



# APPROVAL SHEET

| Approval Specification   | Customer's Approval Certificate   |
|--|---|
| <p><b>TO:</b></p> <p><b>Part No.:</b></p> <p><b>Customer's Part No.:</b></p> | <p>Please return this copy as a certification of your approval</p> <p><b>Checked &amp; Approved by:</b></p> <p><b>Date:</b></p> |

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|          |   |           |
|----------|---|-----------|
| Part No. | : | SF2143    |
| Pages    | : | 6         |
| Date     | : | 2013/3/26 |
| Revision | : | 1.0       |

|                     |     |
|---------------------|-----|
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| <b>Checked by:</b>  |     |
| <b>Approved by:</b> |     |

**Application**

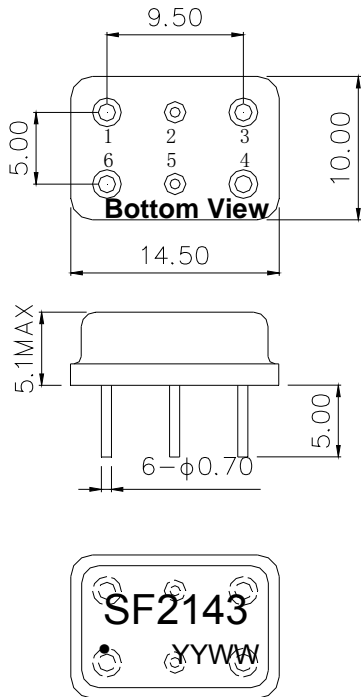
- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 5 MHz

**Features**

- RoHS compatible
- Package size 14.5x10.0x5.10mm<sup>3</sup>
- Package Code DIP1510J
- Electrostatic Sensitive Device(ESD)



**Package Dimensions (Unit: mm)**



**Pin Configuration**

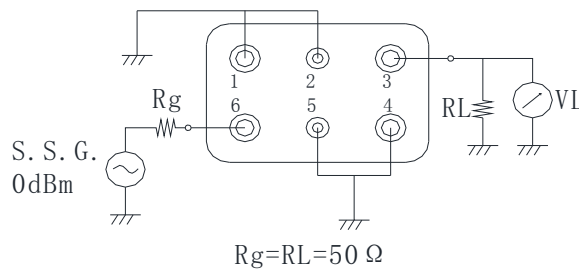
| Pin No. | Description |
|---------|-------------|
| 6       | Input       |
| 3       | Output      |
| 1,2,4,5 | Ground      |

**Marking Description**

|             |                       |
|-------------|-----------------------|
| <b>S</b>    | Trademark             |
| <b>F</b>    | SAW Filter            |
| <b>2143</b> | Part Number           |
| <b>●</b>    | Pin 1                 |
| <b>YYWW</b> | Year Code & Week Code |

\*Fig: If the products produced in 06<sup>th</sup> week of 2012,  
The year code & week code is 1206.

**Test Circuit (Bottom View)**



**Performance****Maximum Rating**

| Item                  |           | Value      | Unit |
|-----------------------|-----------|------------|------|
| DC Voltage            | $V_{DC}$  | 3          | V    |
| Operation Temperature | T         | -40 ~ +85  | °C   |
| Storage Temperature   | $T_{stg}$ | -55 ~ +125 | °C   |
| RF Power Dissipation  | P         | 10         | dBm  |

**Electronic Characteristics**

Test Temperature:  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$

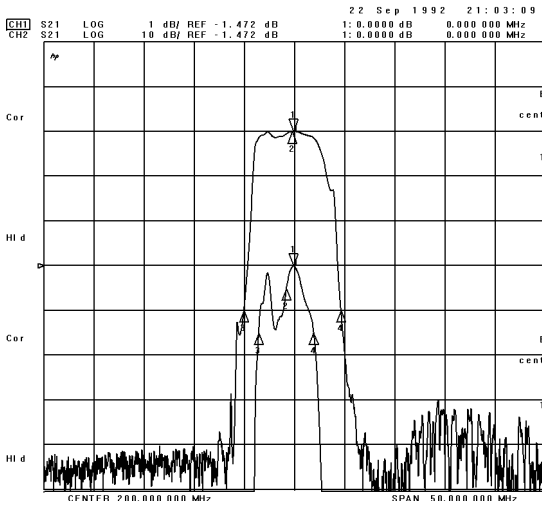
Terminating source impedance:  $50\Omega$

Terminating load impedance:  $50\Omega$

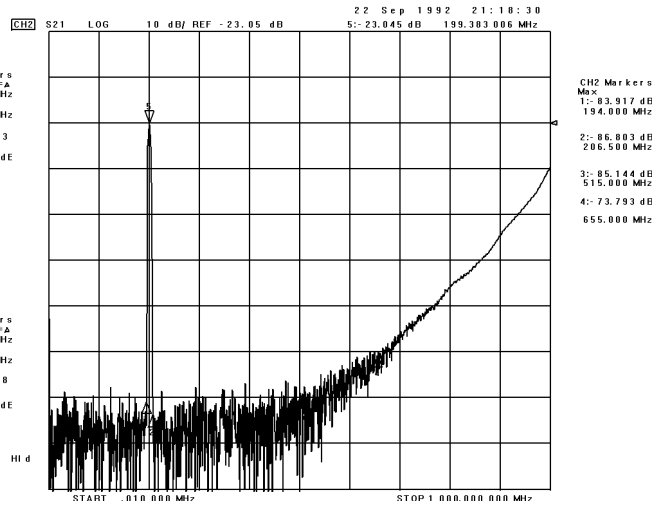
| Item                   |                  | Minimum | Typical | Maximum | Unit |
|------------------------|------------------|---------|---------|---------|------|
| Center Frequency       | $f_c$            | 198.0   | 200.0   | 202.00  | MHz  |
| Insertion Loss(min)    | IL               |         | 2.0     | 4.5     | dB   |
| Amplitude Ripple (p-p) | $\Delta a$       |         | 1.4     | 1.5     | dB   |
| 1.5 dB Bandwidth       | $BW_{1.5dB}$     | 5.0     | 5.5     |         | MHz  |
| Absolute Attenuation   | $a$              |         |         |         |      |
|                        | 10.00-190.00 MHz | 50.0    | 60.0    |         | dB   |
|                        | 210.00-500.00MHz | 50.0    | 60.0    |         | dB   |

