

Performance characteristics:

- Working mode: The input pulse signal is converted to the complementary signal output
- Operating voltage: -5V
- Input level: Compatible with TTL level
- Output level: 0/-5V
- Static current: 3mA
- Chip size: 1.48mm x 1.13mm x 0.1mm

Product Description:

CW-FEN4A is a 4-bit negative pressure output FET driver chip, manufactured by GaAs process, which can generate the input TTL pulse signal to output the complementary pulse signal of -5.1V/-0.3V. The product can be widely used in the control of FET switch, CNC attenuator, CNC phase shifter and other circuits.

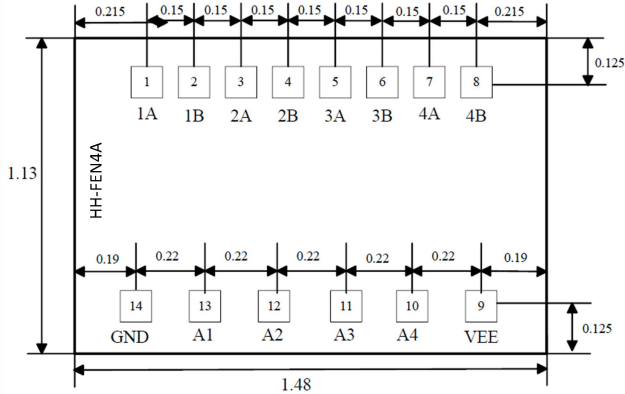
Electrical parameters: ($T_A=25^{\circ}\text{C}$, $V_{EE}=-5\text{V}$)

Parameter name	Symbols	Minimum	Typical	Maximum	Units	Instructions
Power supply voltage	V_{EE}	-5.5	-5	-4.5	V	Normal operating
Static current	I_{EE}	-	3	-	mA	Current after the chip
Input high level	V_{IH}	2.8	5	5	V	Input voltage of pin A1-A6, compatible
Input low level	V_{IL}	0	0	0.4	V	
Input current	I_i	-	0.4	-	mA	-
Output high level	V_{OH}	-	0	-	V	In-phase and antiphase ends (1A, 2A)
Output low	V_{OL}	-	-5	-	V	
Output (drive) current	I_o	-	2	-	mA	Related to load
Operating frequency	f	0	10	30	MHz	Load dependent
Switching time	t	-	16	25	ns	-
Temperature	T_A	-55	25	85	$^{\circ}\text{C}$	-

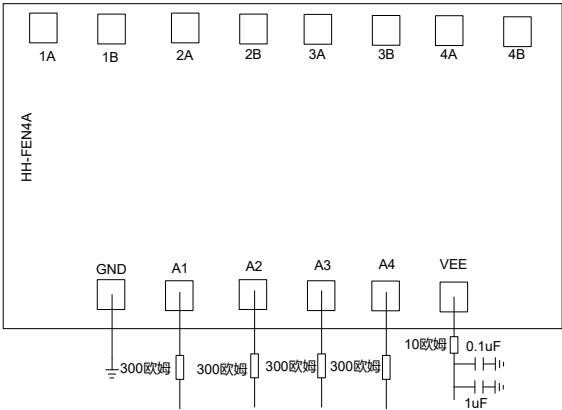
Truth table:

Input				Output							
A1	A2	A3	A4	1A	1B	2A	2B	3A	3B	4A	4B
Li	Li	Li	Li	Lo	Ho	Lo	Ho	Lo	Ho	Lo	Ho
Hi	Li	Li	Li	Ho	Lo	Lo	Ho	Lo	Ho	Lo	Ho
Li	Hi	Li	Li	Lo	Ho	Ho	Lo	Lo	Ho	Lo	Ho
Li	Li	Hi	Li	Lo	Ho	Lo	Ho	Ho	Lo	Lo	Ho
Li	Li	Li	Hi	Lo	Ho	Lo	Ho	Lo	Ho	Ho	Lo
Hi	Hi	Hi	Hi	Ho	Lo	Ho	Lo	Ho	Lo	Ho	Lo

Dimensional drawing: (unit mm)



Suggested assembly drawing:



Instructions:

Storage: The chip must be placed in a container with electrostatic protection and stored in a nitrogen environment.

Cleaning treatment: The bare chip must be operated and used in a purified environment. It is forbidden to use liquid cleaning agent to clean the chip.

Electrostatic protection: Strictly comply with the ESD protection requirements to avoid electrostatic damage to the components.

General operation: Use vacuum chuck or precision pointed tweezers to pick up the chip. Avoid touching the surface of the chip with tools or fingers during handling.

Mounting operation: The chip can be installed using AuSn solder eutectic welding or conductive adhesive bonding process. The mounting surface must be clean and flat.

Bonding operation: Input and output with 2 (recommended diameter of 25um gold wire) bonding wire, bonding wire length less than 250um is optimal. It is recommended to use the smallest possible ultrasonic energy. Bonding begins at the pressure point on the chip and ends at the package (or substrate).