

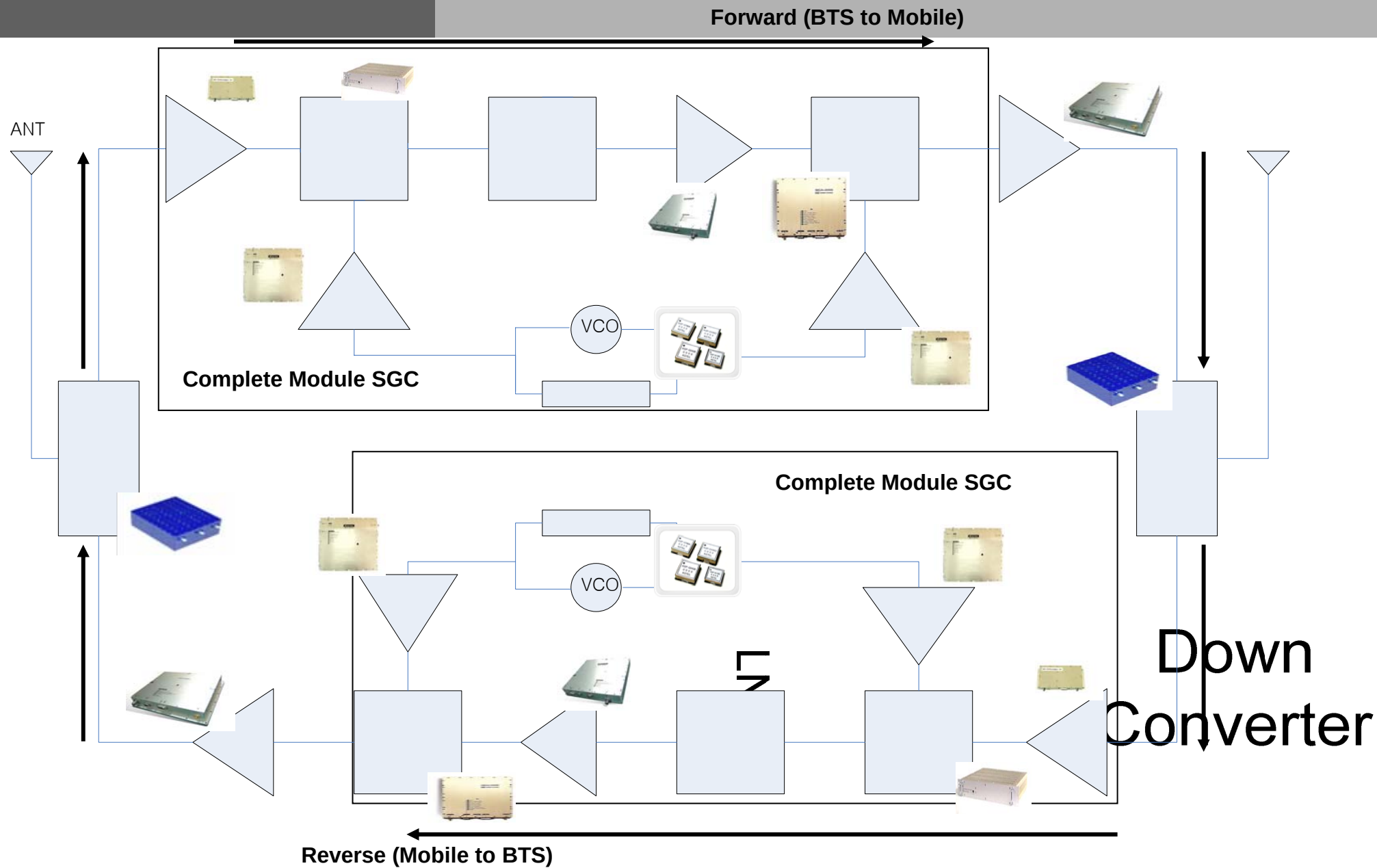
**RF Components**  
**Product Information for Wi-bro & Wi-max**

**2005.12.01**

**SGC Technologies Inc.**  
**Wireless and Internet Communications.**  
**212-2 MAERYOO-RI NEUNGSEO-MYUN YEOJU-KUN,**  
**KYUNGKI-DO.KOREA 469-811**  
**TEL : +82-31-884-0236 FAX : +82-31-884-0239**  
**Home Page : <http://www.sgctech.co.kr>**