Frequency Characteristics

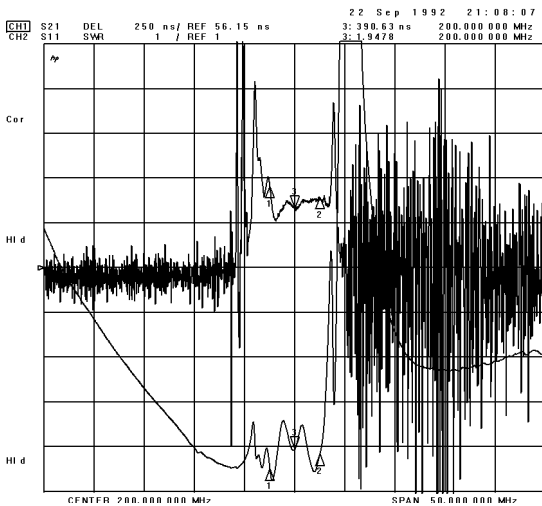
Frequency Response



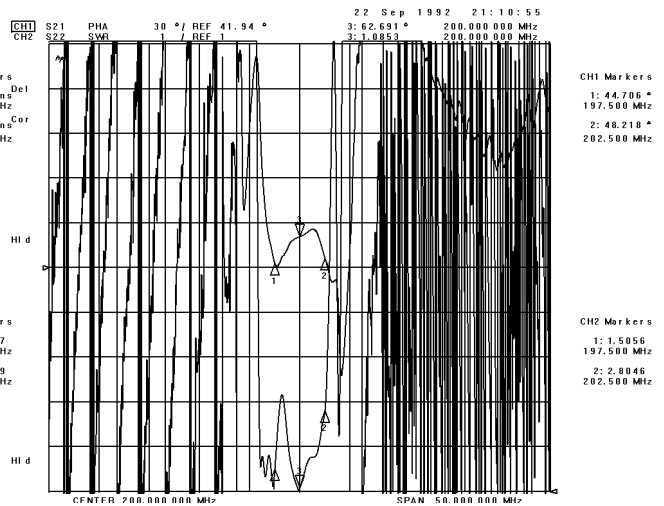
Frequency Response (wideband)



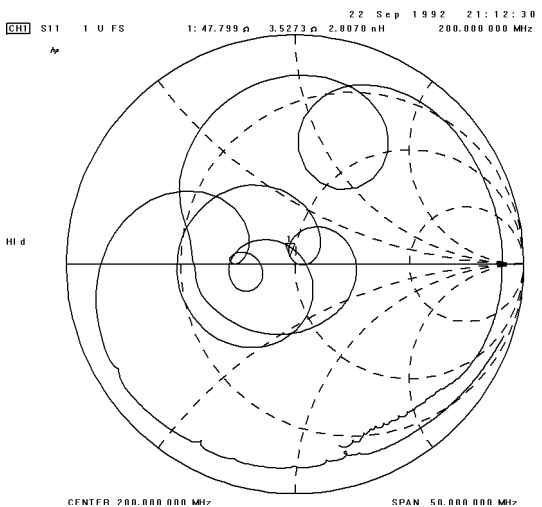
Delay Ripple & S11 VSWR



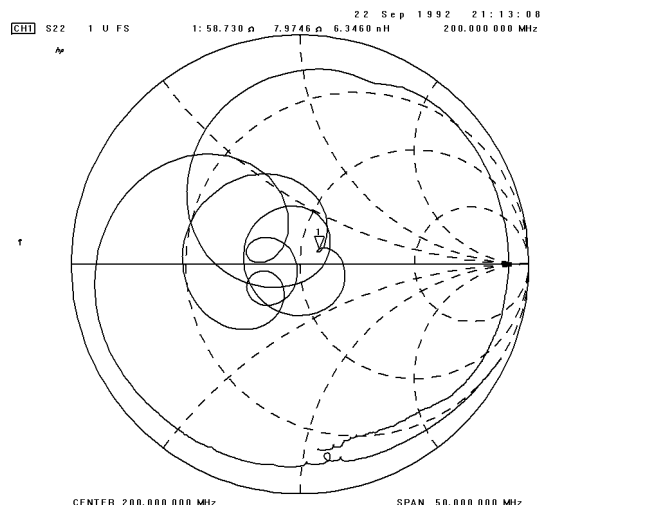
Phase Linearity & S22 VSWR



S11 Smith Chart



S22 Smith Chart





**Notes**

1. As a result of the particularity of inner structure of SAW products, it easy to be breakdown by electrostatic, so we should pay attention to **ESD protect** in the test.
2. **Static voltage** between signal load and ground may cause deterioration and destruction of the component. Please avoid static voltage.
3. **Ultrasonic cleaning** may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning.
4. Only leads of component may **be soldered**. Please avoid soldering another part of component.
5. There is a close relationship between the device's performance and **matching network**. The specifications of this device are based on the test circuit shown above. L and C values may change depending on board layout. Values shown are intended as a guide only.