

SPECIFICATION FOR APPROVAL

<p>CUSTOMER'S APPROVAL CHOP</p> <p>Approval's condition: _____</p> <p>Approved date: _____</p>
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KINDLY RETURN A SET WITH YOUR COMPANY'S OFFICIAL STAMP
ON APPROVAL OF THIS ITEM

CUSTOMER'S NAME: _____

CUSTOMER'S MODEL NO. : _____

CUSTOMER'S PART NO. : _____

DESCRIPTION: **CERAMIC DUPLEXER**

Semitel'S MODEL NO. : **SD2140_1950B_60_60_40_071**

VERSION: **01**

DATE: **2025/4/25**

- Attachments:**
- Product Specification
 - Sample Qty. :
 - Test Data

Prepared By	Checked By	Approved By
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1.FEATURES

- Small Size, Light weight
- SMT package soldering
- Ideal for Microwave telecommunication

2.SPECIFICATIONS

ELECTRICAL SPECIFICATIONS				
NO	ITEM	ANT >> Low	ANT >> High	Unit
1	Center Frequency [fo]	1950	2140	MHz
2	Bandwidth [BW]	fo ±30[1920~1980]	fo±30[2110~2170]	MHz
3	Insertion Loss in BW	1.8 max.	1.8 max.	dB
4	Ripple in BW	1.0 max.	1.0 max.	dB
5	Return Loss in BW(S11 , S22)	15.0 min.	15.0 min.	dB
6	In/Out Impedance	50		Ω
7	Attenuation[Absolute value]	60 min.@ 2110~2170MHz	60 min.@1920~1980MHz	dB
8	Operation Temperature Range	-40°C to +105°C		

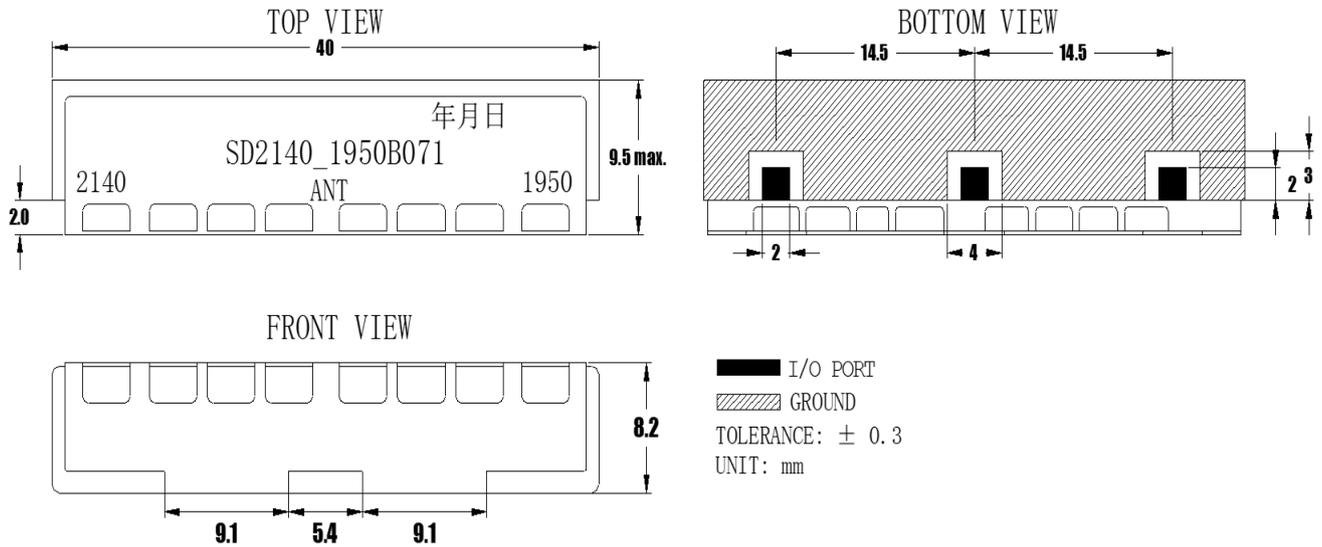
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3. OUTLINE DRAWING and Weight

