

# SGC Technologies Inc.

Wireless and Internet Communications

Specification No. SB-2R-SM-1575BP5M

## PRODUCT SPECIFICATION FOR INFORMATION

**ISSUED DATE : 2001/11/09**

**PRODUCT NAME : SB-2R-SM-1575BP5M**

**PART NO : SB-2R-SM-1575BP5M**

### APPROVAL

WE HAVE RECEIVED THE ATTACHED SPECIFICATION.

**DATE : 2001-11-09**

**COMPANY :** \_\_\_\_\_

**DIVISION :** \_\_\_\_\_

REPRESENTATIVE

RECEIVED BY

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

**RESEARCH INSTITUTE**

PREPARED BY

APPROVED BY

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

**SGC Technologies Inc.**

Made in KOREA

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# SGC Technologies Inc.

## Wireless and Internet Communications

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### 1. APPLICATIONS

- 1-1. The product of this specification is intended to provide a standard use for mobile communication equipment such as cellular telephone, cordless telephone, pager, wireless terminals for business use and their stations. However, generation of trouble may be accelerated due to life and their stations. However, generation of trouble may be accelerated due to life and characteristics deterioration in case the product is used improperly. Particularly when the product is installed in equipment required to ensure safety, you are requested to make a previous check on final product in connection with individual trouble of this product in order to make it sufficiently safe as a set.
- 1-2. if you have a question about the safety of this product, please inform us it so that the problem will be technically solved.
- 1-3. As for applications to such equipment as mentioned in the following, we are ready to provide separate specifications through individual consultation.

### 2. PART NUMBER

SGC PART NUMBER	CUSTOMER PART NUMBER
SB-2R-SM-1575BP5M	

### 3. SCOPE

This specification applies to microwave dielectric band pass filter SB-2R-SM-1575BP5M

### 4. RATINGS

- 4-1. Operating Temperature range : -30°C to +85°C
- 4-2. Storage Temperature range : -40°C to +85°C

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### 5. ELECTRICAL SPECIFICATIONS

TABLE. 1

ITEM	SPECIFICATIONS	
CENTER FREQUENCY	1575.42MHz	
PASS BAND WIDTH	Fo $\pm$ 2.5 MHz	
INSERTION LOSS	3.0dB max	
RIPPLE	0.5dB max	
V.S.W.R	1.7 max	
ATTENUATION	Freq.	ATT.
	Fo $\pm$ 30MHz	10dB min
	Fo $\pm$ 50MHz	18dB min
INPUT/OUTPUT IMPEDANCE	50 $\Omega$	

#### 5-1. Measuring conditions

5-1-1. EQUIPMENT used : HP 8753E

5-1-2. TEST JIGS used : Specified jigs (loss: 0.5 dB)

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### 6. ENVIRONMENTAL SPECIFICATIONS

#### 6-1. TEST CONDITIONS

BASIC CONDITIONS :Temperature 20℃ , relative humidity 65% RH

STANDARD CONDITIONS : Temperature Range 5~35℃

Humidity Range 45~85%

unless otherwise specified for the test and judgment

#### 6-2. ENVIRONMENTAL PERFORMANCE

##### 6-2-1. TEMPERATURE CHARACTERISTICS

TABLE 1 should be satisfied at temperatures ranging from -30℃ to +85℃

##### 6-2-2. HEAT RESISTANCE

Leave the product in the test bath at temperatures +85℃ ±2℃ for 72±2hours. Take it out leave it in a stationary state for 1 to 2 hours. Then it should satisfy the TABLE 1.

##### 6-2-3. COLD RESISTANCE

Leave the product in the test bath at temperatures -40℃ ±5℃ for 72±2hours. Take it out leave it in a stationary state for 1 to 2 hours. Then it should satisfy the TABLE 1.

