# M52693SP

## BURST LOCK CLOCK GENERATOR

## DESCRIPTION

The M52693SP is a semiconductor integrated circuit developed for analog signal processing of a picture-in-picture system, consisting of a sync separator, an ACC, a burst lock clock generator circuit, an analog switch and a clamp circuit, etc. It is also available on digital video signal systems other than the above.

## FEATURES

- Low power dissipation of supply voltage 5.0V and circuit current 32mA (Typ.)
- Built-in 4fsc burst lock clock generator circuit required for digital video signal processing
- Small picture chroma level following main picture burst level
- Main picture pedestal level matching small picture pedestal level
- Built-in reference voltage source for A/D converter

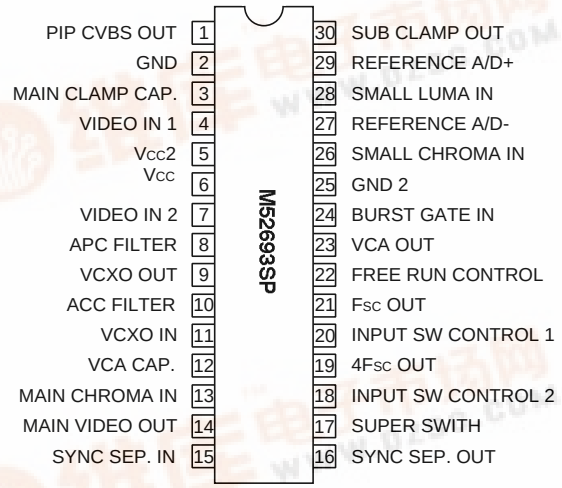
## APPLICATION

TV, VCR

## RECOMMENDED OPERATING CONDITION

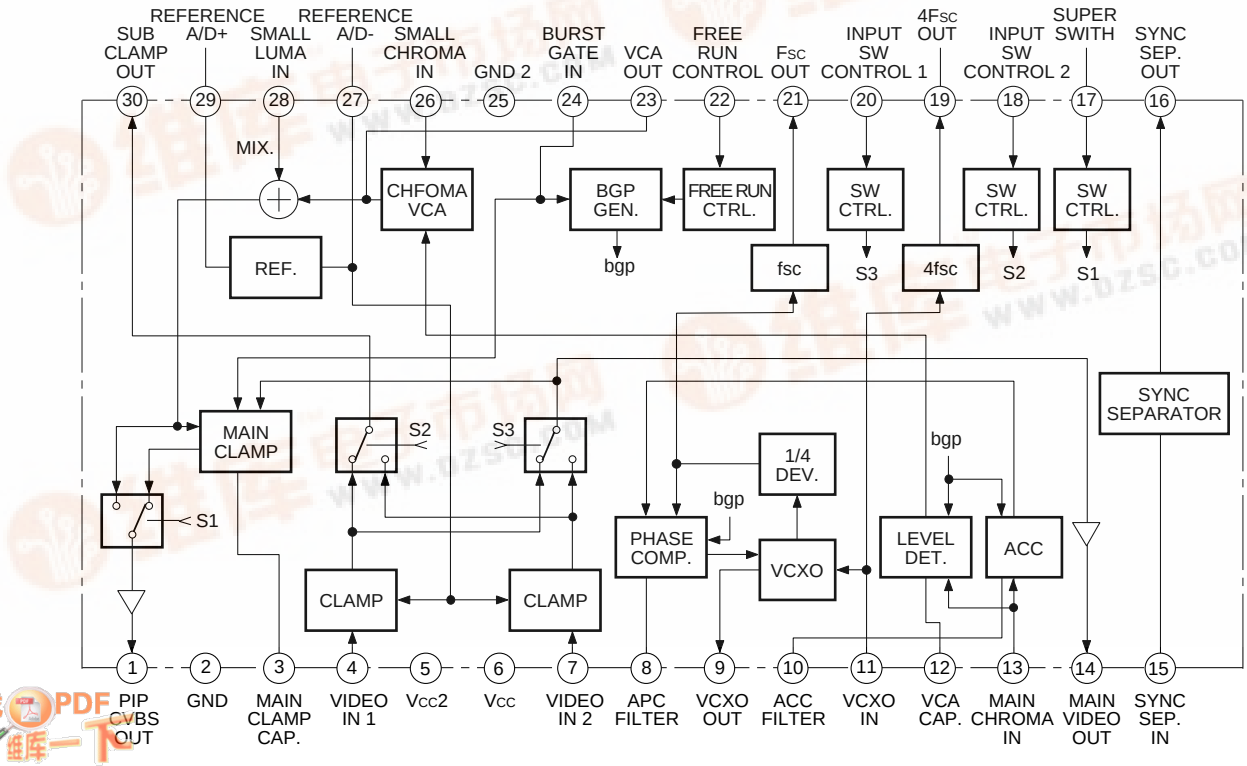
Supply voltage range..... 4.7 to 5.3V
Rated supply voltage.....5.0V

