



PRELIMINARY

Three Channels Video Driver

■ **DESCRIPTION**

AA7623SP is a three channels video driver, with 75Ω output buffer, and it supports 5V operation voltage. The 75Ω buffer is capable of driving two circuits. The DC potential for the previous stage can be used for direct DC-couple, because the input is coming directly with no internal bias or clamp. The IC is available in **8-pin SOP** package.

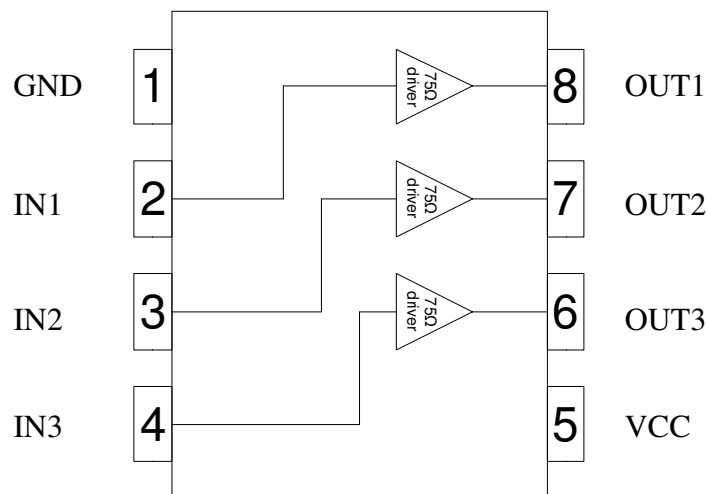
■ **FEATURES**

1. Composite video driver
2. Support 5V operation voltage
3. Three channels video driver
4. Output short circuit protection function
5. A load sufficient for driving two circuits
6. Low operating current, 17mA typical
7. SOP-8 package
8. DC-Couple output

■ **APPLICATION**

- VCR
- Video Camera
- TV
- Video Player

■ **AA7623SP BLOCK DIAGRAM**




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■ PIN DESCRIPTION

| Symbol | Pin No | Type | Function |
|-------------|--------|------|--|
| GND | 1 | - | Ground |
| IN1 | 2 | I | Channel 1 input terminal of composite signal |
| IN2 | 3 | I | Channel 2 input terminal of composite signal |
| IN3 | 4 | I | Channel 3 input terminal of composite signal |
| VCC | 5 | - | 5V Power Supply |
| OUT3 | 6 | O | Channel 3 output |
| OUT2 | 7 | O | Channel 2 output |
| OUT1 | 8 | O | Channel 1 output |

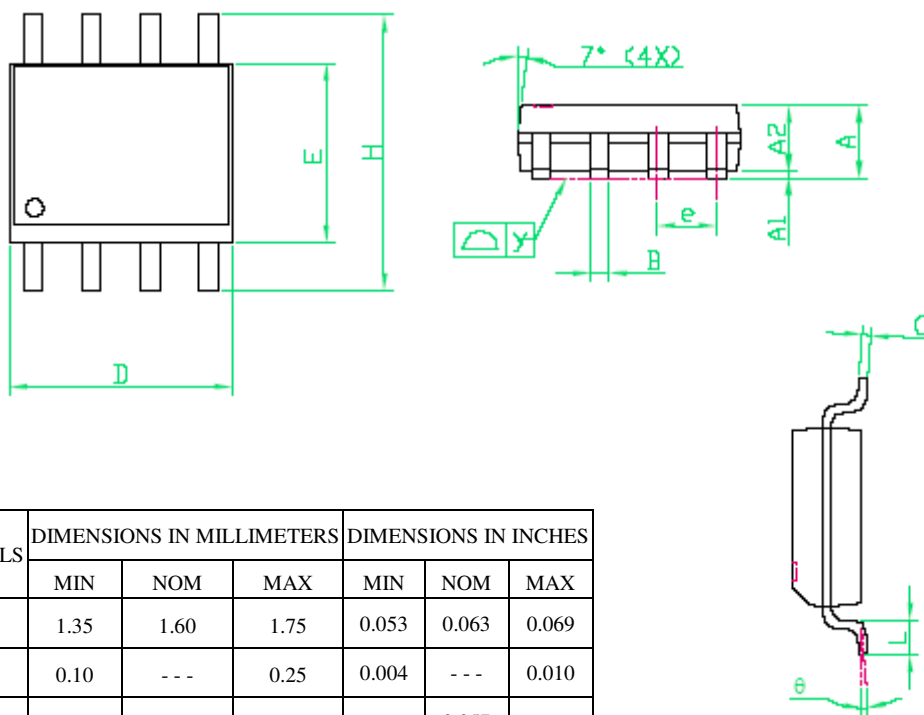
■ ABSOLUTE MAXIMUM RATING
 $T_a = 25\text{ }^{\circ}\text{C}$

