



APPROVAL SHEET

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

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| | | |
|----------|---|-----------|
| Part No. | : | SF2144 |
| Pages | : | 6 |
| Date | : | 2013/2/27 |
| Revision | : | 1.0 |

| | |
|---------------------|-----|
| Prepared by: | 郑宝琴 |
| Checked by: | |
| Approved by: | |

Application

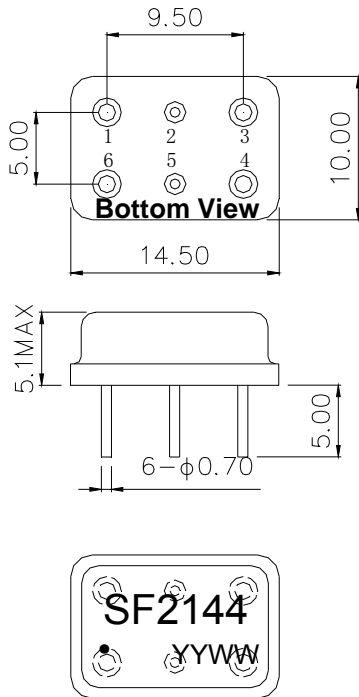
- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 2 MHz

Features

- RoHS compatible
- Package size 14.5x10.0x5.10mm³
- Package Code DIP1510J
- Electrostatic Sensitive Device(ESD)



Package Dimensions (Unit: mm)



Pin Configuration

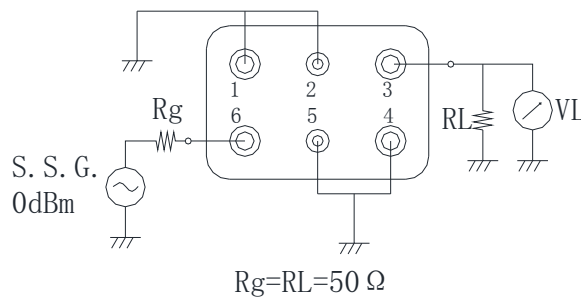
| Pin No. | Description |
|---------|-------------|
| 6 | Input |
| 3 | Output |
| 1,2,4,5 | Ground |

Marking Description

| | |
|-------------|-----------------------|
| S | Trademark |
| F | SAW Filter |
| 2144 | Part Number |
| ● | Pin 1 |
| YYWW | Year Code & Week Code |

*Fig: If the products produced in 06th 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: $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$

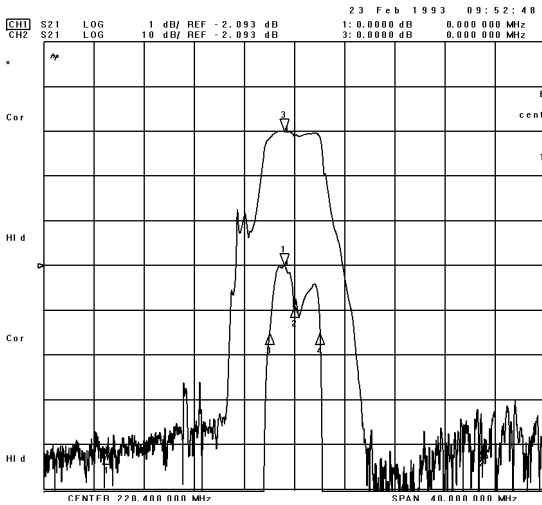
Terminating source impedance: 50Ω

Terminating load impedance: 50Ω

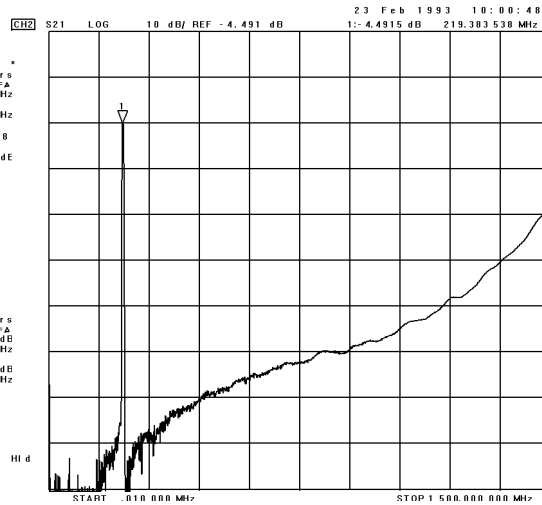
| Item | | Minimum | Typical | Maximum | Unit |
|--|----------------|---------|---------|---------|------|
| Center Frequency | f_c | 220.1 | 220.4 | 220.7 | MHz |
| Insertion Loss(min) | IL | | 2.1 | 4.0 | dB |
| Amplitude Ripple (p-p) 218.90-221.90MHz | $\Delta\alpha$ | | 1.2 | 1.5 | dB |
| 1.5 dB Bandwidth | $BW_{1.5dB}$ | 3.5 | 4.0 | | MHz |
| Absolute Attenuation | α | | | | |
| DC -205.40 MHz | | 60.0 | 61.0 | | dB |
| 205.4 MHz | | 60.0 | 70.0 | | dB |
| 205.40-214.00MHz | | 50.0 | 55.0 | | dB |
| 235.4 MHz | | 60.0 | 70.0 | | dB |
| 227.00- 700.00MHz | | 50.0 | 51.0 | | dB |
| Input VSWR 218.90-221.90MHz | | | 1.9:1 | 2.5:1 | / |
| Output VSWR 218.90-221.90MHz | | | 1.8:1 | 2.5:1 | / |

