

IMT-901 Microstep driver

The IMT-901 is a microstep PWM constant current driver. A sine wave-like microstep is generated in the IMT 901 module by the hardware and made available at the power output using pulse inputs.



Advantages:

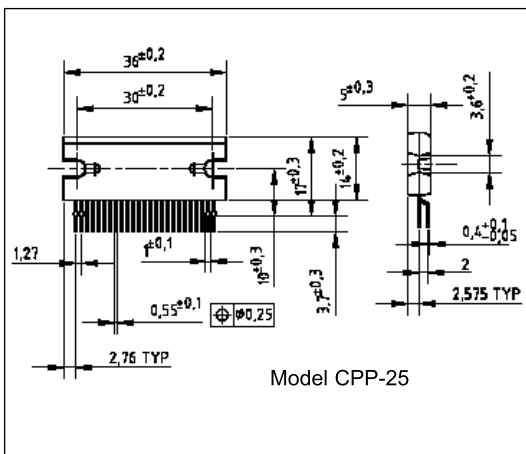
- Only 1 IC for power and logic (up to 2.5 A/phase) considerably reduces space requirements, equipping cost and therefore the cost of an entire micro-step driver with a minimum number of external components and maximum functionality
- 1/1, 1/2, 1/4 and 1/8 step changeover makes it possible to have individual application-related micro-step changeovers with quiet, even running and less system resonance
- Current reduction or current zeroing reduces or eliminates power loss and heat generation when the motor is stationary

- Suitable insulating heat conducting foil (see accessories)

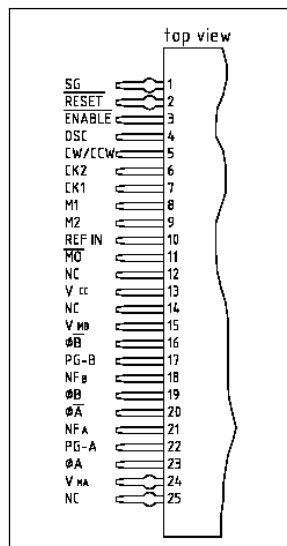


Compl. info on the Internet:
www.nanotec.de

Dimension diagram (mm)



Pin assignments

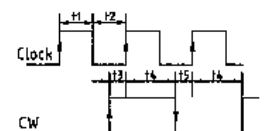


Max. nominal values (at 25°C)

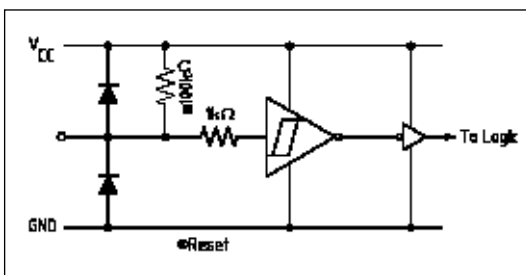
Supply voltage V_{CC} :	5.5 V
	V_M : 40 V
Output current I_{out} :	1.5 A (average)
	2.5 A (peak)
Power loss P_d :	5 W/43 W
	Without/with heat sink
	$T_C = 85^\circ\text{C}$
Max. clock frequency:	50 kHz
Operating temp.:	-40°C to 85°C
Memory temp.:	-55°C to 150°C

Input	Mode	
M1	M2	
L	L	1/1 step
H	L	1/2 step
L	H	1/4 step
H	H	1/8 step

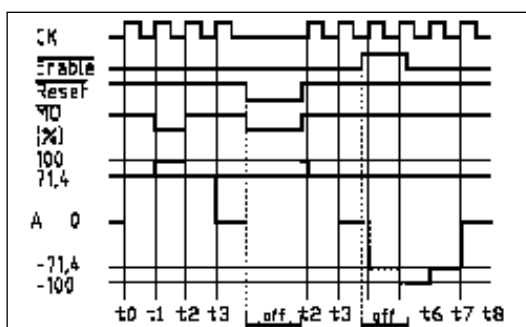
Signal switching times
 t1: Pulse width > 10 μs
 t2: Pulse delay > 10 μs
 t3: > 5 μs
 t4: > 10 μs



Inputs

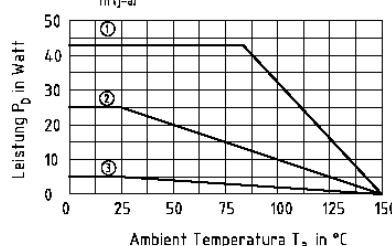


Input/output signals



Temperature behaviour

- ① INFINITE HEAT SINK
 $R_{th(j-c)} = 1.5^\circ\text{C/W}$
- ② HEAT SINK
(with 3.5°C/W Heat Pin and 1.5°C contact thermal Resistance; Total 5°C/W)
- ③ NO HEAT SINK
 $R_{th(j-a)} = 25^\circ\text{C/W}$



TRANSIENT THERMAL RESISTANCE

- ① 2C/W HEAT SINK
- ② NO HEAT SINK