| Parameter | Symbol | Rating | | | UNIT | CONDITION |
|--------------------------------------|------------|--------|-----|-----|--------------------|-----------|
| | | MIN | TYP | MAX | | |
| Supply Voltage | Vcc | -0.3 | 3 | 7 | V | |
| Operating Ambient Temperature | Ta | -40 | | 85 | $^{\circ}\text{C}$ | |
| Storage Temperature | Ts | -40 | | 125 | $^{\circ}\text{C}$ | |

NOTE : Stress above those listed under “Absolute Maximum Rating” may cause device permanent damage to the device. This stress-rating only factor and functional operation of the device at these or any other conditions above those indicated in the operational section of this specification is not implied. Exposure to absolute maximum rating conditions for an extended period of time may affect device reliability of the device.


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■ ELECTRICAL CHARACTERISTICS
 $T_a = 25^{\circ}\text{C}$, $V_{cc} = 5\text{V}$

| Parameter | Symbol | Min | Typ | Max | Unit | Condition |
|--------------------------|-----------------|-----|------|-----|-----------------|---|
| Supply Current | I _{cc} | | 17 | 20 | mA | No input Signal |
| Voltage Gain | G _v | | -0.5 | 0 | dB | Input Signal Freq = 4.43MHz, 2V _{pp} , measure OUT |
| Frequency Characteristic | G _F | -3 | 0 | 1 | dB | Input Signal Freq = 7MHz/1MHz, 2V _{pp} , measure OUT |
| Maximum Output level | V _{om} | 2.9 | 3.4 | | V _{pp} | f=1kHz, THD=10% |
| Differential Gain | DG | | 0.4 | 1.0 | % | V _{IN} = 2V _{PP} , refer staircase signal |
| Differential Phase | DP | | 0.4 | 1.0 | deg | V _{IN} = 2V _{PP} , refer staircase signal |
| Crosstalk | CT | | -60 | | dB | V _{IN} =2V _{PP} 4.43M Sinewave |


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■ SOP-8 – AA7623SP – PACKAGE DIMENSION


| SYMBOLS | DIMENSIONS IN MILLIMETERS | | | DIMENSIONS IN INCHES | | |
|----------|---------------------------|------|------|----------------------|-------|-------|
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 1.35 | 1.60 | 1.75 | 0.053 | 0.063 | 0.069 |
| A1 | 0.10 | --- | 0.25 | 0.004 | --- | 0.010 |
| A2 | --- | 1.45 | --- | --- | 0.057 | --- |
| b | 0.33 | --- | 0.51 | 0.013 | --- | 0.020 |
| C | 0.19 | --- | 0.25 | 0.007 | --- | 0.010 |
| D | 4.80 | --- | 5.00 | 0.189 | --- | 0.197 |
| E | 3.80 | --- | 4.00 | 0.150 | --- | 0.157 |
| e | --- | 1.27 | --- | --- | 0.050 | --- |
| H | 5.80 | --- | 6.20 | 0.228 | --- | 0.244 |
| L | 0.40 | --- | 1.27 | 0.016 | --- | 0.050 |
| y | --- | --- | 0.10 | --- | --- | 0.004 |
| θ | 0° | --- | 8° | 0° | --- | 8° |

NOTES:

1. Package body sizes exclude moldflash protrusions or gate burns.
2. Tolerance ± 0.1 mm (4 mil) unless otherwise specified
3. Coplanarity: 0.1 mm
4. Controlling dimension is millimeter converted inch dimensions are not necessarily exact
5. Followed from JEDEC MS-012