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8bit 10ch D/A converter

BH2223FV/GLU

BH2223FV/GLU is an 8bit D/A converter for electronic adjustment. The 10-channel DC output voltage can be independently controlled by three-wire serial interface from micro-controller. The D/A converter can generate without loss by Rail-to-Rail output within the setting voltage. The built-in power on reset circuit keeps the output state Low after the power is on and prevents the unstable output state.

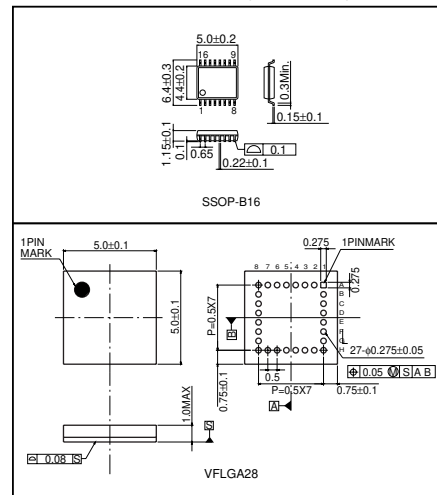
●Applications

The voltage adjustment for DVC, DSC etc.

●Features

- 1) 8bit 10-channel D/A converters adopting R-2R system.
- 2) 3-wire 12-bit serial interface.
- 3) POWER ON RESET circuit.
- 4) The full scale output voltage range : 2.7V to 5.5V.
- 5) SSOPB16/VFLGA28 package.

●External dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|------------------------------------|------------------|-------------------------|------|
| Power supply voltage | V _{CC} | -0.3 to +7.0 | V |
| Maximum output voltage | V _{IN} | -0.3 to V _{CC} | V |
| Storage temperature | T _{stg} | -55 to +125 | °C |
| Power dissipation(SSOPB16/VFLGA28) | P _d | 400/300* | mW |

*Reduced by 4mW/3mW for each increase in Ta of 1°C over 25°C.

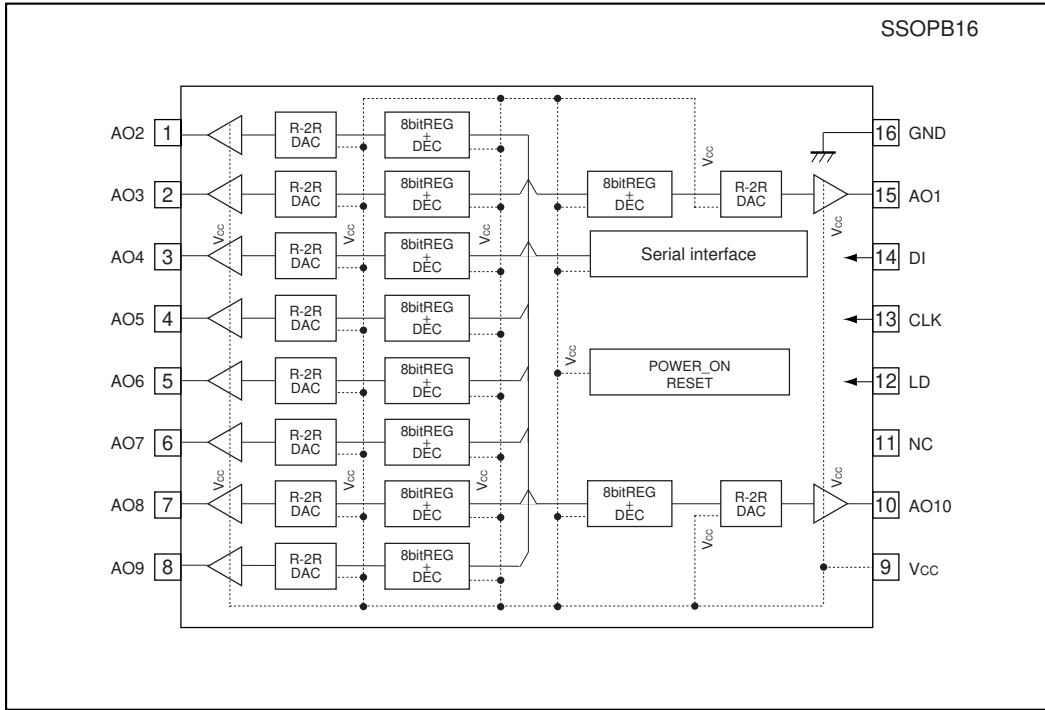
©This product is not designed for protection against radioactive rays.

●Recommended operating conditions (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|--------------------------------|------------------|------|------|------|------|
| V _{CC} supply voltage | V _{CC} | 2.7 | - | 5.5 | V |
| Analog output source current | I _{OL} | - | - | 1.0 | mA |
| Analog output sink current | I _{OH} | - | - | 1.0 | mA |
| Operating temperature range | T _{opr} | -20 | - | 85 | °C |
| Clock frequency | FSCLK | - | 1.0 | - | MHz |
| Limit load capacitance | CL | - | - | 0.1 | μF |

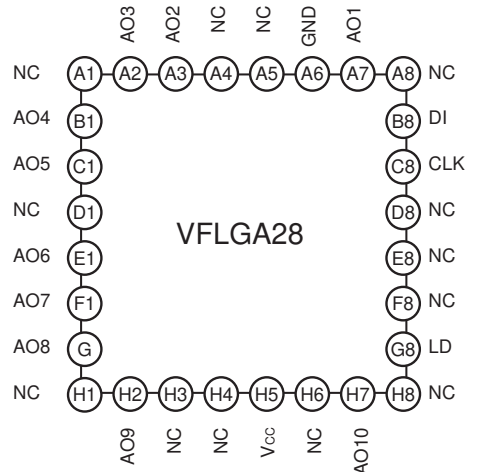
Standard IC

●Block diagram



●Pin descriptions

| Pin No. | | Pin name | In / Out | Functions |
|---------|---------|----------|----------|------------------------|
| SSOPB16 | VFLGA28 | | | |
| 1 | A3 | AO2 | OUT | Analog output pins |
| 2 | A2 | AO3 | OUT | Analog output pins |
| - | A1 | NC | - | NC |
| 3 | B1 | AO4 | OUT | Analog output pins |
| 4 | C1 | AO5 | OUT | Analog output pins |
| - | D1 | NC | - | NC |
| 5 | E1 | AO6 | OUT | Analog output pins |
| 6 | F1 | AO7 | OUT | Analog output pins |
| 7 | G1 | AO8 | OUT | Analog output pins |
| - | H1 | NC | - | NC |
| 8 | H2 | AO9 | OUT | Analog output pins |
| - | H3 | NC | - | NC |
| - | H4 | NC | - | NC |
| 9 | H5 | Vcc | - | Power supply pin |
| - | H6 | NC | - | NC |
| 10 | H7 | AO10 | OUT | Analog output pins |
| 11 | H8 | NC | - | NC |
| 12 | G8 | LD | IN | Serial Load input pin |
| - | F8 | NC | - | NC |
| - | E8 | NC | - | NC |
| - | D8 | NC | - | NC |
| 13 | C8 | CLK | IN | Serial Clock input pin |
| 14 | B8 | DI | IN | Serial Data input pin |
| - | A8 | NC | - | NC |
| 15 | A7 | AO1 | OUT | Analog output pins |
| 16 | A6 | GND | - | Common GND pin |
| - | A5 | NC | - | NC |
| - | A4 | NC | - | NC |



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