- 
- I. PRODUCT OVERVIEW**
  - II. ACTIVE COMPONENT**
  - III. PASSIVE COMPONENT**
  - IV. TRANSCEIVER MODULE**
-

I. PRODUCT OVERVIEW



# 1) FREQUENCY RANGE GUARD

## Remark

**SKT: First Band**

**Band Width: 27 MHz**

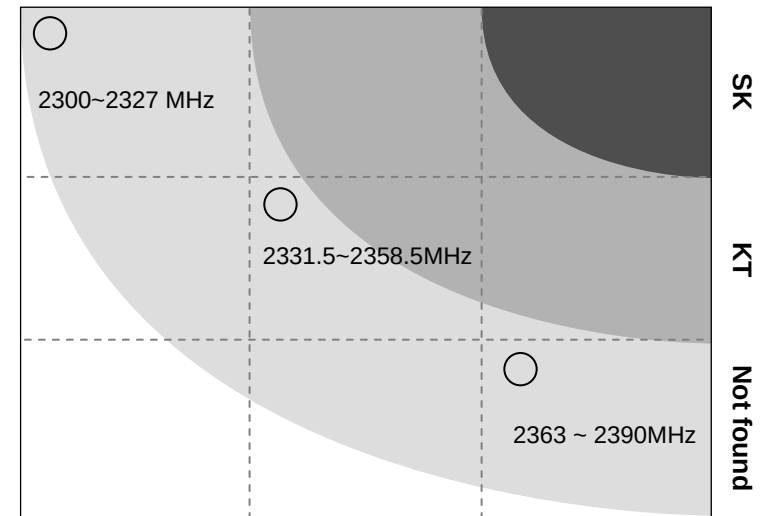
**KT: Second Band**

**Band Width: 27 MHz**

**Not found: Third Band**

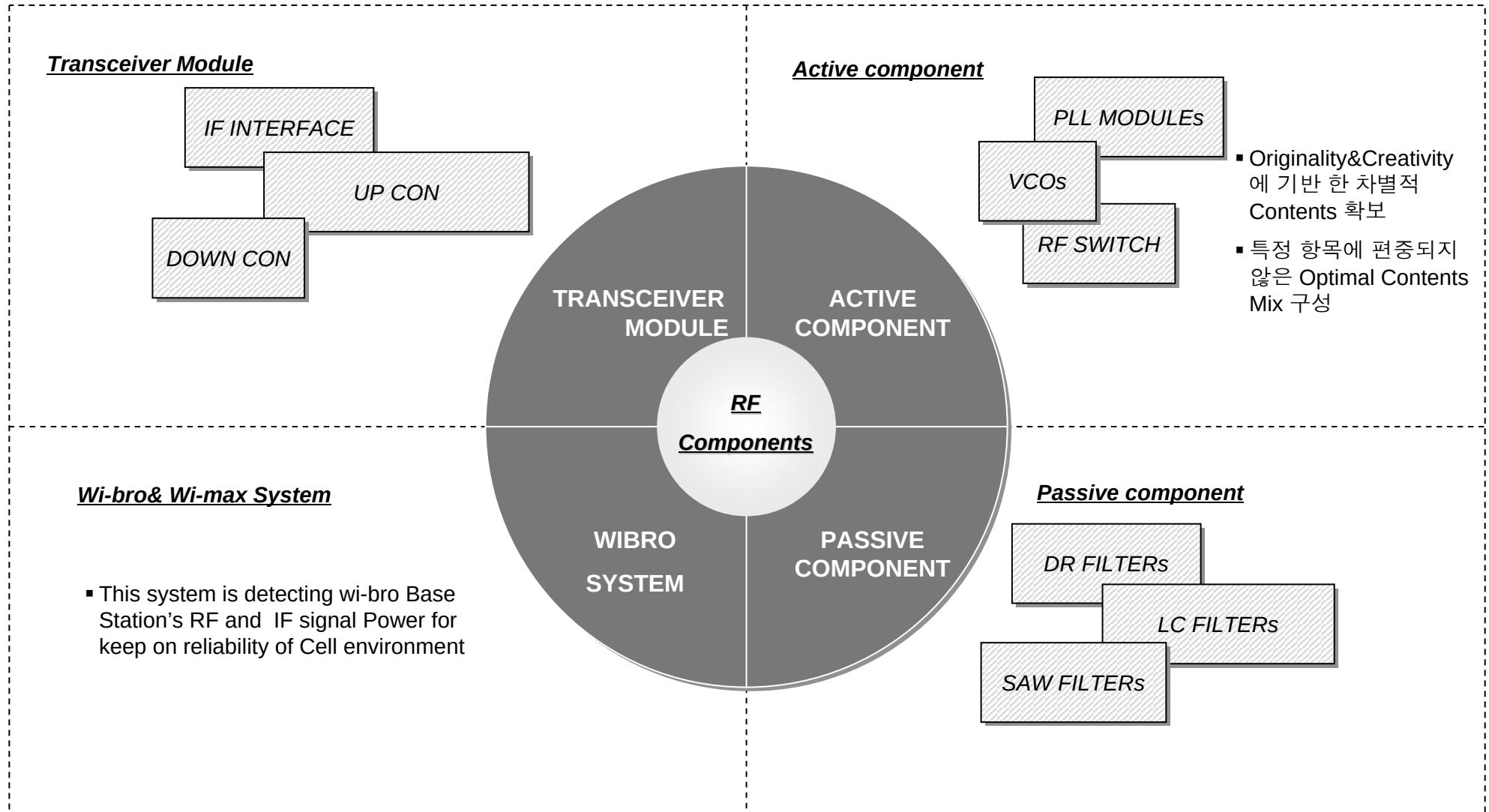
**Band Width: 27 MHz**

## Frequency Range



## Wi-bro Frequency Range

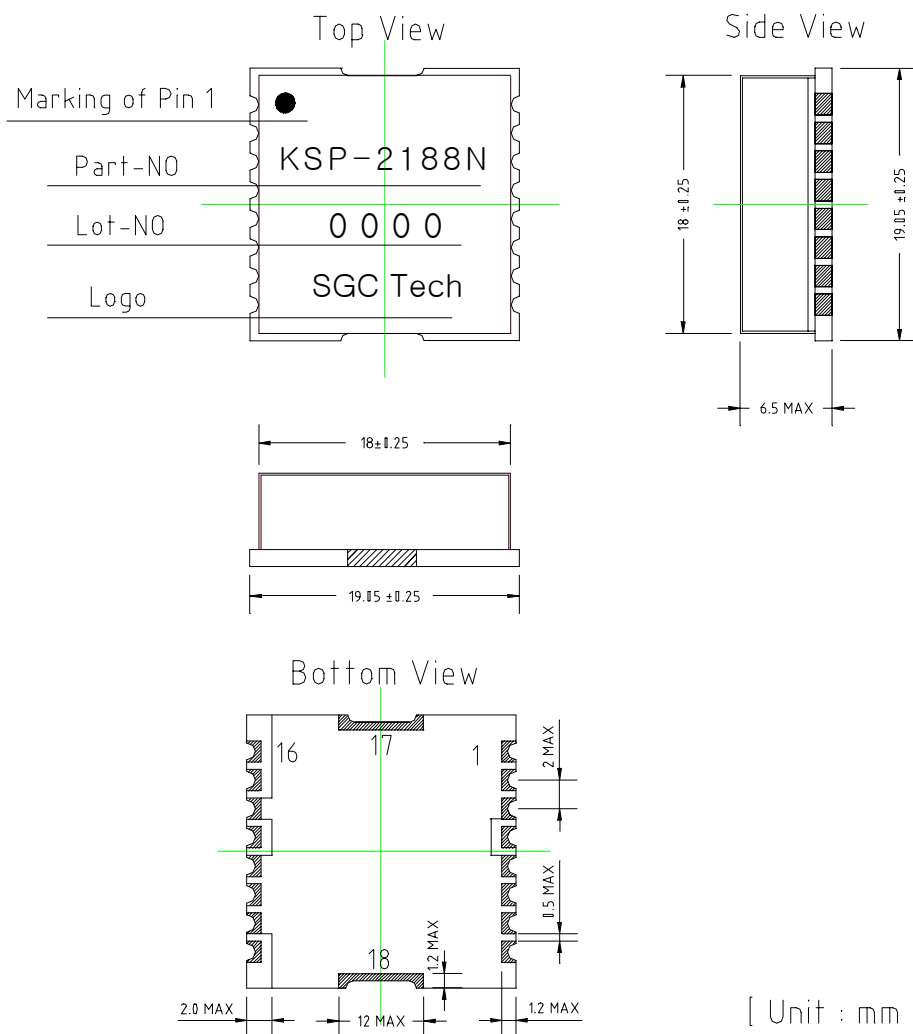
## 2) To-be Picture



## II. ACTIVE COMPONENT

### - PLL MODULE

#### Mechanical Specifications (19.05 X 19.05 X 6.5t)



#### Terminal Connection

| Pin NO                                                    | Terminal NAME       |
|-----------------------------------------------------------|---------------------|
| 4                                                         | Osc. IN             |
| 9                                                         | VCO Vcc(DC +5V) IN  |
| 13                                                        | RF Out              |
| 15                                                        | PLL Vcc (DC +5V) IN |
| 16                                                        | Lock Detect (LD)    |
| 1, 2, 3, 5, 6, 7, 8, 10, 11, 12, 14, 17, 18 : Ground Pins |                     |

