VRef 0...2.5V (0.11 Ohm  sense resistor)
>=2.5V  100%  –  1.64A  RMS
 1.25V   50%  –  0.82A  RMS
 0.50V   20%  –  0.33A  RMS

EN (with pull-up)
GND     driver  enabled
VCC     driver  disabled

PDN/UART (with pull-down)
GND     automatic standstill current reduction
VCC     automatic standstill power down disable
optional  UART interface

CLK (with pull-down)
GND     internal clock
optional  supply external clock

| MS1 | MS2 | Steps | Interpolation | ChopperMode |
|-----|-----|-------|---------------|-------------|
| GND | GND | 8     | Yes  to  256  | stealthChop2 |
| VIO | GND | 2     | Yes  to  256  | stealthChop2 |
| GND | VIO | 4     | Yes  to  256  | stealthChop2 |
| VIO | VIO | 16    | Yes  to  256  | stealthChop2 |

To access all other modes (eg spreadCycle) you have to use the UART interface.

IC1  TMC2208

15  VCC_IO
8   5VOUT
3*3 GND
2   ENN
16  STEP
19  DIR
11  DIAG
12  INDEX
9   MS1
10  MS2
13  CLK
14  PDN_UART
17  VREF

6   VS
    VCP
5   CPI
4   CPO
24  OA1
21  OA2
26  OB1
1   OB2
23  BRA
27  BRB

C1  100n/50V
C2  4u7/6V3
C3  100n/50V
C5  100n/50V
C7  1u/50V
C6  100n/50V
C4  22n/50V
22*2

R2  20k
R3  20k
R1  20k
R5  20k
R4  20k
R6  R080S/0R11
R7  R080S/0R11

+5V
VIO
GND
VM

JP1  8 7 6 5 4 3 2 1
JP2  8 7 6 5 4 3 2 1
JP3  1
JP4  1
JP5  1

EN MS1 MS2 STEP DIR
VIO OB2 OB1 OA1 OA2 VM
DIAG
INDEX
VREF

PDN_UART
CLK
J1
J2

www.watterott.com
SilentStepStick-TMC2208_v12
nicht gespeichert!
Sheet: 1/1

# Component Side View
## (Bottom)

Dir

Step

CLK

PDN/UART

MS2

MS1

En

GND

Vio - 3.3-5V

Motor Coil 1-B

Motor Coil 1-A

Motor Coil 2-A

Motor Coil 2-B

GND

Vm

VRef DIAG INDEX