

Structure : Silicon Monolithic Integrated Circuit

Product name : Dual Video Amplifier

Type : **BD7628F**

Package : SOP8

Features : 1) Wide operating voltage range
2) 75Ω video line driven
3) Low supply current

○Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Rating | Unit |
|-------------------------|-----------------|---------------------|------|
| Positive supply voltage | VCC | +10.0 | V |
| Negative supply voltage | VEE | -10.0 | V |
| Power dissipation | Pd | 690*1 | mW |
| Input voltage range | V _{IN} | VEE-0.2V ~ VCC+0.2V | V |
| Operating temperature | Topr | -40°C~+85°C | °C |
| Storage temperature | Tstg | -55°C~+150°C | °C |

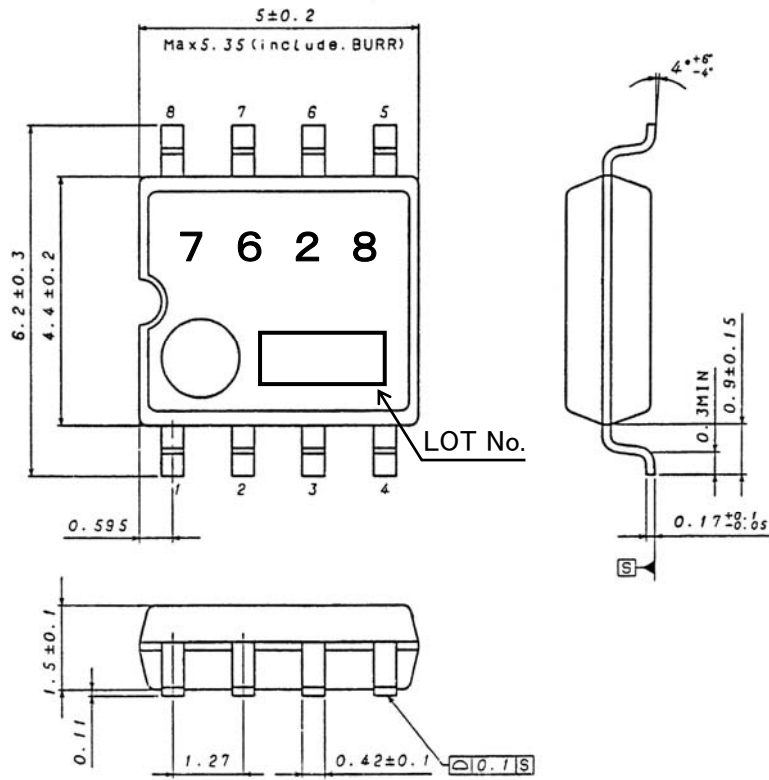
*1 For operation above 25°C free-air temperature, power dissipation is decreasing 4.0mW/°C in case mounting the ROHM standard application board (70mm × 70mm × 1.6mm)

○Operating Condition (Ta=25°C)

| Parameter | Symbol | Min | Typ | Max | Unit |
|-------------------------|--------|------|------|------|------|
| Positive supply voltage | VCC | +2.0 | +5.0 | +6.0 | V |
| Negative supply voltage | VEE | -6.0 | -5.0 | -2.0 | V |

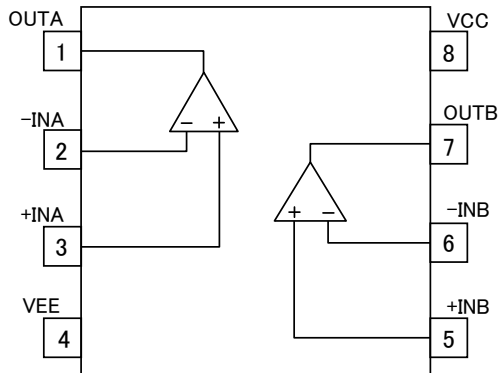
* This product is not designed for protection against radioactive rays.