## PIN CONFIGURATION (TOP VIEW)




Outline 30P4B

## BLOCK DIAGRAM



## ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise noted)

| Symbol | Parameter | Ratings | Unit |
|---|---|---|---|
| $V_{CC}$ | Supply voltage | 6.0 | V |
| $P_d$ | Power dissipation | 1265 | mW |
| $T_{opr}$ | Operating temperature | -20 to +75 | °C |
| $T_{stg}$ | Storage temperatare | -40 to +125 | °C |

## ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise noted)

| Symbol | Parameter | Test pin | Test conditions | | | | | | | | | | | | | | | | | | | | | | | | | Limits | | | Unit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Pin conditions | | | | | | | | | | | | | | | | | | | | | | Switch conditions | | | | | | | | |
| | | | 4 | 5 | 6 | 7 | 11 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 26 | 27 | 28 | 29 | 30 | SW 4 | SW 7 | SW 11 | SW 13 | SW 26 | SW 28 | Min. | Typ. | Max. | |
| $I_{CC}$ | Circuit current | ⑤⑥ | SG 1 | 5.0 V | 5.0 V | – | – | SG 2 | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | b | a | OFF | b | a | a | 20.8 | 32.0 | 43.2 | mA |
| Vin1 | Video signal input 1 output voltage | ④ | – | 5.0 V | 5.0 V | – | – | – | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 2.16 | 2.41 | 2.66 | V |
| Vin2 | Video signal input 2 output voltage | ⑦ | – | 5.0 V | 5.0 V | – | – | – | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 2.16 | 2.41 | 2.66 | V |
| $V_{RH}$ | Reference voltage H | ㉙ | – | 5.0 V | 5.0 V | – | – | – | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 3.60 | 3.75 | 3.90 | V |
| $V_{RL}$ | Reference voltage L | ㉗ | – | 5.0 V | 5.0 V | – | – | – | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 2.18 | 2.33 | 2.48 | V |
| $V_R$ | (VRT - VRB) voltage | – | – | 5.0 V | 5.0 V | – | – | – | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 1.27 | 1.42 | 1.57 | V |
| $V_{SOH}$ | Sync separation signal output voltage H | ⑯ | – | 5.0 V | 5.0 V | – | – | – | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 3.40 | 4.20 | – | V |
| $V_{SOL}$ | Sync separation signal output voltage L | ⑯ | – | 5.0 V | 5.0 V | – | – | – | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | – | 0.90 | 1.20 | V |
| $t_H$ | Sync separation signal output pulse width | ⑯ | – | 5.0 V | 5.0 V | – | – | – | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 5.00 | 5.30 | 5.80 | µs |
| $t_{PDH}$ | Sync separation signal output delay time | ⑯ | – | 5.0 V | 5.0 V | – | – | – | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | – | 0.12 | 0.30 | µs |
| $S_{sync-in}$ | Sync separation signal input level | ⑯ | – | 5.0 V | 5.0 V | – | – | – | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 0.10 | 0.30 | 0.60 | $V_{P-P}$ |
| $V_{SUb}$ | Video signal output voltage (small picture system) | ㉚ | – | 5.0 V | 5.0 V | – | – | – | – | PG 1 | – | 0 V | 5.0V / 0V | – | 0V / 5.0V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 2.25 | 2.40 | 2.55 | V |
| $\Delta V_{SRB}$ | Clamp offset | ㉚ | – | 5.0 V | 5.0 V | – | – | – | – | PG 1' | – | 0 V | 5.0V / 0V | – | 0V / 5.0V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 30 | 60 | 90 | mV |
| $G_{SUb}$ | Video signal output gain (small picture system) | ㉚ | SG 1 | 5.0 V | 5.0 V | SG 1 | – | – | – | PG 1' | – | 0 V | 5.0V / 0V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | b | b | ON | a | a | a | -1.00 | 0 | 1.00 | dB |
| $CT_{SUb}$ | Video signal output crosstalk (small picture system) | ㉚ | SG3 | 5.0 V | 5.0 V | SG3 | – | – | – | PG 1' | – | 0 V | 5→0V / 0→5V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | b/a | b/a | ON | a | a | a | – | -55 | -45 | dB |
| $fBW_{SUb}$ | Video signal output frequency band (small picture system) | ㉚ | SG 4 | 5.0 V | 5.0 V | SG 4 | – | – | – | PG 1' | – | 0 V | 5.0V / 0V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | b | b | ON | a | a | a | 10 | – | – | MHz |
| $V_{main}$ | Video signal output voltage (main picture system) | ⑭ | – | 5.0 V | 5.0 V | – | – | – | – | PG 1' | – | 0 V | 5.0 V | – | 5.0V / 0V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 1.20 | 1.45 | 1.70 | V |
| $G_{main}$ | Video signal output gain (main picture system) | ⑭ | SG 1 | 5.0 V | 5.0 V | SG 1 | – | – | – | PG 1' | – | 0 V | 5.0 V | – | 5.0V / 0V | – | 0 V | – | – | – | – | – | – | b | b | ON | a | a | a | 1.3 | 2.3 | 3.3 | dB |