## II. ACTIVE COMPONENT

- PLL MODULE

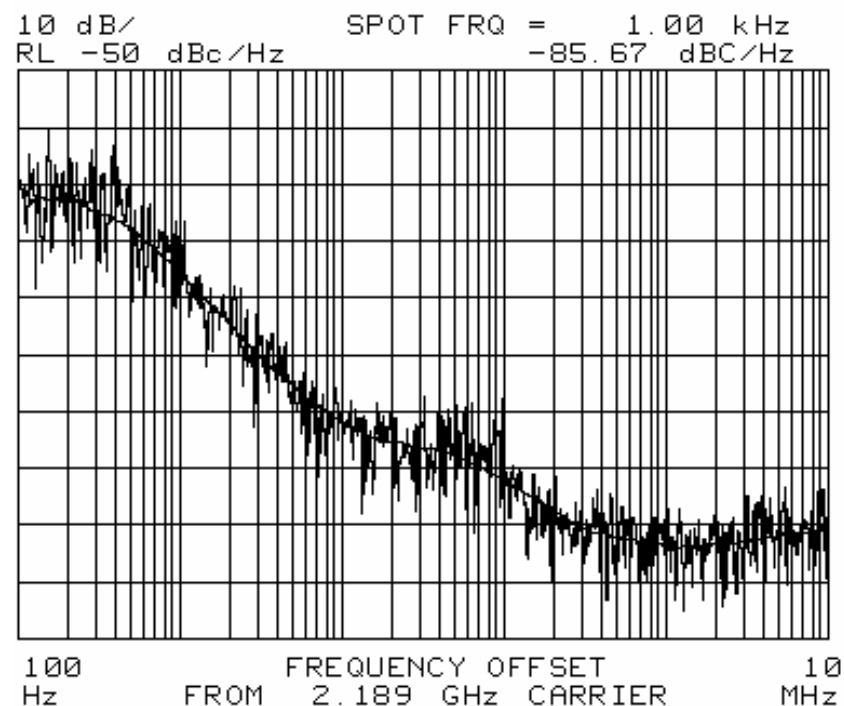
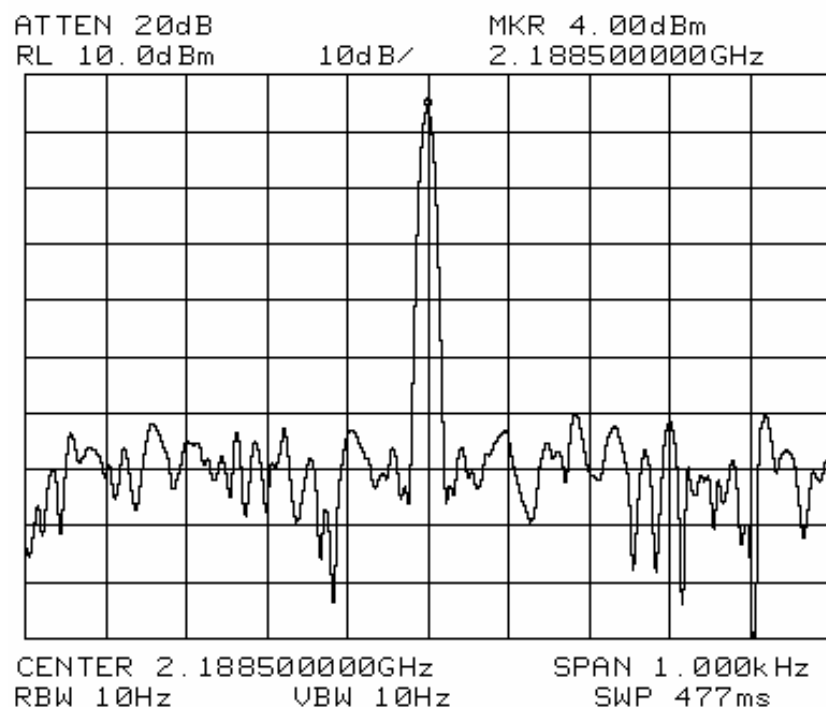
### Electrical Specifications

| NO | ITEM                      |      | UNIT     | MIN   | TYP     | MAX   |
|----|---------------------------|------|----------|-------|---------|-------|
| 1  | Operating Frequency Range |      | MHz      | -     | 2188.50 | -     |
| 2  | Output Power Level        |      | dBm      | +3.0  | +5.0    | +7.0  |
| 3  | Harmonics                 | 2'nd | dBc      |       |         | -20   |
|    | Level                     | 3'rd | dBc      |       |         | -30   |
| 4  | Spurious Level            |      | dBc      |       |         | -70   |
| 5  | Phase Noise               |      |          |       |         |       |
|    | at offset @ 1kHz          |      | dBc/Hz   |       | -85     |       |
|    | at offset @ 10kHz         |      | dBc/Hz   |       | -110    |       |
|    | at offset @ 100kHz        |      | dBc/Hz   |       | -120    |       |
| 6  | Lock time                 |      | msec     |       |         | 30    |
| 7  | Output Impedance          |      | $\Omega$ |       | 50      |       |
| 8  | VCO Supply Voltage        |      | V        | +4.75 | +5.0    | +5.25 |
| 9  | PLL Supply Voltage        |      | V        | +4.75 | +5.0    | +5.25 |
| 10 | Reference Freq.           |      | MHz      |       | 10      |       |
| 11 | Reference Power Level     |      | dBm      | -4    |         | +4    |
| 12 | Current Consumption       |      | mA       |       |         | 40    |

## II. ACTIVE COMPONENT

### - PLL MODULE

#### Test Data



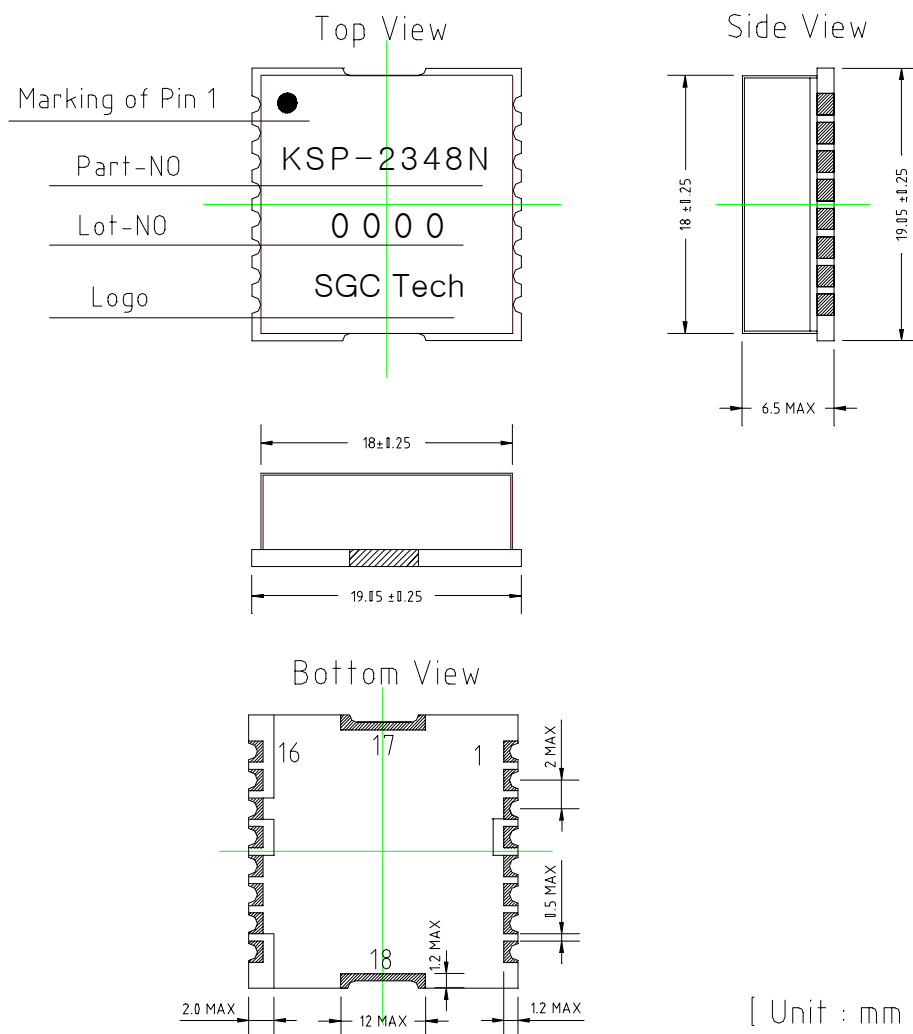
| offset   | Phase Noise    |
|----------|----------------|
| 1 KHz    | -85.67 dBc/Hz  |
| 10 KHz   | -112.00 dBc/Hz |
| 100 KHz  | -122.17 dBc/Hz |
| 1000 KHz | -133.50 dBc/Hz |



