

Structure : Silicon Monolithic Integrated Circuit

Product name : Triple Circuits Video Signal Switchers

Type : BA7603F

Features : 1) Contain three 2-input, 1-output switch circuits

2) Power supply voltage (4.5~5.5 V)

3) Low power consumption

4) Good frequency characteristics

5) Large dynamic range

6) Sync-tip clamp input

7) Large input impedance

8) Fast switching speed (Typ. 50ns)

OAbsolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|-----------------------|--------|----------|------|
| Supply voltage | Vcc | 9 | V |
| Power dissipation | Pd | 500 * | mW |
| Operating temperature | Topr | -40~+85 | °C |
| Storage temperature | Tstg | -55~+125 | °C |

^{*} Deratings is done at 5.0mW/°C above Ta=25°C.

OOperating Range (Ta=25°C)

| Parameter | Symbol | Min | Тур | Max | Unit |
|----------------|--------|-----|-----|-----|------|
| Supply voltage | Vcc | 4.5 | 5.0 | 5.5 | V |

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

Application example

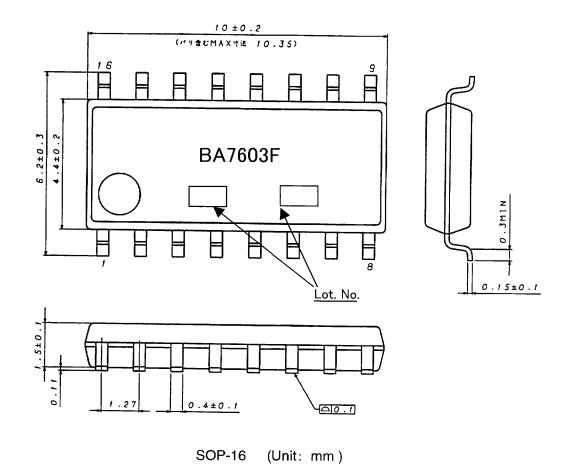
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OElectrical characteristics (Unless otherwise noted, Ta= 25°C, Vcc=5.0V)

| Parameter | Symbol | Min. | Тур. | Max. | Unit | Conditions |
|---------------------------|-----------------|------|------|------|------|---|
| Circuit current | lcc | - | 13.0 | 20.0 | mΑ | |
| Maximum output level1 | Vom | 2.6 | 2.9 | - | Vp-p | f=1kHz, THD=0.5%, |
| Voltage gain | Gv | -0.5 | 0 | 0.5 | dB | $f=1MHz$, $V_{IN}=1V_{P-P}$ |
| Interchannel crosstalk | C _T | - | -65 | - | dB | f=4.43MHz, V _{IN} =1V _{P-P} |
| Total harmonic distortion | Gf | -3 | 0 | 1 | dB | 10MHz/1MHz, V _{IN} = 1V _{P-P} |
| CTL pin switching level | V _{TH} | 2.0 | 2.5 | 3.0 | V | |

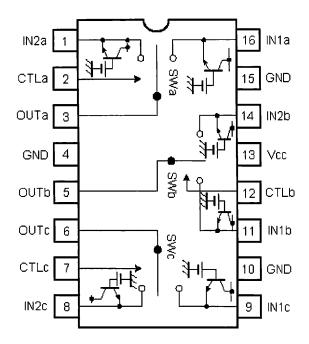
OOuter dimension



Rev.B



OBlock diagram



OPin number and pin name

| Pin | Pin name |
|-----|-------------|
| No. | 1 III Haine |
| 1 | IN2a |
| 2 | CTLa |
| 3 | OUTa |
| 4 | GND |
| 5 | OUTb |
| 6 | OUTc |
| 7 | CTLc |
| 8 | IN2c |
| 9 | IN1c |
| 10 | GND |
| 11 | IN1b |
| 12 | CTLb |
| 13 | Vcc |
| 14 | IN2b |
| 15 | GND |
| 16 | IN1a |

OCautions on use

1) Absolute maximum ratings

If applied voltage, operating temperature range, or other absolute maximum ratings are exceeded, the LSI may be damaged. Do not apply voltages or temperatures that exceed the absolute maximum ratings. If you think of a case in which absolute maximum ratings are exceeded, enforce fuses or other physical safety measures and investigate how not to apply the conditions under which absolute maximum ratings are exceeded to the LSI.