## ELECTRICAL CHARACTERISTICS (cont.)

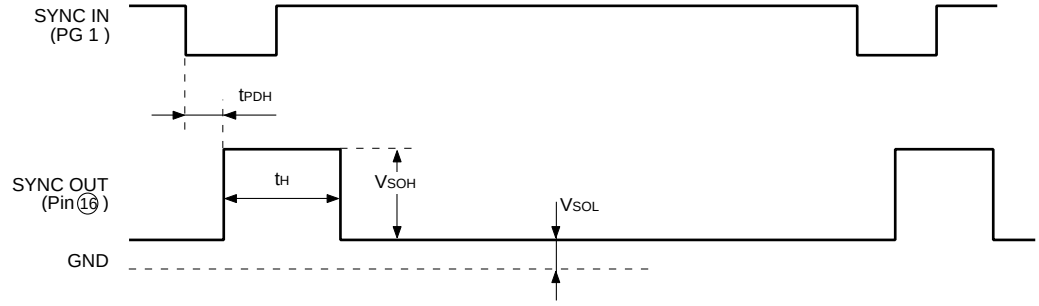
| Symbol | Parameter | Test point | Test conditions | | | | | | | | | | | | | | | | | | | | | | | | | | | Limits | | | Unit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Pin conditions | | | | | | | | | | | | | | | | | | | | | Switch conditions | | | | | | | | | |
| | | | 4 | 5 | 6 | 7 | 11 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 26 | 27 | 28 | 29 | 30 | SW 4 | SW 7 | SW 11 | SW 13 | SW 26 | SW 28 | Min. | Typ. | Max. | |
| $CT_{main}$ | Video signal output crosstalk (main picture system) | ⑭ | SG3 | 5.0 V | 5.0 V | SG3 | – | – | – | PG 1' | – | 0 V | 5.0 V | – | 5→0V / 0→5V | – | 0 V | – | – | – | – | – | – | b/a | a/b | ON | a | a | a | – | -55 | -45 | dB |
| $fBW_{main}$ | Video signal output frequency band (main picture system) | ⑭ | SG 4 | 5.0 V | 5.0 V | SG 4 | – | – | – | PG 1' | – | 0 V | 5.0 V | – | 5.0V 0V | – | 0 V | – | – | – | – | – | – | b | b | ON | a | a | a | 10 | – | – | MHz |
| $V_{PIP}$ | PIP output voltage (Sub) | – | – | 5.0 V | 5.0 V | – | – | – | – | RG 1 | – | 5.0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 1.40 | 1.65 | 1.90 | V |
| $\Delta V_{PIP}$ | PIP output clamp offset | – | – | 5.0 V | 5.0 V | – | – | – | – | RG 1 | – | 0 V | 5.0 V | – | 5.0V 0V | – | 0 V | – | – | – | – | – | – | a | a | ON | a | a | a | 0 | – | 15 | mV |
| $G_{PIPSC}$ | PIP output gain (Sub-C) | – | – | 5.0 V | 5.0 V | – | – | – | – | RG 1 | – | 5.0 V | 5.0 V | – | 5.0 V | – | 0 V | – | SG 5 | – | – | – | – | a | a | ON | a | b | a | 4.3 | 5.3 | 6.3 | dB |
| $G_{PIPSI}$ | PIP output gain (Sub-Luma) | – | – | 5.0 V | 5.0 V | – | – | – | – | RG 1 | – | 5.0 V | 5.0 V | – | 5.0 V | – | 0 V | – | – | – | SG 6 | – | – | a | a | ON | a | a | b | 4.6 | 5.6 | 6.6 | dB |
| $G_{PIP}$ | PIP output gain | – | SG 1 | 5.0 V | 5.0 V | SG 1 | – | – | – | RG 1 | – | 0 V | 5.0 V | – | 5.0V 0V | – | 0 V | – | – | – | – | – | – | b | b | ON | a | a | a | 4.3 | 5.3 | 6.3 | dB |
| $fBW_{PIP}$ | PIP output frequency band | – | SG 4 | 5.0 V | 5.0 V | SG 4 | – | – | – | RG 1 | – | 0 V | 5.0 V | – | 5.0V 0V | – | 0 V | – | – | – | – | – | – | b | b | ON | a | a | a | 10 | – | – | MHz |