## II. ACTIVE COMPONENT

### - PLL MODULE

#### Mechanical Specifications (19.05 X 19.05 X 6.5t)



#### Terminal Connection

| Pin NO                                                    | Terminal NAME       |
|-----------------------------------------------------------|---------------------|
| 4                                                         | Osc. IN             |
| 9                                                         | VCO Vcc(DC +5V) IN  |
| 13                                                        | RF Out              |
| 15                                                        | PLL Vcc (DC +5V) IN |
| 16                                                        | Lock Detect (LD)    |
| 1, 2, 3, 5, 6, 7, 8, 10, 11, 12, 14, 17, 18 : Ground Pins |                     |

## II. ACTIVE COMPONENT

- PLL MODULE

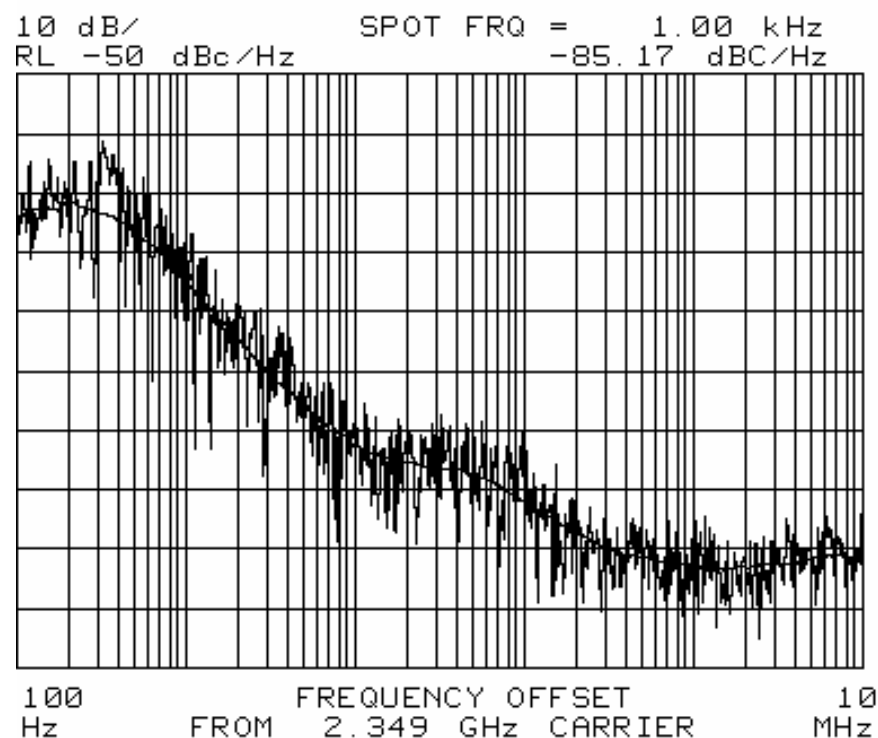
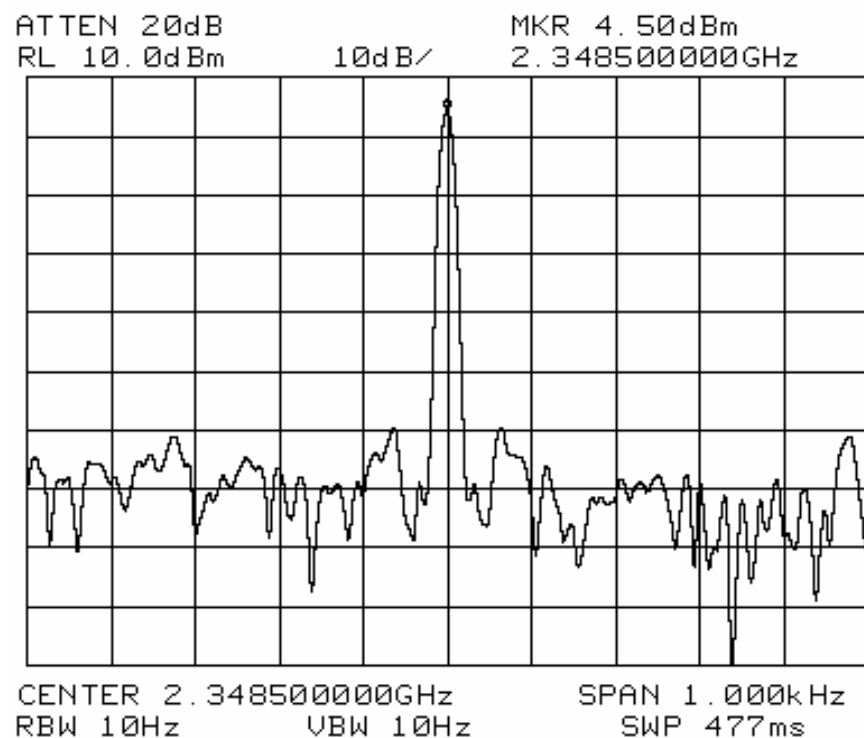
### Electrical Specifications

| NO | ITEM                      |      | UNIT     | MIN   | TYP     | MAX   |
|----|---------------------------|------|----------|-------|---------|-------|
| 1  | Operating Frequency Range |      | MHz      | -     | 2348.50 | -     |
| 2  | Output Power Level        |      | dBm      | +3.0  | +5.0    | +7.0  |
| 3  | Harmonics                 | 2'nd | dBc      |       |         | -20   |
|    | Level                     | 3'rd | dBc      |       |         | -30   |
| 4  | Spurious Level            |      | dBc      |       |         | -70   |
| 5  | Phase Noise               |      |          |       |         |       |
|    | at offset @ 1kHz          |      | dBc/Hz   |       | -85     |       |
|    | at offset @ 10kHz         |      | dBc/Hz   |       | -110    |       |
|    | at offset @ 100kHz        |      | dBc/Hz   |       | -120    |       |
| 6  | Lock time                 |      | msec     |       |         | 30    |
| 7  | Output Impedance          |      | $\Omega$ |       | 50      |       |
| 8  | VCO Supply Voltage        |      | V        | +4.75 | +5.0    | +5.25 |
| 9  | PLL Supply Voltage        |      | V        | +4.75 | +5.0    | +5.25 |
| 10 | Reference Freq.           |      | MHz      |       | 10      |       |
| 11 | Reference Power Level     |      | dBm      | -4    |         | +4    |
| 12 | Current Consumption       |      | mA       |       |         | 40    |

## II. ACTIVE COMPONENT

### - PLL MODULE

#### Test Data



| offset   | Phase Noise    |
|----------|----------------|
| 1 KHz    | -85.17 dBc/Hz  |
| 10 KHz   | -112.67 dBc/Hz |
| 100 KHz  | -122.17 dBc/Hz |
| 1000 KHz | -132.83 dBc/Hz |

