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| Approved by: |
| Checked by:  |
| Issued by:   |

# **SPECIFICATION**

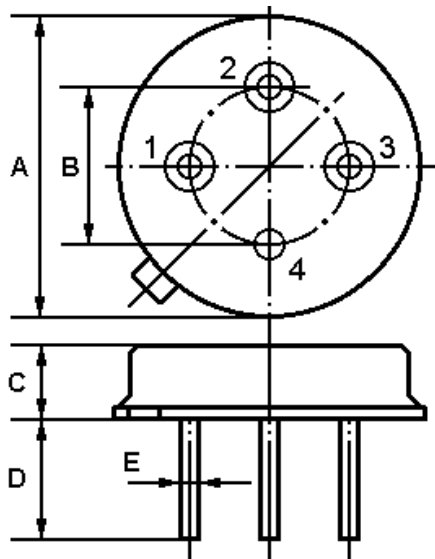
PRODUCT: SAW FILTER

MODEL: NMF479.5-6 TO-39B

**HOPE MICROELECTRONICS CO.,LIMITED**

The NMF479.5-6 is an IF filter for DBS receivers with constant group delay.

### 1.Package Dimension (TO-39)



| Pin | Configuration     |
|-----|-------------------|
| 1   | Input / Output    |
| 2   | Output 2 / Input2 |
| 3   | Output 1 / Input1 |
| 4   | Ground            |

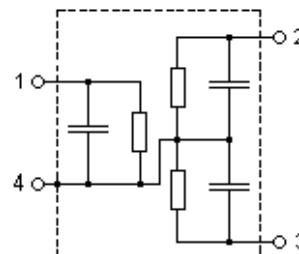
| Dimensions | Data (Unit: mm) |
|------------|-----------------|
| A          | 9.35±0.10       |
| B          | 5.08±0.10       |
| C          | 3.40±0.10       |
| D          | 3.00±0.20       |
| E          | 4-Φ0.45±0.20    |

### 2.Marking

**NMF479.5-6**

Color: Black or Blue

### 3.Equivalent LC Model



### 4.Performance

#### 4-1.Maximum Ratings

| Rating                          |           | Value      | Units |
|---------------------------------|-----------|------------|-------|
| AC Voltage Between Any Two Pins | $V_{PP}$  | 5          | V     |
| DC Voltage Between Any Two Pins | $V_{DC}$  | 0          | V     |
| Storage temperature range       | $T_{stg}$ | -40 to +85 | °C    |
| Operable temperature range      | $T_A$     | -25 to +85 | °C    |

#### 4-2.Electronic Characteristics

|                               |                                    |
|-------------------------------|------------------------------------|
| Reference temperature:        | $T_A = 25 \text{ } ^\circ\text{C}$ |
| Terminating source impedance: | $Z_S = 50 \text{ } \Omega$         |
| Terminating load impedance:   | $Z_L = 50 \text{ } \Omega$         |
| Group delay aperture:         | 0.25MHz                            |

## Characteristics of Channel1

| Characteristic                       |  | Min.             | Typ.   | Max.   | Units |     |
|--------------------------------------|--|------------------|--------|--------|-------|-----|
| Center Frequency                     | $f_c$  | 478.50           | 479.50 | 480.50 | MHz   |     |
| Insertion attenuation                | 479.50 MHz<br>(Reference level for the following data) | $\alpha$         | --     | 21.0   | 22.5  | dB  |
| Pass bandwidth                       | $\alpha_{rel} \leq 3\text{dB}$                         | $B_{3\text{dB}}$ | --     | 27.0   | --    | MHz |
| Relative attenuation                 | $\alpha_{rel}$   |                  |        |        |       |     |
|                                      | 466.00 MHz   | --               | 3.3    | 4.5    | dB    |     |
|                                      | 493.00 MHz   | --               | 2.5    | 4.5    | dB    |     |
| Lower sidelobe                       | 430.00 ... 452.00 MHz                                  | 32.0             | 38.0   | --     | dB    |     |
| Upper sidelobe                       | 507.00 ... 530.00 MHz                                  | 30.0             | 36.0   | --     | dB    |     |
| Reflected wave signal suppression    | 0.13 $\mu$ s ... 2.0 $\mu$ s after main pulse          | 40.0             | 49.0   | --     | dB    |     |
| Amplitude ripple (p-p)               | 471.00 ... 488.00 MHz                                  | $\Delta \alpha$  | --     | 0.6    | 1.2   | dB  |
| Group delay ripple (p-p)             | 466.00 ... 493.00 MHz                                  | $\Delta \tau$    | --     | 11     | 18    | ns  |
| Temperature coefficient of frequency | $TC_f$   | --               | -86    | --     | ppm/K |     |