○ External dimensions and label codes



SOP8 (UNIT:mm)

○ Block diagram



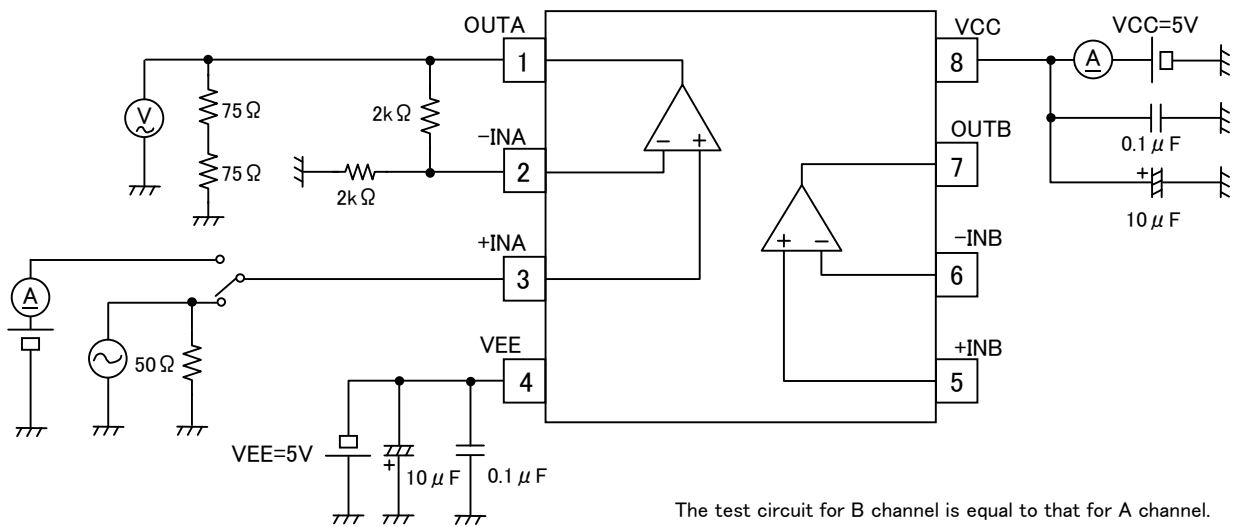
○ Pin number and Pin name

| Pin NO. | Pin name | Pin NO. | Pin name |
|---------|----------|---------|----------|
| 1 | OUTA | 5 | VCC |
| 2 | -INA | 6 | OUTB |
| 3 | +INA | 7 | -INB |
| 4 | VEE | 8 | +INB |

○Electrical characteristics (Unless otherwise specified, $T_a = 25^\circ\text{C}$, $V_{CC} = 5.0\text{V}$, $V_{EE} = -5.0\text{V}$)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|---------------------------|----------|------|------|------|---------------|--|
| Circuit current | I_{CC} | - | 16.7 | 23.0 | mA | No Signal |
| Input bias current | I_{IB} | - | - | 6 | μA | $V_{in} = 0.0\text{V}$ |
| Maximum output voltage | V_{OM} | 5.0 | 5.7 | - | V_{pp} | DC Voltage |
| Voltage gain | G_V | 5.6 | 5.9 | 6.2 | dB | $V_{in} = 1.0\text{V}_{pp}$, $f = 1\text{MHz}$ |
| Frequency characteristics | G_F | -2.0 | -0.1 | 1.0 | dB | $V_{in} = 1.0\text{V}_{pp}$, $f = 1\text{MHz}/10\text{MHz}$ |
| Cross talk | C_T | - | -63 | -50 | dB | $V_{in} = 1.0\text{V}_{pp}$, $f = 4.43\text{MHz}$ |

○ Test Circuit Diagrams



● Cautions for use

(1) Absolute maximum ratings

If the absolute maximum ratings for applied voltage and/or operation temperature are exceeded, LSI damage may result. Therefore, do not apply voltage or use in a temperature that exceeds these absolute maximum ratings. If it is possible that absolute maximum ratings will be exceeded, use a physical safety device such as a fuse and make sure that no conditions that might exceed the absolute maximum ratings will be applied to the LSI IC.

(2) Thermal design

The thermal design should be done using an ample margin that takes into consideration the allowable dissipation under actual use conditions.

(3) Shorts between pins and mounting errors

When mounting LSI ICs onto the circuit board, make sure each LSI's orientation and position is correct. The ICs may become damaged if they are not mounted correctly when the power is turned on. Similarly, damage may also result if a short occurs, such as when a foreign object is positioned between pins in an IC, or between a pin and a power supply or GND connection.

(4) Operation in strong electromagnetic field

When used within a strong electromagnetic field, evaluate carefully to avoid the risk of operation faults.

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