##### 6-2-4. MOISTURE RESISTANCE

Leave the product in the test bath at temperatures -40℃ ±2℃ and humidity 90 to 95% for 48±2hours. Take it out leave it in a stationary state for 1 to 2 hours. Then it should satisfy the TABLE 1.

##### 6-2-5. HEAT IMPACT RESISTANCE

Test the product at low temperature(-40℃ ±5℃) and high temperature(+85℃ ±2℃) for 30±2 min. each by 5 cycles, and leave it in a stationary state for 1 to 2 hours. Then it should satisfy the TABLE 1.

##### 6-2-6. SOLDERABILITY

Leave it at temperatures shown in FIG.1 for specified length of time. Solder shall be sticking to more than 95% of the part.

Solder : Pb (37 to 38 %) / Sn (62 to 63 %)

Flux : RMA ( 9 to 11 %)

##### 6-2-7. VIBRATION RESISTANCE

Test the product by vibration of full amplitude 1.5 mm at 5Hz ~ 55Hz and acceleration 49 m/s<sup>2</sup> at 55 ~ 150 Hz by sweep 0.1 oct/min. for 2 hours each in the direction of x, y, z. Then it should satisfy the TABLE 1.

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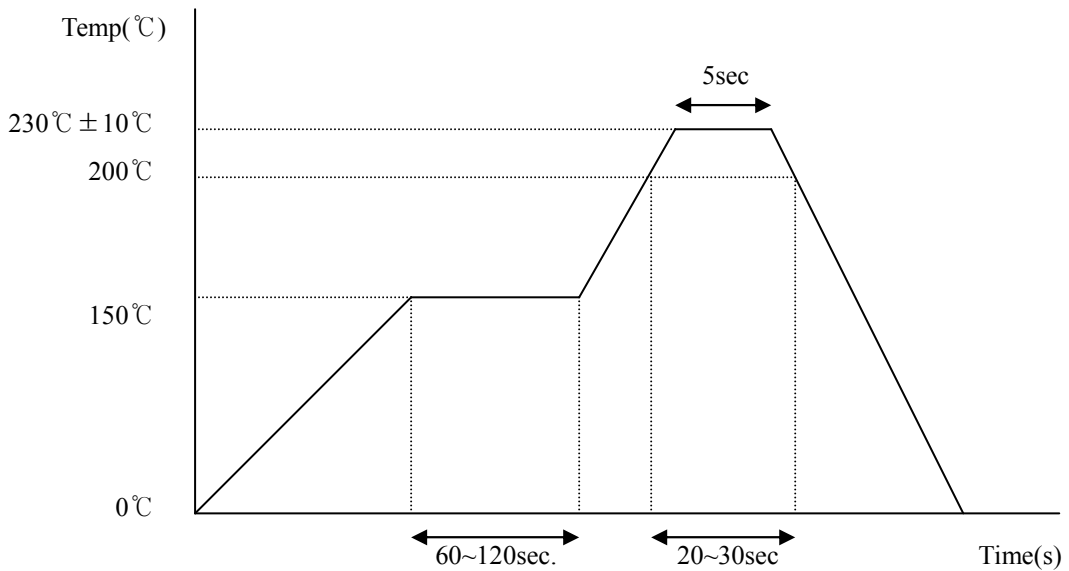
### 6-2-8. IMPACT RESISTANCE

Apply impact of maximum acceleration  $200 \text{ m/s}^2$  and sine half-wave (working time  $7 \sim 11 \text{ m/s}$ ) to the product, 3 times each in six different directions. Then it should satisfy the TABLE 1.

### 6-2-9. SOLDERING HEAT RESISTANCE

Leave it at temperatures shown in FIG.2 for specified length of time. After two cycle of this operation, keep it in standard conditions for 1 to 2 hours. Then it should satisfy the TABLE 1.

FIG.1 RECOMMENDED TEMPERATURE PROFILE



### 6-2-10. SHOCK RESISTANCE (DROP)

Install the product in the real unit dummy(159 g) and let it drop under the following conditions.