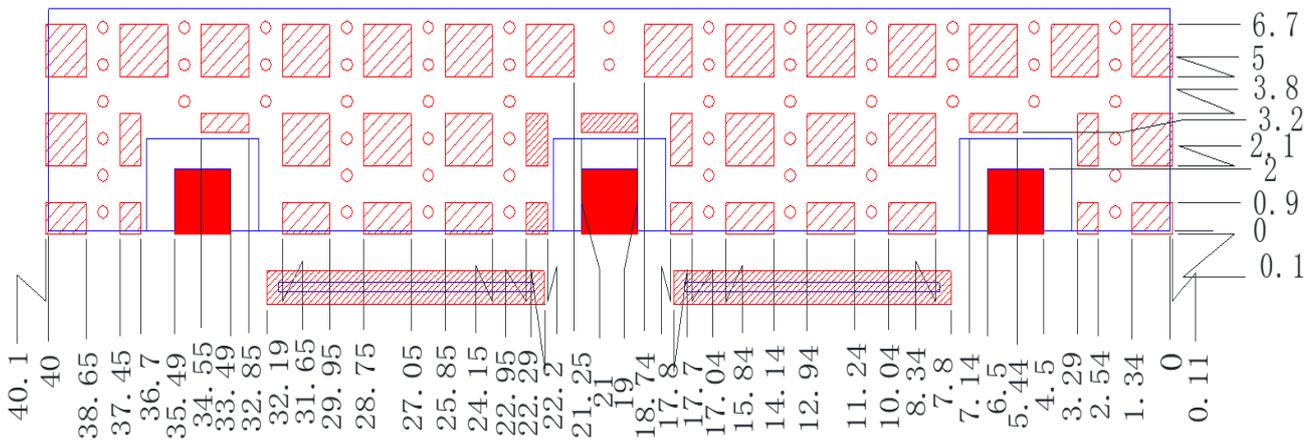
3.1. Filter drawing

3.2. P/N SD2140_1950B_60_60_40_071 Marking information as

3.3. Unit weight: TBD Ref.



4. RECOMMENDED PC BOARD PATTERN



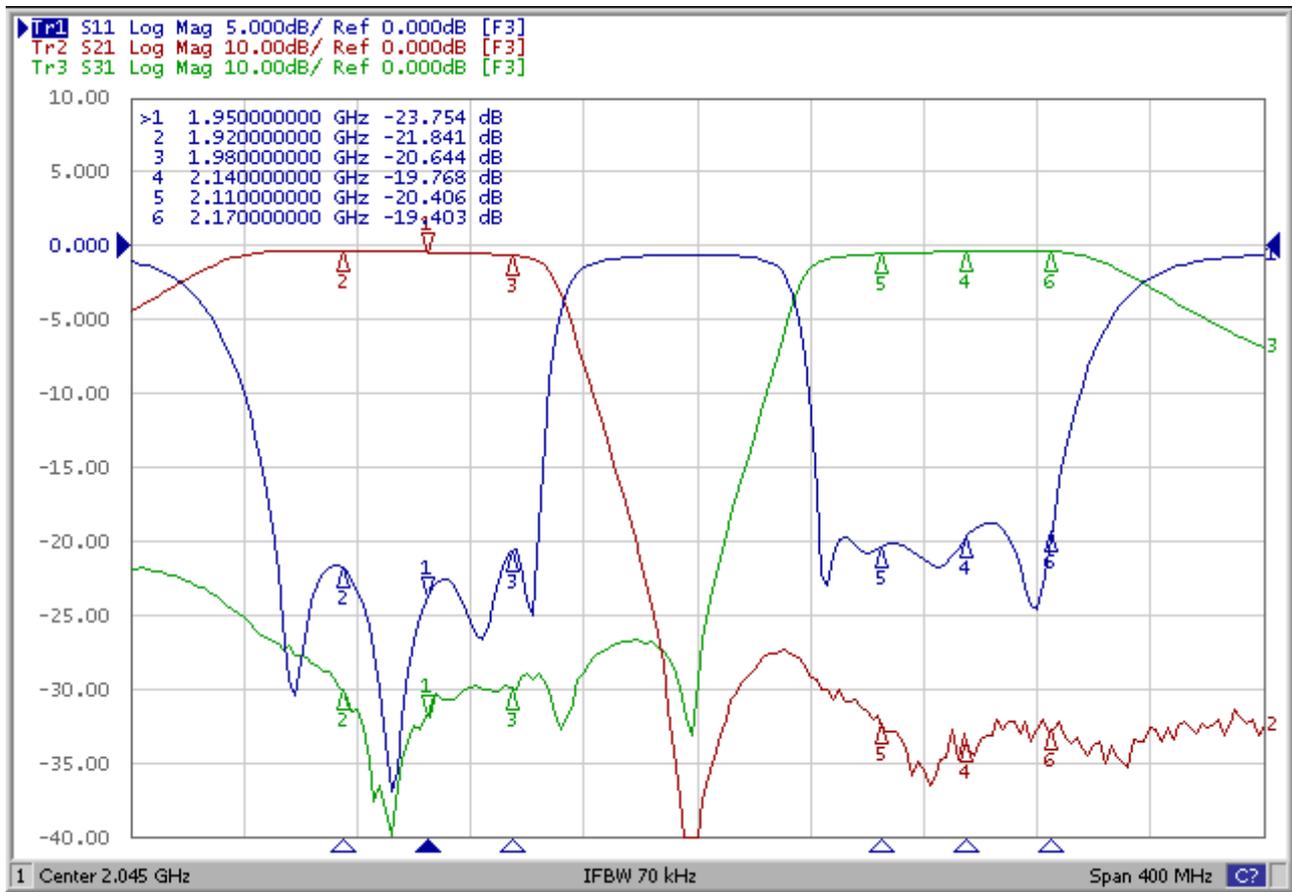
Remark: Recommending using silver-containing solder paste.