Frequency Characteristics

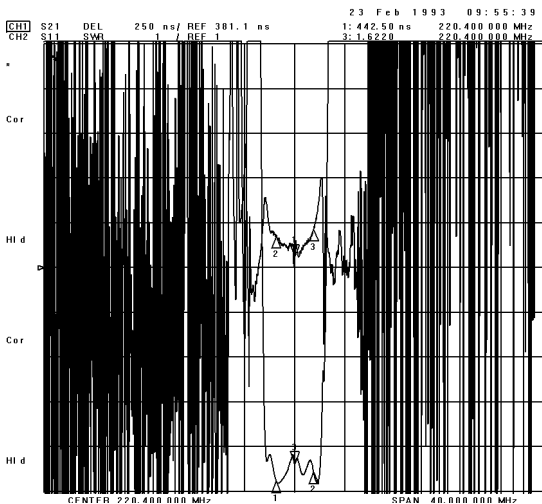
Frequency Response



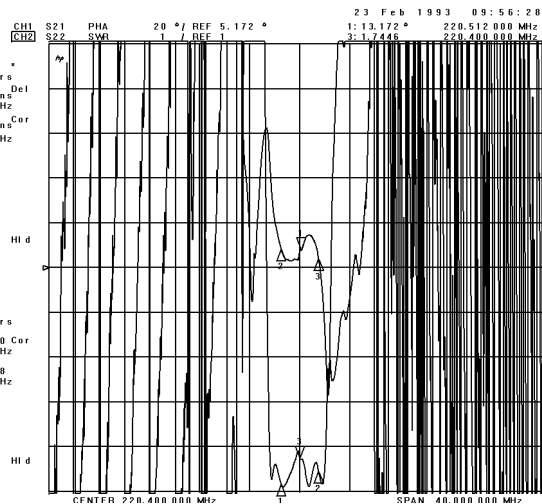
Frequency Response (wideband)



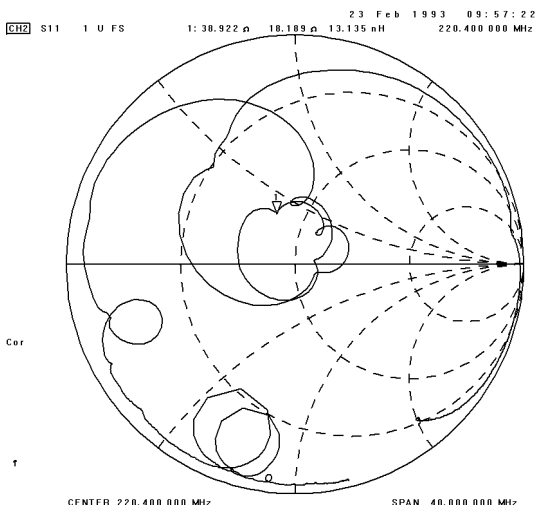
Delay Ripple & S11 VSWR



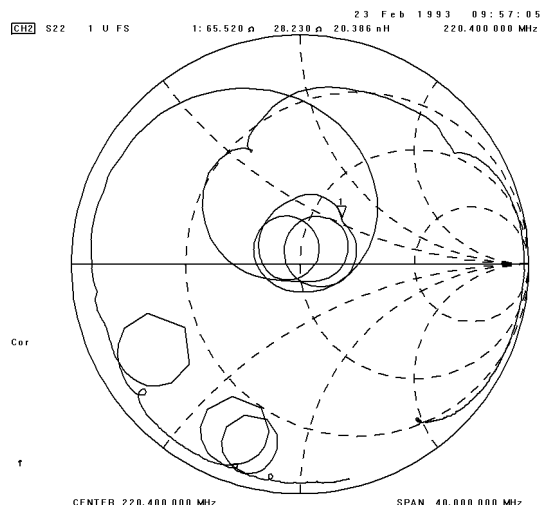
Phase Linearity & S22 VSWR



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.