_{FRM}$	$T_s = 25\text{ (70) }^\circ\text{C}$ , $t_p \leq 1\text{ ms}$		A
$T_j$		- 40 ... + 175	$^\circ\text{C}$
$I_{tRMS}$	per power terminal (20 A / spring)	40	A
$T_{stg}$	$T_{op} \leq T_{stg}$	- 40 ... + 125	$^\circ\text{C}$
$V_{isol}$	AC, 1 min.	2500	V

Characteristics		$T_s = 25\text{ }^\circ\text{C}$ , unless otherwise specified			
Symbol	Conditions	min.	typ.	max.	Units
<b>IGBT - Inverter</b>					
$V_{CEsat}$	$I_C = 20\text{ A}$ , $T_j = 25\text{ (125) }^\circ\text{C}$		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
$V_{CE(TO)}$	$T_j = 25\text{ (125) }^\circ\text{C}$		0,9 (0,85)	1 (0,9)	V
$r_T$	$T_j = 25\text{ (125) }^\circ\text{C}$		28 (43)	45 (60)	m $\Omega$
$C_{ies}$	$V_{CE} = 25\text{ V}$ , $V_{GE} = 0\text{ V}$ , $f = 1\text{ MHz}$		-		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
$t_{d(off)}$	$I_C = 20\text{ A}$ , $T_j = 125\text{ }^\circ\text{C}$		-		ns
$t_f$	$R_{Gon} = R_{Goff} = 15\text{ }\Omega$		-		ns
$E_{on}$	inductive load		0,75		mJ
$E_{off}$			0,65		mJ
<b>Diode - Inverter</b>					
$V_F = V_{EC}$	$I_F = 20\text{ A}$ , $T_j = 25\text{ (125) }^\circ\text{C}$		1,7 (1,75)	1,6	V
$V_{(TO)}$	$T_j = 25\text{ (150) }^\circ\text{C}$		1,03 (0,85)		V
$r_T$	$T_j = 25\text{ (150) }^\circ\text{C}$		20 (28)		m $\Omega$
$R_{th(j-s)}$	per diode		2,5		K/W
$I_{RRM}$	under following conditions		-		A
$Q_{rr}$	$I_F = 20\text{ A}$ , $V_R = 300\text{ V}$		-		$\mu\text{C}$
$E_{rr}$	$V_{GE} = 0\text{ V}$ , $T_j = 125\text{ }^\circ\text{C}$ $di_F/dt = 1350\text{ A}/\mu\text{s}$				mJ
<b>Temperature Sensor</b>					
$R_{ts}$	3 %, $T_r = 25\text{ (100) }^\circ\text{C}$		1000(1670)		$\Omega$
<b>Mechanical Data</b>					
m			35		g
$M_s$	Mounting torque	2		2,5	Nm



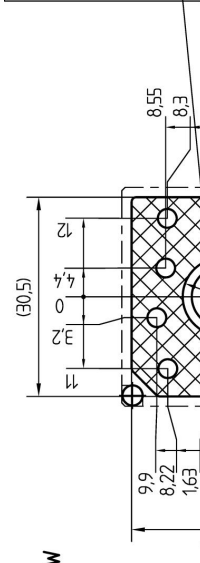
ACB



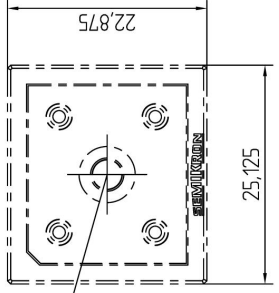
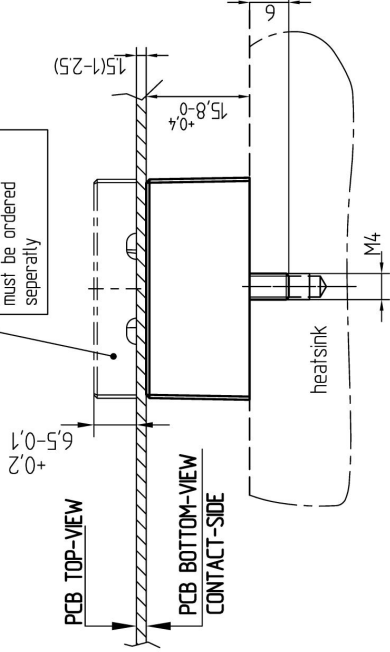
standard pressure part pressure part is no part of MiniSKiP and must be ordered seperately

## MiniSKiP 0

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

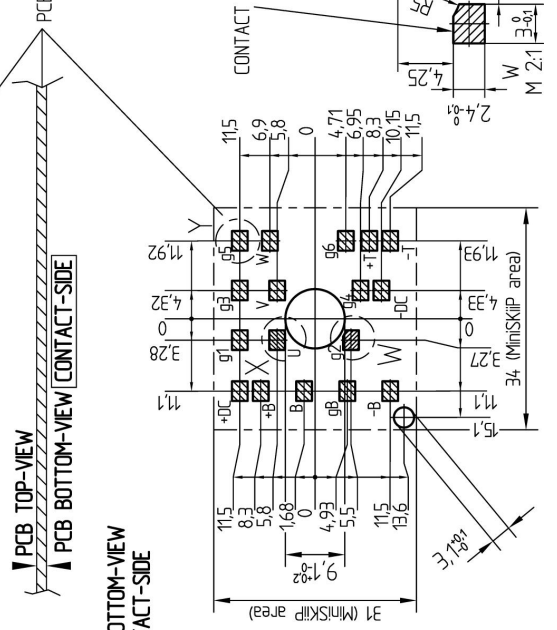
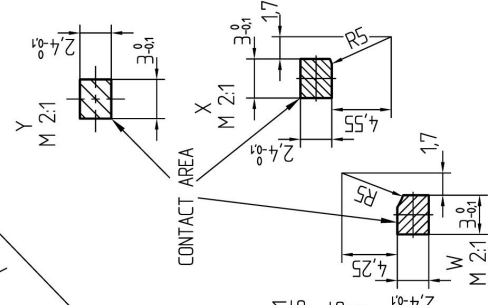
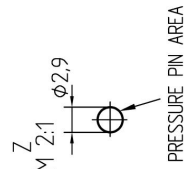


### pinout, dimensions



measure: mm  
tolerance: ISO 2768-f

For mounting please follow the assembly instruction



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

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