

# AN5862K, AN5862S

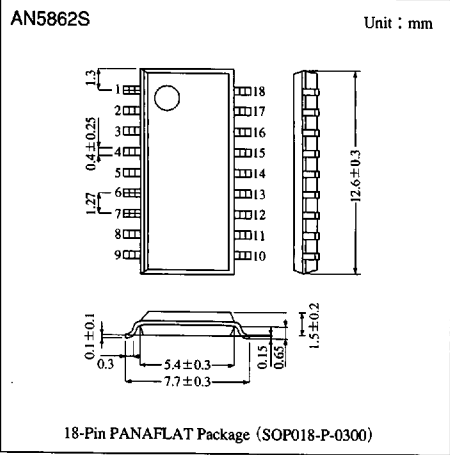
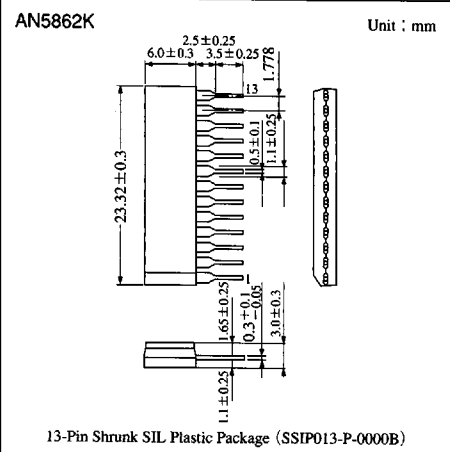
## Analog Switch ICs for RGB Interface

### Overview

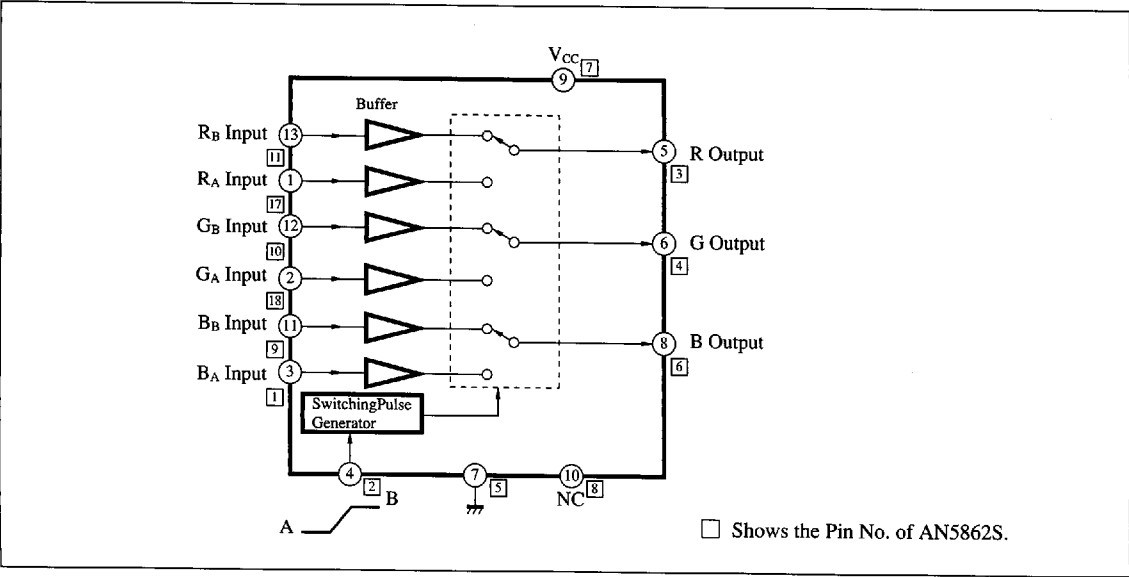
The AN5862K and AN5862S are integrated circuits designed for analog switch of RGB signal processing.

### Features

- Wide band characteristics
- High speed switching characteristics ( $t_{dr} (typ.)$ ,  $t_{df} (typ.)$  : 35ns)



### Block Diagram



## Pin Descriptions

( ) shows the Pin No. of AN5862S.

| Pin No. | Pin name              | Pin No. | Pin name             |
|---------|-----------------------|---------|----------------------|
| 1 (17)  | R <sub>A</sub> input  | 8 (6)   | B output             |
| 2 (18)  | G <sub>A</sub> input  | 9 (7)   | V <sub>CC</sub>      |
| 3 (5)   | B <sub>A</sub> input  | 10 (8)  | NC                   |
| 4 (2)   | Switching pulse input | 11 (9)  | B <sub>B</sub> input |
| 5 (3)   | R output              | 12 (10) | G <sub>B</sub> input |
| 6 (4)   | G output              | 13 (11) | R <sub>B</sub> input |
| 7 (5)   | GND                   |         |                      |