Then it should satisfy the TABLE 1.

- On p-tile : 150 cm. 6surfaces. 5 time each

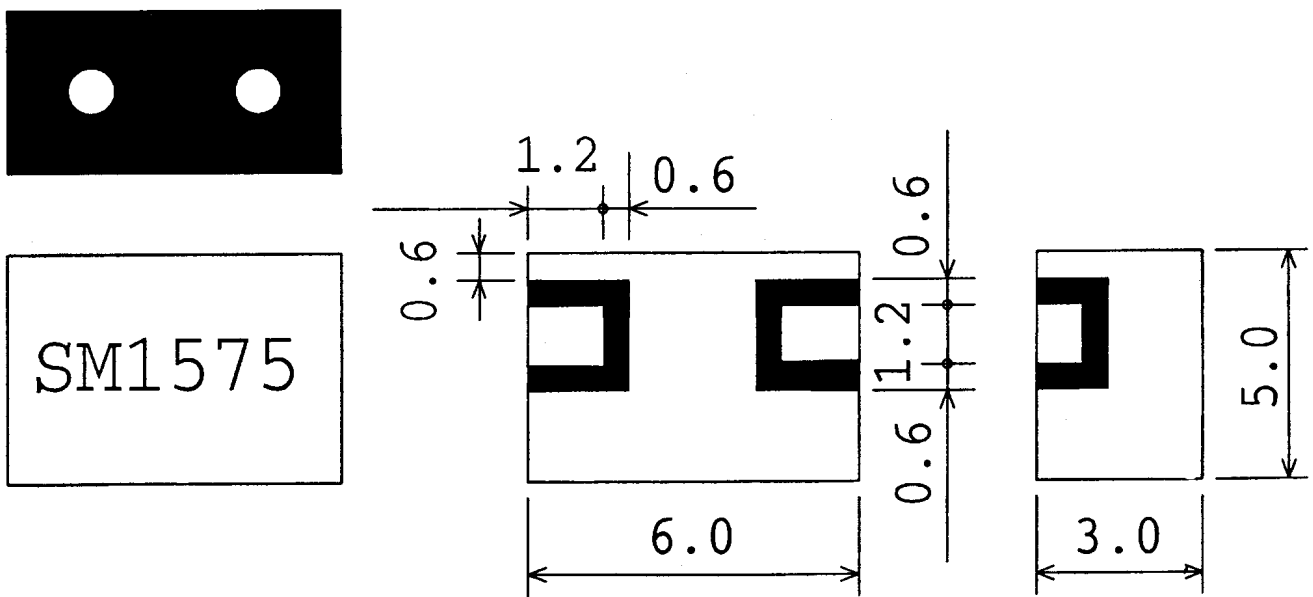
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## 7. APPERANCES AND DIMENSIONS



