

**HF36S1**

**This item can replace X7350P**



Approved by:

Checked by:

Issued by:

# **SPECIFICATION**

**PRODUCT:** SAW FILTER

**MODEL:** HF36S1 SMD (X7350P)

**HOPE MICROELECTRONICS CO.,LIMITED**

## HF36S1

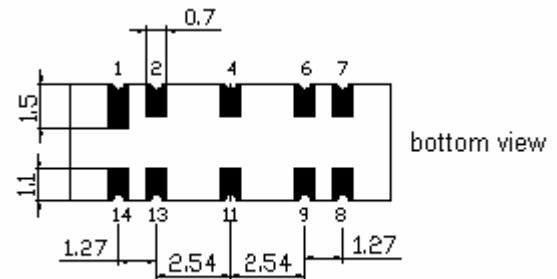
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F filter for digital cable TV

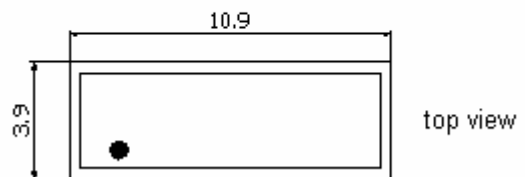
Surface Mounted Technology (SMT)

Unbalanced input option

Center Frequency: 36.13 MHz

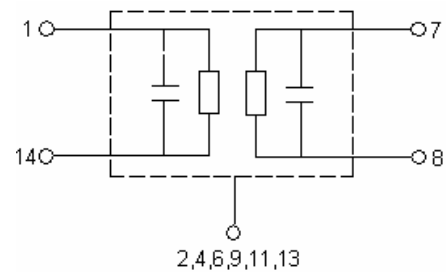


**Dimensions:** unit: mm

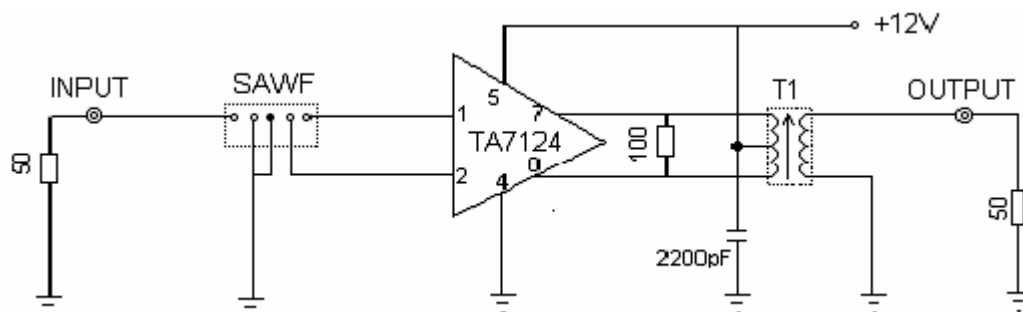


## Pin Configuration

|           |             |
|-----------|-------------|
| 1         | Input       |
| 14        | Input       |
| 4,9,11,13 | Case-ground |
| 2,6       | Ground      |
| 7         | Output      |
| 8         | Output      |



## Test Circuit



## Maximum Ratings

|                            |            |                       |
|----------------------------|------------|-----------------------|
| Operable temperature range | -25 ~65 °C |                       |
| Storage temperature range  | -40~85 °C  |                       |
| DC voltage                 | 12 V       | between any terminals |
| AC voltage                 | 10 V       | between any terminals |

## Electrical Specification

| Items                                                                                                                 | Conditions           | Specification |      |      | Unit       | Remarks   |
|-----------------------------------------------------------------------------------------------------------------------|----------------------|---------------|------|------|------------|-----------|
|                                                                                                                       |                      | Min.          | Typ. | Max. |            |           |
| Insertion Loss                                                                                                        | 36.13 MHz            | 19.2          | 20.7 | 22.2 | dB         |           |
| Pass Bandwidth<br>$\alpha_{rel} \leq 1\text{dB}$<br>$\alpha_{rel} \leq 3\text{dB}$<br>$\alpha_{rel} \leq 30\text{dB}$ | $B_{1\text{dB}}$     | -             | 7.4  | -    | MHz        |           |
|                                                                                                                       | $B_{3\text{dB}}$     | -             | 7.9  | -    | MHz        |           |
|                                                                                                                       | $B_{30\text{dB}}$    | -             | 10.0 | -    | MHz        |           |
| Relative Attenuation                                                                                                  | 25.0~30.15 MHz       | -             | -36  | -30  | dB         |           |
|                                                                                                                       | 30.15~31.25 MHz      | -             | -35  | -28  | dB         |           |
|                                                                                                                       | 31.25 MHz            | -             | -36  | -28  | dB         |           |
|                                                                                                                       | 32.13 MHz            | -4.6          | -3.6 | -2.6 | dB         |           |
|                                                                                                                       | 32.32 MHz            | -             | -1.7 | -    | dB         |           |
|                                                                                                                       | 36.13MHz             | -             | 0    | -    | dB         | Reference |
|                                                                                                                       | 39.94 MHz            | -2.5          | -1.5 | -0.5 | dB         |           |
|                                                                                                                       | 40.13 MHz            | -4.1          | -3.1 | -2.1 | dB         |           |
|                                                                                                                       | 47.25 MHz            | -             | -40  | -37  | dB         |           |
|                                                                                                                       | 41.30~42.00 MHz      | -             | -37  | -30  | dB         |           |
|                                                                                                                       | 42.00~50.00 MHz      | -             | -39  | -33  | dB         |           |
| Amplitude Ripple                                                                                                      | 32.32~39.94 MHz      | 0             | 0.5  | 1.0  | dB         |           |
| Group Delay Ripple                                                                                                    | $\Delta\tau$         | -             | 40   | -    | ns         |           |
| Input Impedance                                                                                                       | $R_{in}$ (36.13MHz)  | -             | 3.4  | -    | K $\Omega$ |           |
|                                                                                                                       | $C_{in}$ (36.13MHz)  | -             | 12.3 | -    | pF         |           |
| Output Impedance                                                                                                      | $R_{out}$ (36.13MHz) | -             | 3.9  | -    | K $\Omega$ |           |
|                                                                                                                       | $C_{out}$ (36.13MHz) | -             | 3.1  | -    | pF         |           |
| Temperature Coefficient of Frequency                                                                                  |                      | -             | -72  | -    | ppm/°C     |           |

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## Frequency Characteristics