Note) In case of AN5862S, Pin No. ①, ②, ③, ④, ⑤, are NC

## Absolute Maximum Ratings (T<sub>a</sub>=25°C)

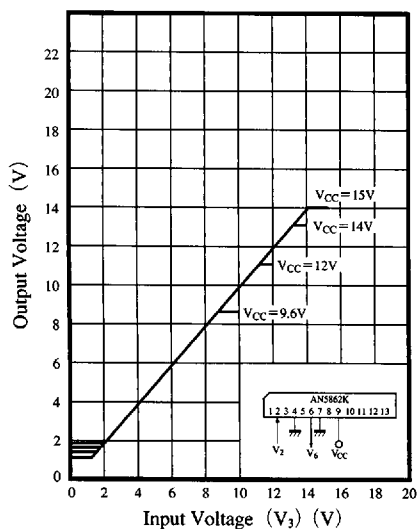
| Parameter                                  |                               |         | Symbol                                                          | Rating      |                                      | Unit |
|--------------------------------------------|-------------------------------|---------|-----------------------------------------------------------------|-------------|--------------------------------------|------|
| Voltage                                    | Supply voltage                |         | V <sub>CC</sub>                                                 | 14.4        |                                      | V    |
|                                            | Circuit voltage               |         | V <sub>9-7</sub> (V <sub>7-5</sub> )                            | 0           | 14.4                                 | V    |
|                                            |                               |         | V <sub>1,2,3,11,12,13-7</sub> (V <sub>17,18,1,9,10,11-5</sub> ) | 0           | V <sub>9-7</sub> (V <sub>7-5</sub> ) | V    |
|                                            |                               |         | V <sub>4-7</sub> (V <sub>2-5</sub> )                            | 0           | 6                                    | V    |
| Circuit current                            |                               |         | I <sub>5,6,8</sub> (I <sub>3,4,6</sub> )                        | -10         | 2                                    | mA   |
| Power dissipation<br>(T <sub>a</sub> =70℃) |                               | AN5862K | P <sub>D</sub>                                                  | 660         |                                      | mW   |
|                                            |                               | AN5862S |                                                                 | 420         |                                      |      |
| Temperature                                | Operating ambient temperature |         | T <sub>opr</sub>                                                | -20 to +70  |                                      | ℃    |
|                                            | Storage temperature           | AN5862K | T <sub>stg</sub>                                                | -50 to +150 |                                      | ℃    |
|                                            |                               | AN5862S |                                                                 | -50 to +125 |                                      |      |

Note) ( ) is for the AN5862S

## Electrical Characteristics (T<sub>a</sub>=25°C)

| Parameter                                  | Symbol                | Condition                                | min | typ | max  | Unit             |
|--------------------------------------------|-----------------------|------------------------------------------|-----|-----|------|------------------|
| Operating supply voltage range             | V <sub>CC(opr.)</sub> |                                          | 9.6 | —   | 14.4 | V                |
| Total circuit current                      | I <sub>tot</sub>      | V <sub>CC</sub> =12V                     | 21  | 28  | 35   | mA               |
| Signals input/output dynamic range (Upper) | D.R. <sub>max.</sub>  | V <sub>CC</sub> =12V                     | —   | —   | 10.5 | V                |
| Signals input/output dynamic range (Lower) | D.R. <sub>min.</sub>  | V <sub>CC</sub> =12V                     | 1.7 | —   | —    | V                |
| Output terminal sink enable current        | I <sub>sinc</sub>     | V <sub>CC</sub> =12V, Input voltage 6V   | —   | —   | 0.8  | mA               |
| Signals voltage amplification              | A <sub>v</sub>        | f <sub>in</sub> =1MHz, 1V <sub>P-P</sub> | 0.9 | 1   | 1.1  | times            |
| Signals frequency characteristics          | f <sub>-3dB</sub>     | e <sub>in</sub> =1V <sub>P-P</sub>       | 20  | —   | —    | MHz              |
| Switching crosstalk                        | CT <sub>A/B</sub>     | f <sub>in</sub> =1MHz, 1V <sub>P-P</sub> | —   | —   | -40  | dB               |
| Signal rise time                           | t <sub>r</sub>        | f <sub>in</sub> =1MHz, 1V <sub>P-P</sub> | —   | 20  | 40   | ns               |
| Signal fall time                           | t <sub>f</sub>        | f <sub>in</sub> =1MHz, 1V <sub>P-P</sub> | —   | 20  | 40   | ns               |
| Signal rise delay time                     | t <sub>dr</sub>       | f <sub>in</sub> =1MHz, 1V <sub>P-P</sub> | —   | 10  | 30   | ns               |
| Signal fall delay time                     | t <sub>df</sub>       | f <sub>in</sub> =1MHz, 1V <sub>P-P</sub> | —   | 10  | 30   | ns               |
| Switching delay time                       | t <sub>dr(A/B)</sub>  | Switching pulse 1V <sub>P-P</sub>        | —   | 40  | 60   | ns               |
| Switching pulse standard input             | t <sub>df(A/B)</sub>  | Switching pulse 1V <sub>P-P</sub>        | —   | 40  | 60   | ns               |
| Switching pulse standard input             | V <sub>SWP</sub>      | V <sub>CC</sub> =12V                     | —   | 1   | —    | V <sub>O-P</sub> |

## Input/Output Characteristics



### Pinning comparing table of the AN5862K and AN5862S