| $fBW_{PIPS}$ | PIP output frequency band (s) | – | – | 5.0 V | 5.0 V | – | – | – | – | RG 1 | – | 5.0 V | 5.0 V | – | 5.0 V | – | 5.0 V | – | SG 7 | – | – | – | – | a | a | ON | a | b | a | 10 | – | – | MHz |
| $CT_{PIP}$ | PIP output crosstalk | – | SG 3 | 5.0 V | 5.0 V | SG 3 | – | – | – | RG 1 | – | 0V ↓ 5V | 5.0 V | – | 5.0V 0V | – | 0 V | – | – | – | – | – | – | b | b | ON | a | a | a | – | -50 | -45 | dB |
| $CT_{PIPS}$ | PIP output crosstalk (s) | – | – | 5.0 V | 5.0 V | – | – | SG 2 | – | RG 1 | – | 5V ↓ 0V | 5.0 V | – | 5.0V 0V | – | 0 V | – | SG 5 | – | – | – | – | a | a | ON | b | b | a | – | -50 | -45 | dB |
| $VCA_{typ.}$ | VCA output | ㉓ | – | 5.0 V | 5.0 V | – | – | SG 2 | – | RG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | SG 5 | – | – | – | – | a | a | ON | b | b | a | 2.0 | 3.5 | 5.0 | dB |
| $VCA_{max}$ | VCA control maximum | ㉓ | – | 5.0 V | 5.0 V | – | – | SG 2 | – | RG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | SG 5 | – | – | – | – | a | a | ON | b | b | a | 7.0 | 8.5 | 10.0 | dB |
| $VCA_{min.}$ | VCA control minimum | ㉓ | – | 5.0 V | 5.0 V | – | – | SG 2' | – | RG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | SG 5 | – | – | – | – | a | a | ON | b | b | a | -12.0 | -9.0 | -6.0 | dB |
| $G_{max.}$ | VCA control maximum gain | ㉓ | – | 5.0 V | 5.0 V | – | – | SG 2' | – | RG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 5.0 V | – | SG 5 | – | – | – | – | a | a | ON | b | b | a | 0.8 | 2.8 | 4.8 | dB |
| $L_{VCA}$ | VCA output leak | ㉓ | – | 5.0 V | 5.0 V | – | – | – | – | RG 1 | – | 0 V | 5.0 V | – | 5.0 V | – | 0 V | – | SG 5 | – | – | – | – | a | a | ON | a | b | a | – | – | -9.0 | dB |
| $f_{FR}$ | VCXO free running frequency | ⑲ | – | 5.0 V | 5.0 V | – | – | – | – | RG 1 | – | 0 V | 5.0 V | – | 5.0 V | 0 V | — | – | – | – | – | – | – | a | a | OFF | a | a | a | – | 14.318 | – | MHz |
| $V4f_{SCH}$ | 4fsc output voltage H | ⑲ | – | 5.0 V | 5.0 V | – | – | SG 2 | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | 0 V | — | – | – | – | – | – | – | a | a | OFF | b | a | a | 3.4 | 3.9 | – | V |