UNIT : mm

TOLERANCE : +/- 0.3

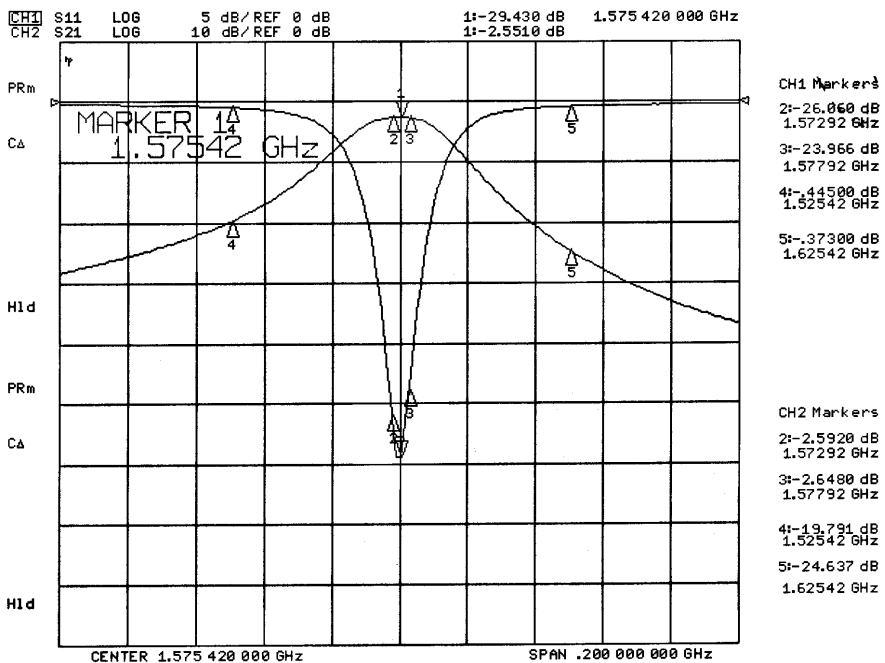
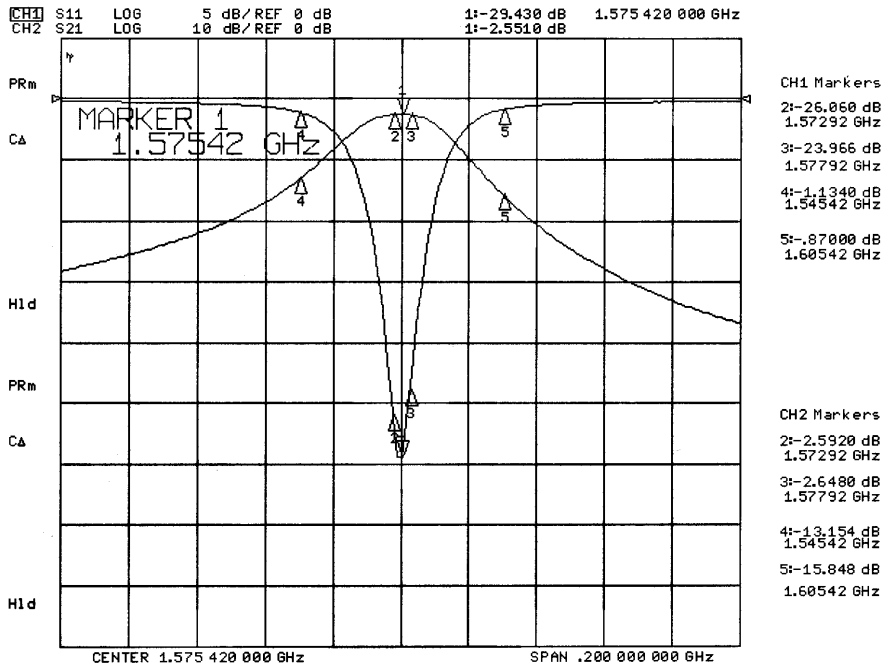
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## 8. DIAGRAM



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### 9. MATERIALS

FIG 2

NO	NAME	COMPOSITION AND MATERIALS
8-1	RESONATOR	DIELECTRIC MATERIALS
8-2	NUMBER of POLE	2POLE
8-3	IN/OUTPUT TERMINALS	C5 194 Ag PLATED
8-4	GROUND BASE	C5 194 Ag PLATED

### 10. OTHER

#### 10-1. HANDLING PRECIFICATIONS

Handling precautions should be followed the specifications,SB-2R-SM-1575BP5M

#### 10-2. HEAD OFFICE & FACTORY

ADDRESS : 212-2, MAERYOO-RI, NEUNGSEO-MYUN, YEOJU-KUN, KYUNGKI-DO, 469-810, KOREA

TEL: 82 31 884 0236~8 FAX: 82 31 884 0239 E-MAIL: [sales@sgctech.co.kr](mailto:sales@sgctech.co.kr) <http://www.sgctech.co.kr>

#### 10-3. SALES BRANCH

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