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5.FREQUENCY RESPONSE

5.1. Simulation Response



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6. Tape and Reel Dimension

6.1. Quantity per reel: TBD

6.2. Taping Dimension

Unit : mm

6.3. Reel Dimension

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7.Environmental Test

7.1 Vibration Resist

The device should satisfy the electrical characteristics after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X, Y and Z directions.

7.2 Steady Damp Heat Test

The device should satisfy the electrical characteristics after exposed to the temperature $40 \pm 2^{\circ}\text{C}$ and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condition.

7.3 High Temperature Storage

The device should satisfy the electrical characteristics after exposed to temperature $85 \pm 5^{\circ}\text{C}$ or 96 ± 2 hours and 1~2 hours recovery time under normal temperature.

7.4 Low Temperature Storage

The device should also satisfy the electrical characteristics after exposed to the temperature $40^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 96 ± 2 hours and to 2 hours recovery time under normal temperature.

7.5 Thermal Shock

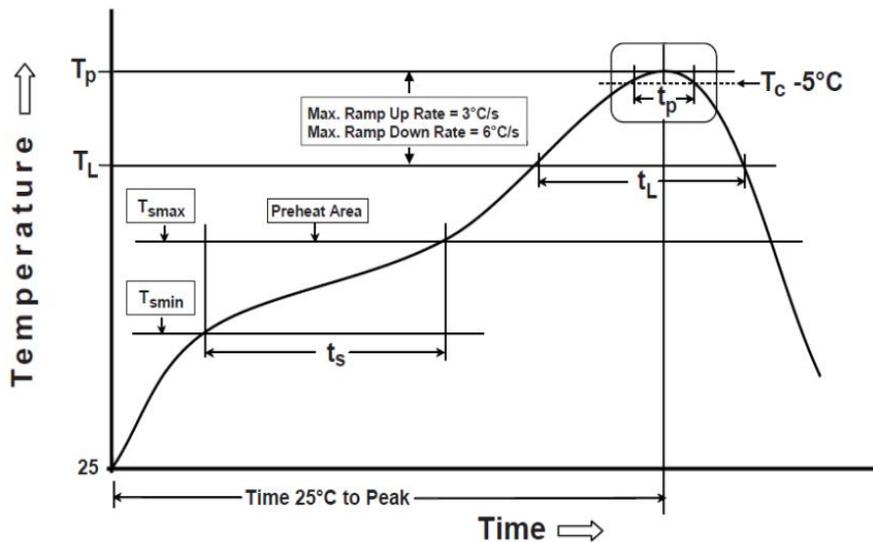
The device should also satisfy the electrical characteristics after exposed to the low temperature -40°C and high temperature $+85^{\circ}\text{C}$ for 30 ± 2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

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8.Notice

1. RoHS 2.0
2. MSL-2a
3. Reflow temperature recommendation

Profile feature		Pb-Free Assembly(SnAgCu)
PREHEAT	Temperature Min(Tsmin)	150°C
	Temperature Max(Tsmax)	200°C
	Time(ts) (from Tsmin to Tsmax)	60-120 seconds
RAMP-UP	Ramp-up rate (TL to TP)	3 °C/second max.
REFLOW	Liquidus Temperature(TL)	217°C
	Total Time maintained above TL (t L)	30-100 seconds
PEAK	Temperature(TP)	250°C
	Time (tp)	25 seconds
RAMP-DOWN	Ramp-down rate (TP to TL)	6 °C / second max.
Time (from 25°C to Peak Temperature) 25°C		8 minutes max.



This product may not be used in the following environments:

- 1.Ambient air containing corrosive gas and volatile or combustible gas.
- 2.In liquid and in environments with a high concentration of airborne particles.

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