## ELECTRICAL CHARACTERISTICS (cont.)

| Symbol | Parameter | Test point | Test conditions | | | | | | | | | | | | | | | | | | | | | | | | | | Limits | | | Unit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Pin conditions | | | | | | | | | | | | | | | | | | | | | | Switch conditions | | | | | | | | |
| | | | 4 | 5 | 6 | 7 | 11 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 26 | 27 | 28 | 29 | 30 | SW 4 | SW 7 | SW 11 | SW 13 | SW 26 | SW 28 | Min. | Typ. | Max. | |
| V4fSCL | 4fsc output voltage L | ⑲ | – | 5.0 V | 5.0 V | – | – | SG 2 | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | 0 V | – | – | – | – | – | – | – | a | a | OFF | b | a | a | – | 0.1 | 0.5 | V |
| VfSCH | fsc output voltage H | ㉑ | – | 5.0 V | 5.0 V | – | – | SG 2 | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | 0 V | – | – | – | – | – | – | – | a | a | OFF | b | a | a | 3.4 | 3.9 | – | V |
| VfSCL | fsc output voltage L | ㉑ | – | 5.0 V | 5.0 V | – | – | SG 2 | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | 0 V | – | – | – | – | – | – | – | a | a | OFF | b | a | a | – | 0.1 | 0.5 | V |
| 4fSC | 4fsc output frequency | ⑲ | – | 5.0 V | 5.0 V | – | – | SG 2 | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | 0 V | – | – | – | – | – | – | – | a | a | OFF | b | a | a | – | 14.318 | – | MHz |
| fSC | fsc output frequency | ㉑ | – | 5.0 V | 5.0 V | – | – | SG 2 | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | 0 V | – | – | – | – | – | – | – | a | a | OFF | b | a | a | – | 3.5795 | – | MHz |
| fCP (+) | Capture range (+) | ⑲ | – | 5.0 V | 5.0 V | – | – | SG 8 | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | 0 V | – | – | – | – | – | – | – | a | a | OFF | b | a | a | 400 | 650 | – | Hz |
| fCP (-) | Capture range (-) | ⑲ | – | 5.0 V | 5.0 V | – | – | SG 8 | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | 0 V | – | – | – | – | – | – | – | a | a | OFF | b | a | a | – | -1200 | -400 | Hz |
| C-IN | Chroma signal input level (burst) | ⑲ | – | 5.0 V | 5.0 V | – | – | SG2' / SG2' | – | PG 1 | – | 0 V | 5.0 V | – | 5.0 V | 0 V | – | – | – | – | – | – | – | a | a | OFF | b | a | a | 0.01 | 0.10 | 0.20 | VP-P |

## ELECTRICAL CHARACTERISTICS TEST METHOD

**$V_R$**
**$V_R = V_{RH} - V_{RL}$**
**$V_{SOH}$, $V_{SOL}$, $t_H$ and $t_{PDH}$**




### Sync-in
Measure $t_H$ and $t_{PDH}$ when the input amplitude of pin ⑮ is $0.1V_{P-P}$. Make sure that $t_H$ and $t_{PDH}$ are within the allowable range. When the input amplitude of pin ⑮ is $0.6V_{P-P}$, make sure that $t_H$ and $t_{PDH}$ are within the allowable range.

