

**LA7214**

VCR-Use Automatic Channel Selection Peripheral

Overview

The LA7214 is a VCR-use automatic channel selection peripheral IC that contains a sync separator, a video buffer, and a comparator.

Functions and Features

- Sync separator
- Video buffer
- Comparator
- Recommended supply voltage : 5V
- Sync separator, comparator output of open collector type ($R_L=10k\Omega$), negative polarity output.

Specifications

Maximum Ratings at $T_a=25^\circ\text{C}$

| Parameter | Symbol | Conditions | Ratings | Unit |
|-----------------------------|----------------------|-----------------------------|-------------|------------------|
| Maximum supply voltage | $V_{CC \text{ max}}$ | | 7.0 | V |
| Allowable power dissipation | $P_d \text{ max}$ | $T_a \leq 75^\circ\text{C}$ | 150 | mW |
| Operating temperature | T_{op} | | -15 to +75 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | | -40 to +125 | $^\circ\text{C}$ |

Operating Conditions at $T_a=25^\circ\text{C}$

| Parameter | Symbol | Conditions | Ratings | Unit |
|----------------------------|---------------------|------------|---------|------|
| Recommended supply voltage | V_{CC} | | 5.0 | V |
| Operating voltage range | $V_{CC \text{ op}}$ | | 4 to 6 | V |

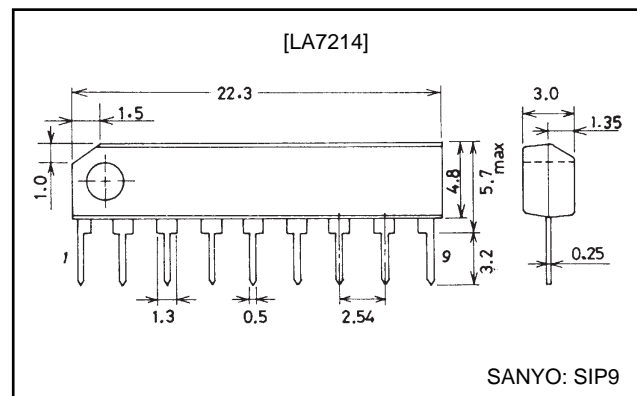
Operating Characteristics at $T_a=25^\circ\text{C}$, $V_{CC}=5\text{V}$

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|-------------------------------------|-------------------|---|---------|-----|-----|---------------|
| | | | min | typ | max | |
| Circuit Current | I_{CC} | No load | 4 | 6.5 | 9 | mA |
| Sync separation operating current | I_{SYNC} | SW1=b | | 85 | | μA |
| Sync separation minimum input level | $V_I \text{ min}$ | Color bar signal $1V_p-p=0\text{dB}$, SW1=a | | -12 | | dB |
| Buffer amp gain | G_1 | $R_L=240\Omega$, $V_{IN}=1V_p-p$, 500kHz | -2 | -1 | 0 | dB |
| Buffer amp gain | G_2 | $R_L=240\Omega$, $V_{IN}=1V_p-p$, 5MHz | -2 | -1 | 0 | dB |
| Comparator reference voltage | V_7 | | | 2.5 | | V |
| Hysteresis amount | ΔV_7 | $\Delta V_7=V_{7H}-V_{7L}$ | | 50 | | mV |
| Output DC level | V_{1H} | No load | 4.9 | | | V |
| Output DC level | V_{1L} | No load | | | 0.2 | V |
| Output DC level | V_{8H} | No load | 4.9 | | | V |
| Output DC level | V_{8L} | No load | | | 0.2 | V |

Package Dimensions

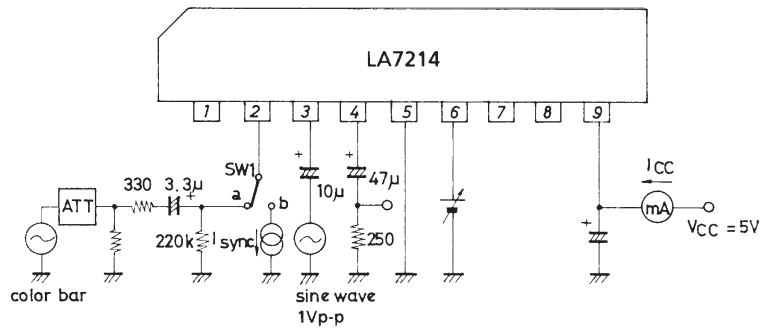
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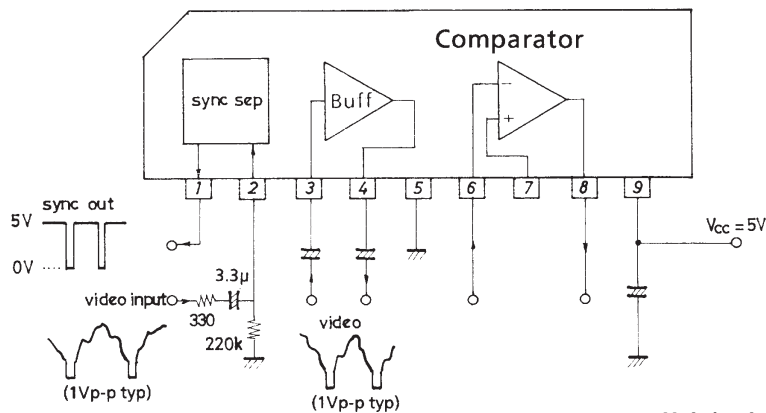
LA7214

Test Circuit



Unit (resistance : Ω , Capacitance : F)

Sample Application Circuit



Unit (resistance : Ω , Capacitance : F)

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