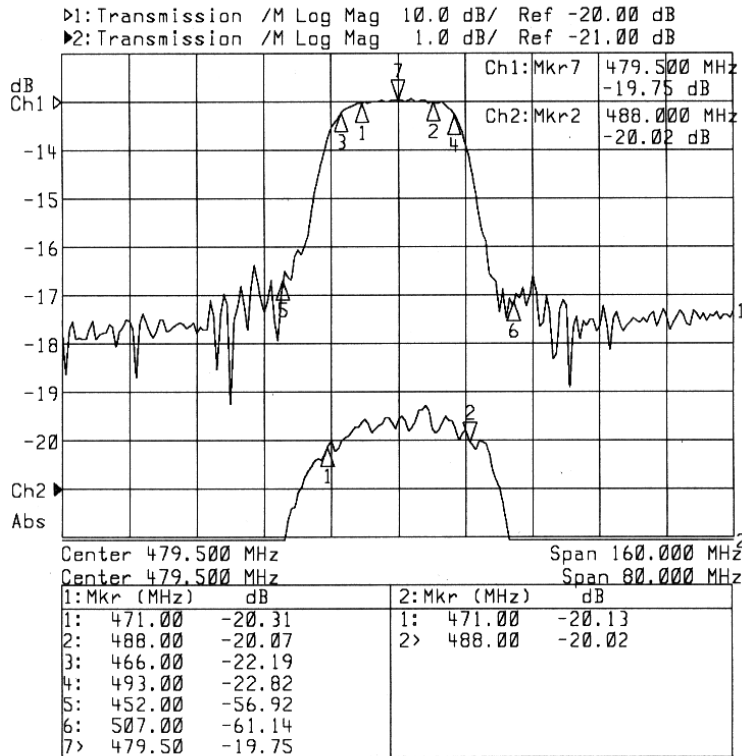
## Characteristics of Channel2

| Characteristic                       |  | Min.             | Typ.   | Max.   | Units |     |
|--------------------------------------|--|------------------|--------|--------|-------|-----|
| Center Frequency                     | $f_c$  | 478.50           | 479.50 | 480.50 | MHz   |     |
| Insertion attenuation                | 479.50 MHz<br>(Reference level for the following data) | $\alpha$         | --     | 21.0   | 22.5  | dB  |
| Pass bandwidth                       | $\alpha_{rel} \leq 3\text{dB}$                         | $B_{3\text{dB}}$ | --     | 18.0   | --    | MHz |
| Relative attenuation                 | $\alpha_{rel}$   |                  |        |        |       |     |
|                                      | 470.50 MHz   | --               | 3.5    | 4.5    | dB    |     |
|                                      | 488.50 MHz   | --               | 2.3    | 4.5    | dB    |     |
| Lower sidelobe                       | 430.00 ... 457.50 MHz                                  | 32.0             | 38.0   | --     | dB    |     |
| Upper sidelobe                       | 500.50 ... 530.00 MHz                                  | 30.0             | 36.0   | --     | dB    |     |
| Reflected wave signal suppression    | 0.13 $\mu$ s ... 3.0 $\mu$ s after main pulse          | 40.0             | 44.0   | --     | dB    |     |
| Amplitude ripple (p-p)               | 476.00 ... 483.00 MHz                                  | $\Delta \alpha$  | --     | 0.6    | 1.2   | dB  |
| Group delay ripple (p-p)             | 470.50 ... 488.50 MHz                                  | $\Delta \tau$    | --     | 11     | 18    | ns  |
| Temperature coefficient of frequency | $TC_f$   | --               | -86    | --     | ppm/K |     |

**ⓘ CAUTION: Electrostatic Sensitive Device. Observe precautions for handling!**

5. Typical Frequency Response

Channel 1



Channel 2