### Vsub and $\Delta V_{SRB}$
Measure pin ㉚ DC output voltage in correspondence to the "H" and "L" states of pin ⑱ .

If the voltage which appears at pin ㉚ when pin ⑱ is "H" is taken as Vsub1, and the voltage which appears at pin ㉚ when pin ⑱ is "L" is taken as Vsub2, the clamp offset is given by the following expression:
$DV_{SRB}$ = (Vsub1 - V27), (Vsub2 - V27)

### Gsub
Measure pin ㉚ gain in correspondence to the "H" and "L" states of pin ⑱ .

### CTsub, Cmain, and $CT_{PIP}$
Measure crosstalk under the following input conditions:

| Prameter | | Input signal | Pin connection<br>Switching condition:Left<br>Input codition:Right | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 4 | | 7 | | 17 | 18 | 20 |
| CTsub | CTsub 1 | Sine wave<br>Amplitude<br>: $0.3V_{P-P}$<br>Frequency<br>: 3.58MHz | b | IN | a | - - | 0V | 5 ⇨ 0V | 0V |
| | Ctsub 2 | | a | - - | b | IN | 0V | 0 ⇨ 5V | 0V |
| CTmain | CTmain 1 | | b | IN | a | - - | 0V | 0V | 5 ⇨ 0V |
| | CTmain 2 | | a | - - | b | IN | 0V | 0V | 0 ⇨ 5V |
| $CT_{PIP}$ | $CT_{PIP}$ 1 | | b | IN | a | - - | 0 ⇨ 5V | 0V | 5V |
| | $CT_{PIP}$ 2 | | a | - - | b | IN | 0 ⇨ 5V | 0V | 0V |

### fBWsub
Measure pin ㉚ frequency characteristics in correspondence to the "H" and "L" states of pin ⑱. Condition: ≤-3dB

### fBWmain
Measure pin ⑭ frequency characteristics in correspondence to the "H" and "L" states of pin ⑳. Condition: ≤-3dB

### Vmain
Measure pin ⑭ DC output voltage in correspondence to the "H" and "L" states of pin ⑳ .

### $\Delta V_{PIP}$
If the voltage which appears at pin ① when pin ⑳ is "H" is taken as Vpip1, and the voltage which appears at pin 1 when pin ⑳ is "L" is taken as Vpip2, $\Delta V_{PIP}$ is given by the following expression:

$$\Delta V_{PIP} = |V_{pip}1 - V_{PIP}| + |V_{pip}2 - V_{PIP}|$$

### Gmain
Measure pin ⑭ gain in correspondence to the "H" and "L" states of pin ⑳ .

### GPIPSC
Pin ⑫ = 2.185V V1 = Amplitude of pin ① V23 = Amplitude of pin ㉓
GPIPSC = 20 log (V1/V23)

### GPIP
Measure pin ① gain in correspondence to the "H" and "L" states of pin ⑳ .

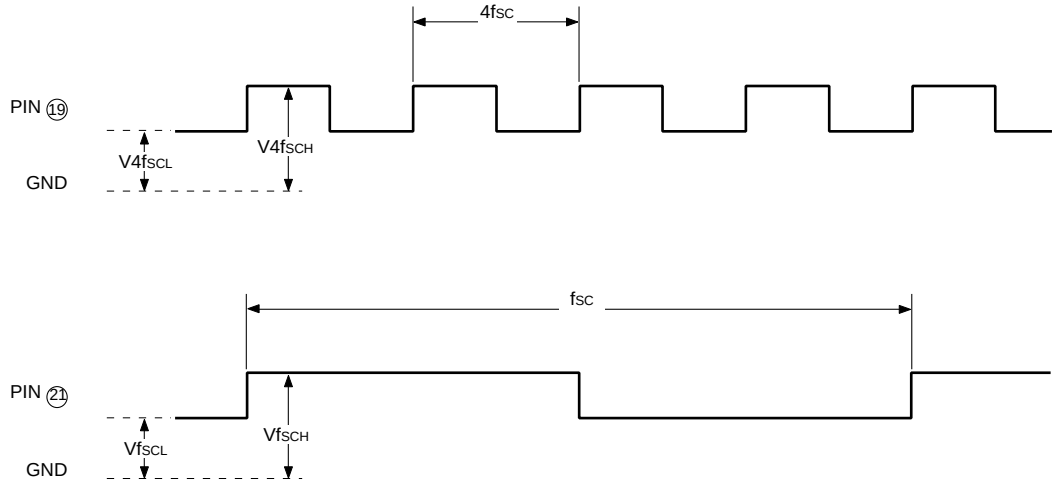
### fBWPIP
Measure pin ① frequency characteristics in correspondence to the "H" and "L" states of pin ⑳. Condition: ≤-3dB