2) GND potential

Make the GND pin voltage such that it is the lowest voltage even when operating below it. Actually confirm that the voltage of each pin does not become a lower voltage than the GND pin, including transient phenomena.

3) Thermal design

Perform thermal design in which there are adequate margins by taking into account the allowable power dissipation in actual states of use.

4) Shorts between pins and miss-installation

When mounting the LSI on a board, pay adequate attention to orientation and placement discrepancies of the LSI. If it is miss-installed and the power is turned on, the LSI may be damaged. It also may be damaged if it is shorted by a foreign substance coming between pins of the LSI or between a pin and a power supply or a pin and a GND.

5) Operation in strong magnetic fields

Adequately evaluate use in a strong magnetic field, since there is a possibility of malfunction.

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U.S.A / San Diego
                        TEL: +1(858)625-3630
                                                 FAX: +1(858)625-3670
       Atlanta
                        TEL: +1(770)754-5972
                                                 FAX: +1(770)754-0691
       Dallas
                        TEL: +1(972)312-8818
                                                 FAX: +1(972)312-0330
Germany / Dusseldorf
                        TEL: +49(2154)9210
                                                 FAX: +49(2154)921400
United Kingdom / London TEL: +44(1)908-282-666
                                                 FAX: +44(1)908-282-528
France / Paris
                        TEL: +33(0)1 56 97 30 60 FAX: +33(0) 1 56 97 30 80
China / Hong Kong
                        TEL: +852(2)740-6262
                                                 FAX: +852(2)375-8971
       Shanghai
                        TEL: +86(21)6279-2727
                                                 FAX: +86(21)6247-2066
       Dilian
                        TEL: +86(411)8230-8549
                                                 FAX: +86(411)8230-8537
       Beijing
                        TEL: +86(10)8525-2483
                                                 FAX: +86(10)8525-2489
Taiwan / Taipei
                        TEL: +866(2)2500-6956
                                                 FAX: +866(2)2503-2869
Korea / Seoul
                        TEL: +82(2)8182-700
                                                 FAX: +82(2)8182-715
Singapore
                        TEL: +65-6332-2322
                                                 FAX: +65-6332-5662
Malaysia / Kuala Lumpur
                        TEL: +60(3)7958-8355
                                                 FAX: +60(3)7958-8377
Philippines / Manila
                        TEL: +63(2)807-6872
                                                 FAX: +63(2)809-1422
Thailand / Bangkok
                        TEL: +66(2)254-4890
                                                 FAX: +66(2)256-6334
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Japan / (Internal Sales)

Tokyo 2-1-1, Yaesu, Chuo-ku, Tokyo 104-0082

TEL: +81(3)5203-0321 FAX: +81(3)5203-0300

Yokohama 2-4-8, Shin Yokohama, Kohoku-ku, Yokohama, Kanagawa 222-8575

TEL: +81(45)476-2131 FAX: +81(45)476-2128

Nagoya Dainagayo Building 9F 3-28-12, Meieki, Nakamura-ku, Nagoya, Aichi 450-0002

TEL: +81(52)581-8521 FAX: +81(52)561-2173

Kyoto 579-32 Higashi Shiokouji-cho, Karasuma Nishi-iru, Shiokoujidori, Shimogyo-ku,

Kyoto 600-8216

TEL: +81(75)311-2121 FAX: +81(75)314-6559

(Contact address for overseas customers in Japan)

Yokohama TEL: +81(45)476-9270 FAX: +81(045)476-9271