## II. PASSIVE COMPONENT

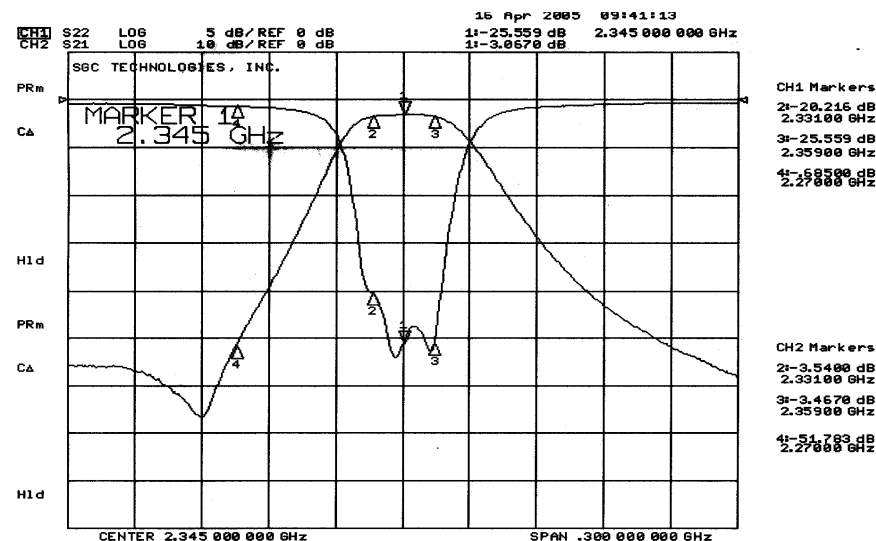
### - DR FILTER (Array Type)

Part Number : **SBP-4R3-2345BP28C**

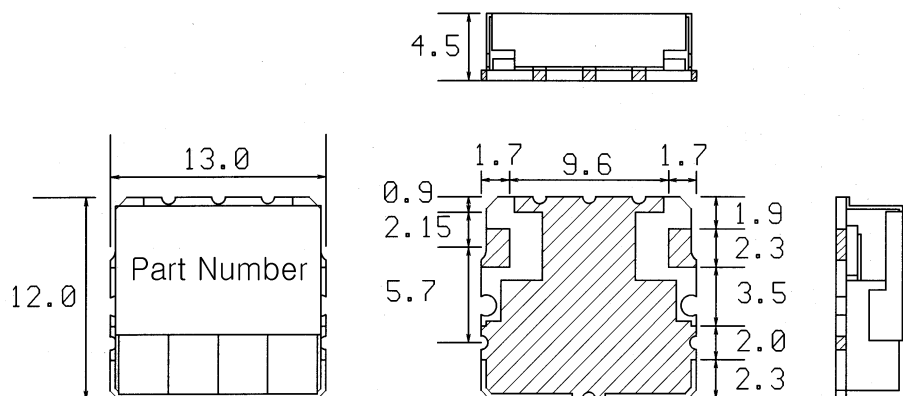
#### Specification

| ITEM                   | SPECIFICATIONS  |          |
|------------------------|-----------------|----------|
| CENTER FREQUENCY       | 2345MHz         |          |
| PASS BAND WIDTH        | Fo $\pm$ 14 MHz |          |
| INSERTION LOSS         | 4 dB max        |          |
| RIPPLE                 | 1dB max         |          |
| RETURN LOSS            | 15dB min        |          |
| ATTENUATION            | Freq.           | ATT.     |
|                        | Fo -75 MHz      | 40dB min |
| INPUT/OUTPUT IMPEDANCE | 50 $\Omega$     |          |

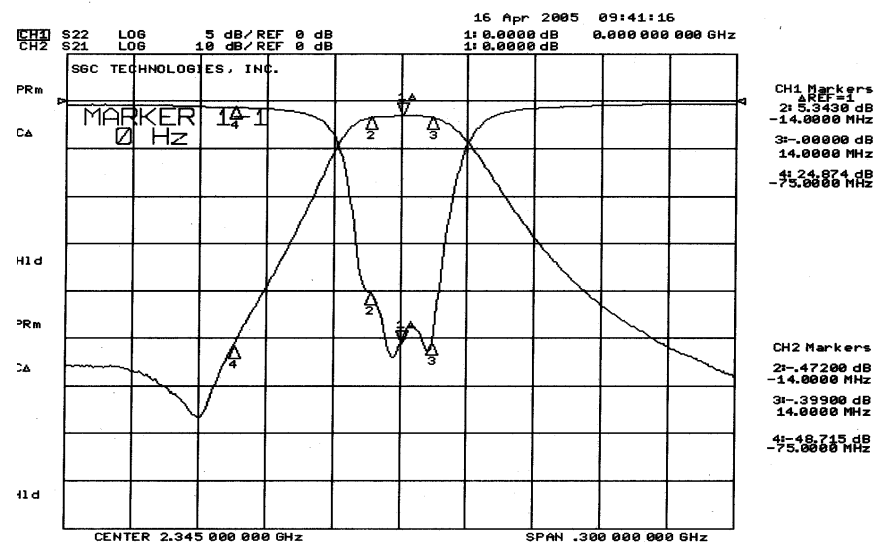
#### Graph



#### Dimension



UNIT:mm  
TOLERANCE UNLESS SPECIFIED:  $\pm 0.3$



# II. PASSIVE COMPONENT

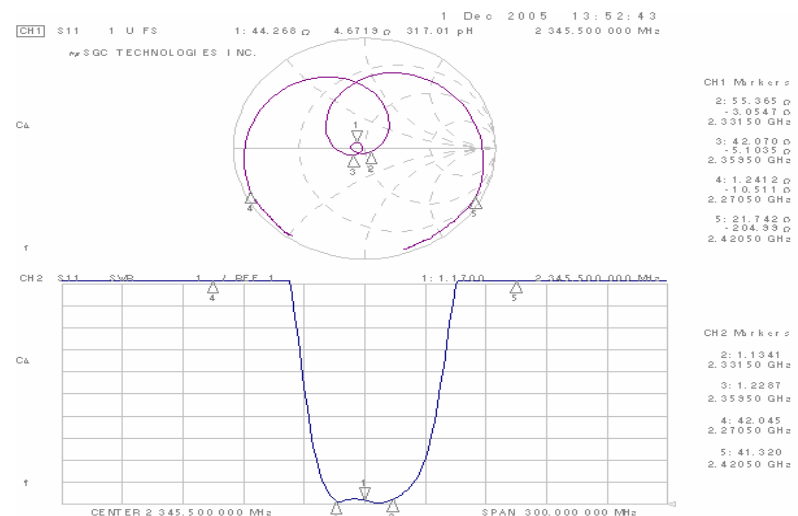
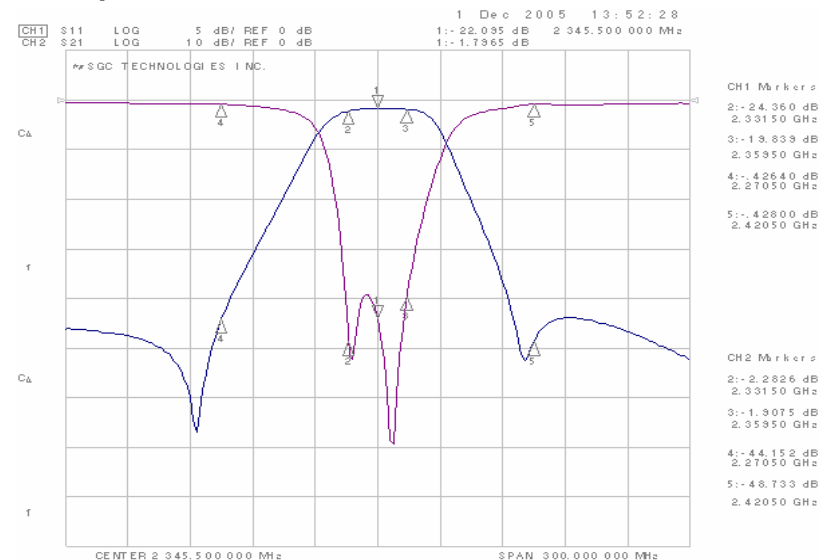
- DR FILTER (Mono Type)