### fBWPIPS
Condition: ≤-3dB

### CTPIPS
Apply 5.0V to pin ⑳. Define as VOS1 the amplitude which appears at pin ① a when pin ⑰ is "H", and as VOM1 the amplitude which appears when pin ⑰ is "L". Then apply 0V to pin ⑳ . Define as VOS2 the amplitude which appears at pin ① when pin ⑰ is "H", and as VOM2 the amplitude which appears at pin ① when "L". CTPIPS is given under the above conditions by the equation given below.
CTPIPS=20log (VOMI/VOSI), 201log (VOM2/VOS2)

### VCAtyp, VCAmax, VCAmin, Gmax, Lvca
20 log {(amplitude of pin 23)/SG5}

### V4fSCH, L; VfSCH, L; 4fsc; fsc
Make sure that the input signal at pin ⑬ is synchronous with the output signal at pin ⑲ .

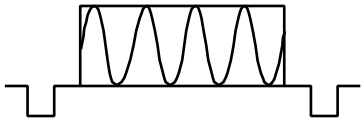
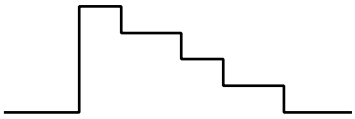
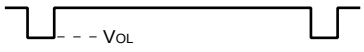



### fcp (+)
1) Raise the frequency of SG8 input signal so that the signal is synchronous with pin ⑲ output signal.
2) Lower the SG8 frequency.
3) Measure the SG8 frequency (f1) when the SG8 input signal is synchronous with the pin ⑲ output signal.
4) fcp(+) = f1 - fc (fc = 3.579545MHz)

### fcp (-)
1) Lower the frequency of SG8 input signal so that the signal is synchronous with pin ⑲ output signal.
2) Raise the SG8 frequency.
3) Measure the SG8 frequency (f2) when the SG8 input signal is synchronous with the pin ⑲ output signal.
4) fcp(-) = f2 - fc (fc = 3.579545MHz)

### C-IN
Make sure that the pin ⑬ input signal is synchronous with the pin ⑲ output signal when the input amplitude of pin ⑬ is 0.20VP-P. Then make sure that the pin ⑬ input signal is synchronous with the pin ⑲ output signal when the input amplitude is 0.01VP-P.

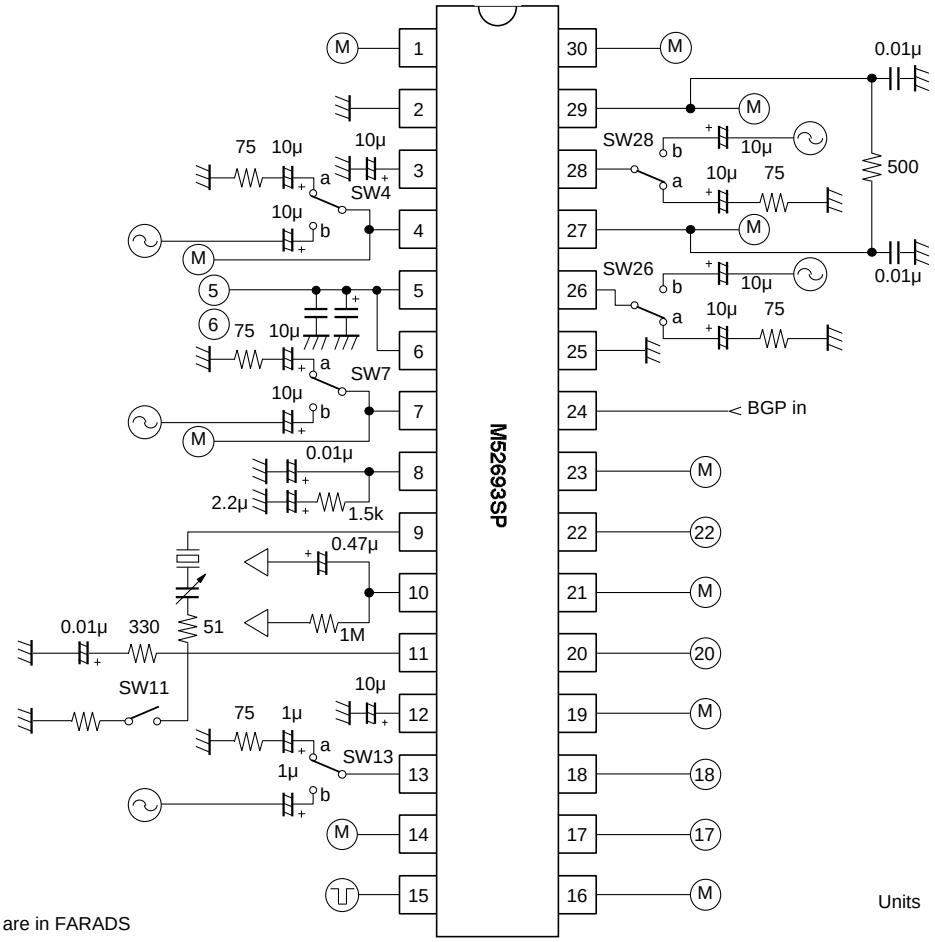
## INPUT SIGNAL

| SG No. | Input signal | Remarks |
|---|---|---|
| SG1 | NTSC system composite video signal ($1V_{P-P}$) | – – – |
| SG2 | Sine wave<br>Frequency: 3.58MHz<br>Amplitude : $0.1V_{P-P}$ | – – – |
| SG2' | Sine wave<br>Frequency: 3.58MHz<br>Amplitude : $0.2V_{P-P}$ | – – – |
| SG2'' | Sine wave<br>Frequency: 3.58MHz<br>Amplitude : $0.01V_{P-P}$ | – – – |
| SG3 | Sine wave<br>Frequency: 3.58MHz<br>Amplitude : $0.3V_{P-P}$ | |
| SG4 | C-Sync + sine wave<br>C-Sync<br>Frequency: 15.734kHz<br>Amplitude : $0.285V_{P-P}$<br>Sine wave<br>Frequency: 1/10MHz<br>Amplitude : $0.715V_{P-P}$ |  |
| SG5 | Sine wave<br>Frequency: 3.58MHz<br>Amplitude : $0.2V_{P-P}$ | – – – |
| SG6 | Y signal<br>Amplitude : $0.715V_{P-P}$ |  |
| SG7 | Sine wave<br>Frequency: 1/10MHz<br>Amplitude : $0.2V_{P-P}$ | – – – |
| SG8 | Sine wave<br>Frequency: Variable<br>Amplitude : $0.1V_{P-P}$ | – – – |
| PG1 | C-Sync<br>Frequency: 15.734kHz<br>Amplitude : $0.3V_{P-P}$<br>$V_{OL}$=2.75V |  |
| PG1' | C-Sync<br>Amplitude : $0.1V_{P-P}$<br>$0.6V_{P-P}$ | – – – |

# M52693SP

## BURST LOCK CLOCK GENERATOR

## TEST CIRCUIT




Notes:

1. Capacitance values are in FARADS
2. Resistors are in OHMS
3. △ : Vcc ⏚ : GND

Units Resistance : Ω
Capacitance : F

## TYPICAL CHARACTERISTICS

**THERMAL DERATING (MAXIMUM RATING)**