**Part Number : SBMP4D2345BP28C**

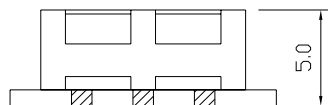
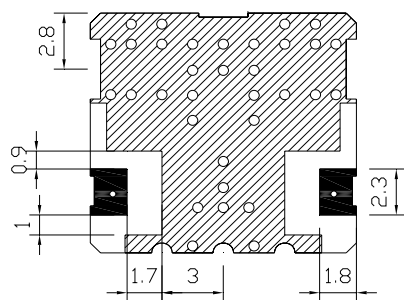
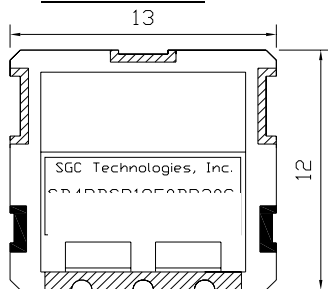
## Specification

| ITEM             | SPECIFICATIONS  |          |
|------------------|-----------------|----------|
| CENTER FREQUENCY | 2345MHz         |          |
| PASS BAND WIDTH  | Fo $\pm$ 14 MHz |          |
| INSERTION LOSS   | 3.5 dB max      |          |
| RIPPLE           | 1dB max         |          |
| RETURN LOSS      | 15dB min        |          |
| ATTENUATION      | Freq.           | ATT.     |
|                  | Fo +75 MHz      | 45dB min |
|                  | Fo -75 MHz      | 40dB min |
| IMPEDANCE        | 50 $\Omega$     |          |

## Graph



## Dimension



TOLERANCE UNLESS  
OTHERWISE SPECIFIED :  $\pm$ 0.3  
DIMENSIONS : mm

■ : I/O PORT  
▨ : GROUND

## II. PASSIVE COMPONENT

### - LC FILTER

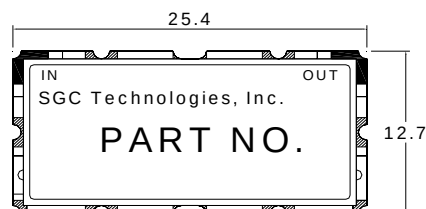
**Part Number : SLB-75-BP30D**

#### Specification

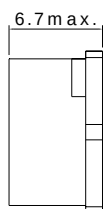
| ITEM                   | SPECIFICATIONS         |
|------------------------|------------------------|
| CENTER FREQUENCY       | 75MHz                  |
| PASS BAND WIDTH        | Fo $\pm$ 15 MHz        |
| INSERTION LOSS         | 2 dB max               |
| RIPPLE                 | 1dB max                |
| RETURN LOSS            | 15dB min               |
| ATTENUATION            | 20dB min @ 110~200 MHz |
|                        | 7dB min @ 100 MHz      |
|                        | 15dB min @ 50 MHz      |
| INPUT/OUTPUT IMPEDANCE | 50 $\Omega$            |

#### Dimension

##### TOP VIEW



##### SIDE VIEW



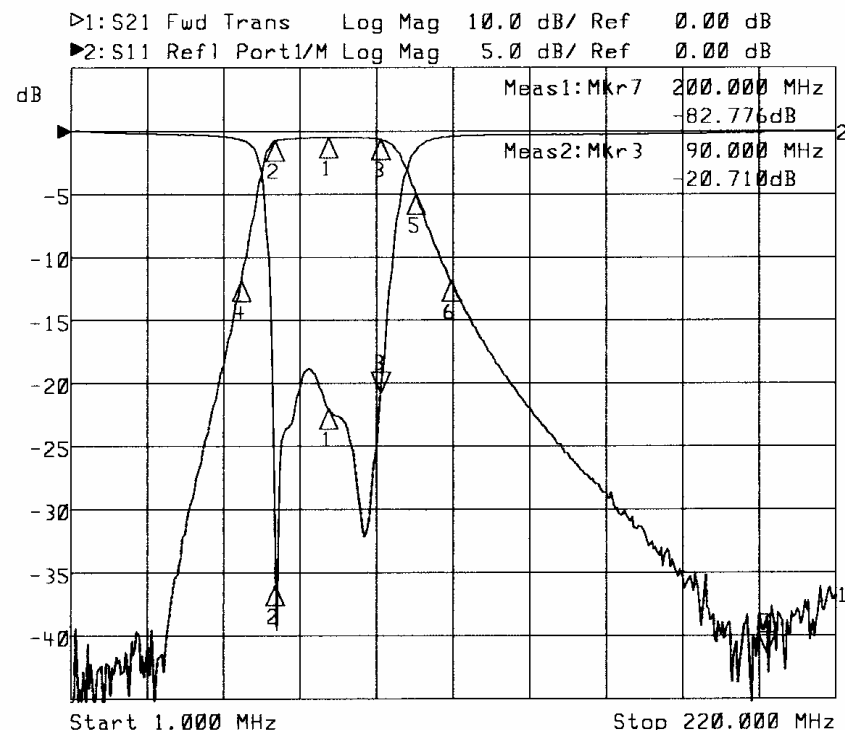
##### BOTTOM VIEW



TOLERANCE UNLESS  
OTHERWISE SPECIFIED :  $\pm 0.3$   
DIMENSIONS : mm

GROUND  
I/O PORT

#### Graph



| 1: Mkr (MHz) | dB      | 2: Mkr (MHz) | dB      |
|--------------|---------|--------------|---------|
| 1: 75.0000   | -0.949  | 1: 75.0000   | -21.983 |
| 2: 60.0000   | -1.472  | 2: 60.0000   | -36.036 |
| 3: 90.0000   | -1.310  | 3: 90.0000   | -20.710 |
| 4: 50.0000   | -23.812 |              |         |
| 5: 100.0000  | -9.889  |              |         |
| 6: 110.0000  | -23.696 |              |         |
| 7: 200.0000  | -82.776 |              |         |

## II. PASSIVE COMPONENT

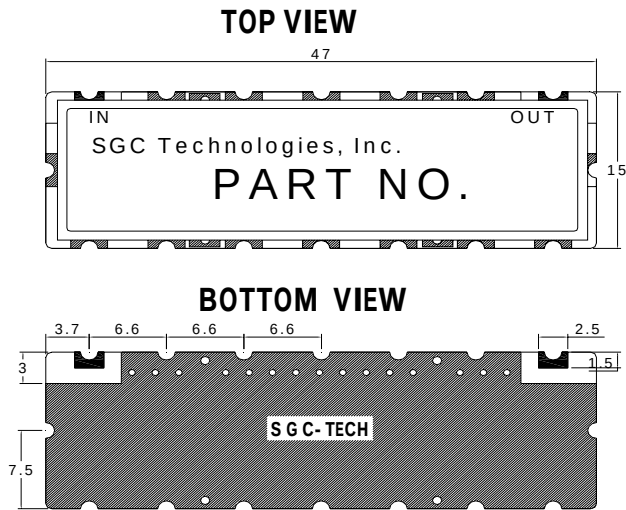
### - LC FILTER

Part Number : **SLB-125-BP30E**

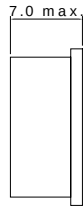
#### Specification

| ITEM              | SPEC.                 |
|-------------------|-----------------------|
| Center frequency  | 125 MHz               |
| Bandwidth         | 30 MHz (110~140MHz)   |
| Insertion loss    | 2.0 dB max            |
| Ripple            | 0.5 dB max            |
| Return loss       | 15 dB min             |
| Group delay       | 10ns p-p              |
| Attenuation       | 25 dB min @ Fc± 35MHz |
| Input power       | 1 W                   |
| Impedance         | 50 Ω                  |
| Temperature range | -30 to +80 °C         |

#### Dimension



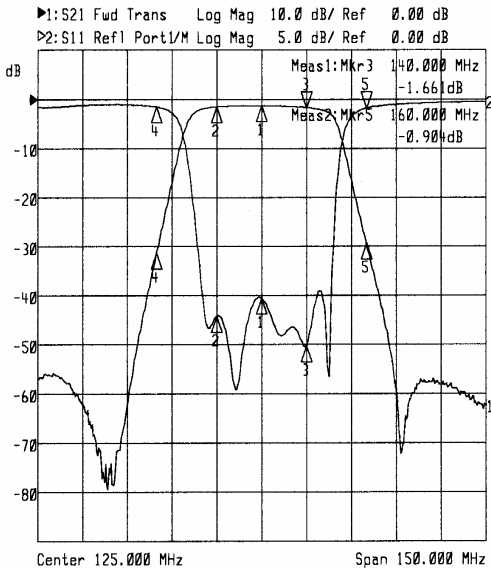
#### SIDE VIEW



TOLERANCE UNLESS  
OTHERWISE SPECIFIED : ±0.3  
DIMENSIONS : mm

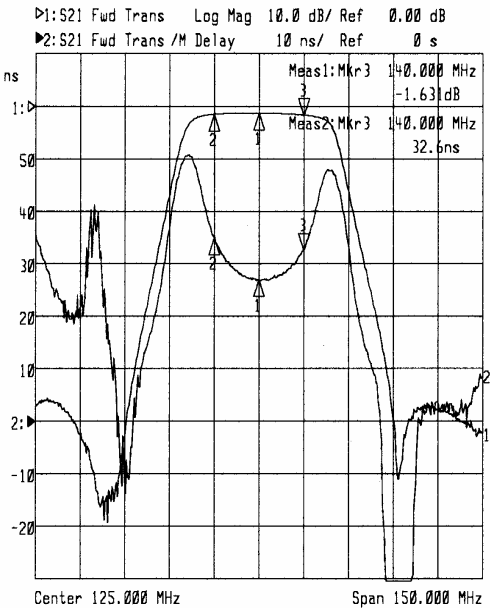
■ GROUND  
■ I/O PORT

#### Graph



| 1:Mkr (MHz) | dB      | 2:Mkr (MHz) | dB      |
|-------------|---------|-------------|---------|
| 1: 125.0000 | -1.328  | 1: 125.0000 | -20.272 |
| 2: 110.0000 | -1.508  | 2: 110.0000 | -22.089 |
| 3: 140.0000 | -1.661  | 3: 140.0000 | -25.113 |
| 4: 90.0000  | -31.273 | 4: 90.0000  | -0.758  |
| 5: 160.0000 | -29.130 | 5: 160.0000 | -0.904  |

#### Graph delay



| 1:Mkr (MHz) | dB     | 2:Mkr (MHz) | s     |
|-------------|--------|-------------|-------|
| 1: 125.0000 | -1.317 | 1: 125.0000 | 27.0n |
| 2: 110.0000 | -1.507 | 2: 110.0000 | 35.1n |
| 3: 140.0000 | -1.631 | 3: 140.0000 | 32.6n |

## II. PASSIVE COMPONENT

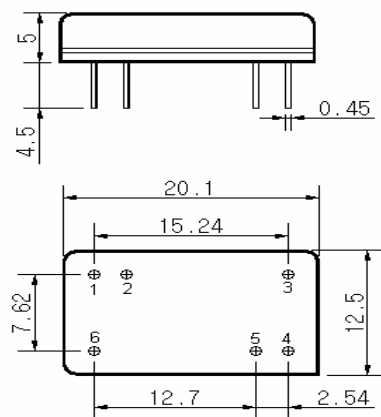
### - SAW FILTER (DIP TYPE)

**Part Number : Preliminary**

#### **Specification**

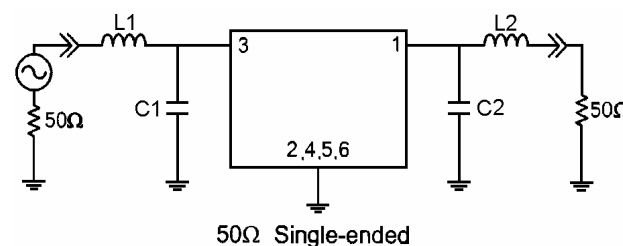
| Parameter               | Unit    | Min.                   | Typ.  | Max.  |
|-------------------------|---------|------------------------|-------|-------|
| Center Frequency        | MHz     | 89.85                  | 90.05 | 90.15 |
| Insertion Loss          | dB      | -                      | 25.50 | 27.00 |
| 1dB Bandwidth           | MHz     | -                      | 28.98 | -     |
| 3dB Bandwidth           | MHz     | 29.50                  | 29.79 | -     |
| 40dB Bandwidth          | MHz     | -                      | 32.66 | 33.00 |
| Passband Ripple         | dB      | -                      | 0.65  | 1.00  |
| Group Delay Variation   | nsec    | -                      | 50    | 100   |
| Absolute Delay          | μsec    | -                      | 1.3   | 1.5   |
| Ultimate Attenuation    | dB      | 50                     | 55    |       |
| Operating Temp. Range   | ° C     | -20                    | +25   | +70   |
| Substrate Material      | -       | 128-LiNbO <sub>3</sub> |       |       |
| Temperature Coefficient | ppm/° C | -72                    |       |       |

#### **Dimension**



1 : Output , 6 : Output Gnd  
3 : Input , 4 : Input Gnd  
2 , 5 : Case Gnd

#### **Matching Configuration**



L1=L2=120nH, C1=5pF, C2=4.3pF  
Source / Load Impedance = 50Ω  
Ambient Temperature = 25°C

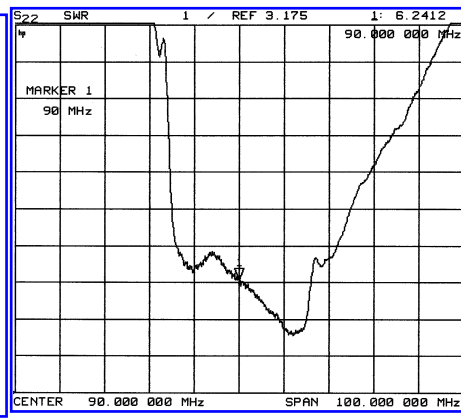
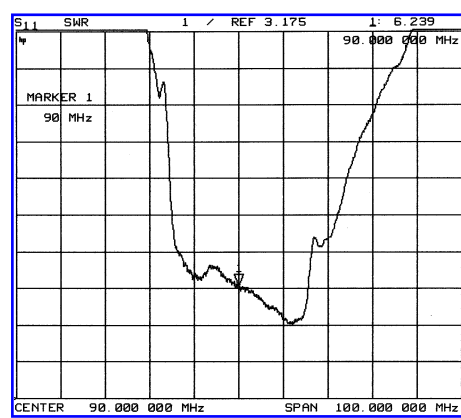
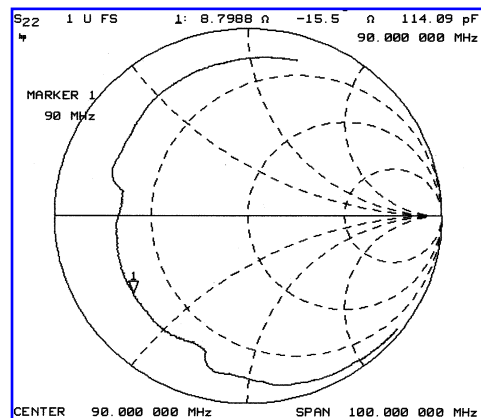
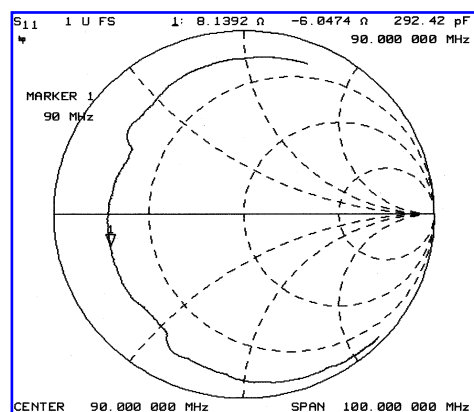
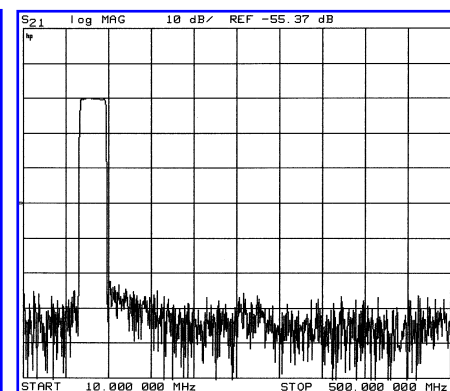
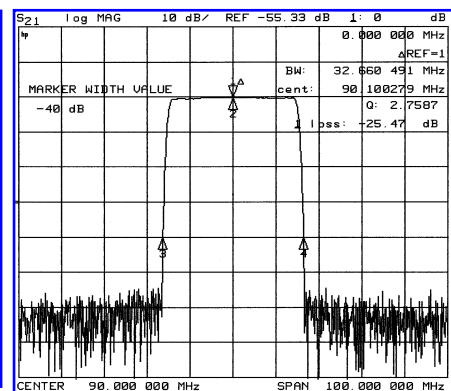
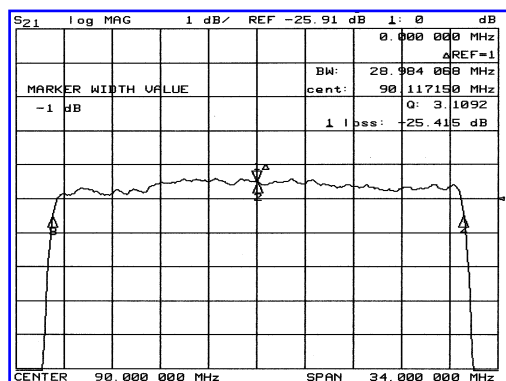
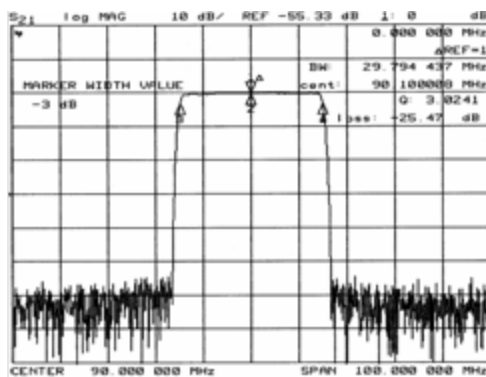


## II. PASSIVE COMPONENT

- SAW FILTER (DIP TYPE)

Part Number : Preliminary

### Graph



## II. PASSIVE COMPONENT

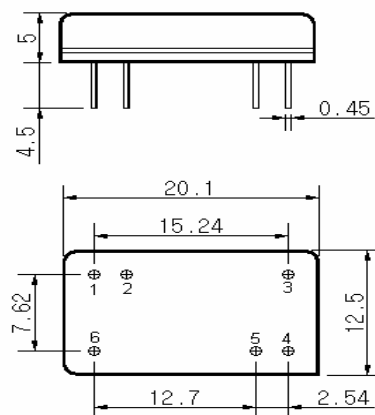
### - SAW FILTER (DIP TYPE)

**Part Number : Preliminary**

#### **Specification**

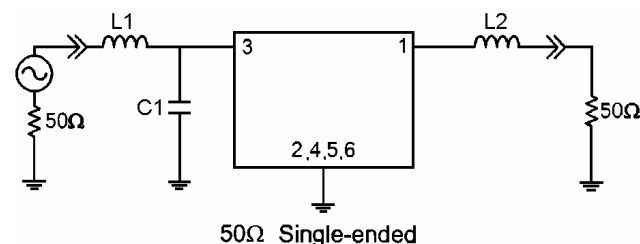
| Parameter               | Unit    | Min.                   | Typ.  | Max.  |
|-------------------------|---------|------------------------|-------|-------|
| Center Frequency        | MHz     | 74.92                  | 75.00 | 75.08 |
| Insertion Loss          | dB      | -                      | 29.50 | -     |
| 1dB Bandwidth           | MHz     | -                      | 28.70 | -     |
| 3dB Bandwidth           | MHz     | -                      | 29.78 | -     |
| 40dB Bandwidth          | MHz     | -                      | 34.32 | 34.80 |
| Passband Ripple         | dB      | -                      | 0.45  | 1.00  |
| Group Delay Variation   | nsec    | -                      | 20    | 50    |
| Absolute Delay          | μsec    | -                      | 0.93  | -     |
| Ultimate Attenuation    | dB      | -                      | 50    | -     |
| Operating Temp. Range   | ° C     | -20                    | +25   | +70   |
| Substrate Material      | -       | 128-LiNbO <sub>3</sub> |       |       |
| Temperature Coefficient | ppm/° C | -72                    |       |       |

#### **Dimension**



1 : Output , 6 : Output Gnd  
3 : Input , 4 : Input Gnd  
2 , 5 : Case Gnd

#### **Matching Configuration**



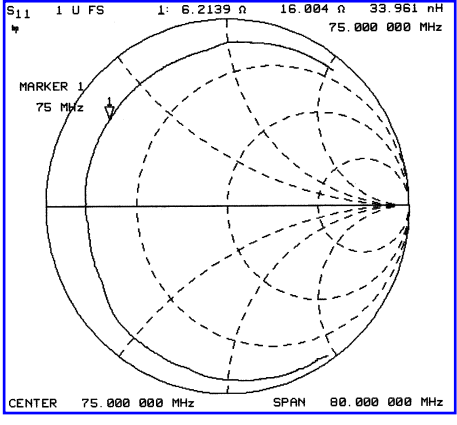
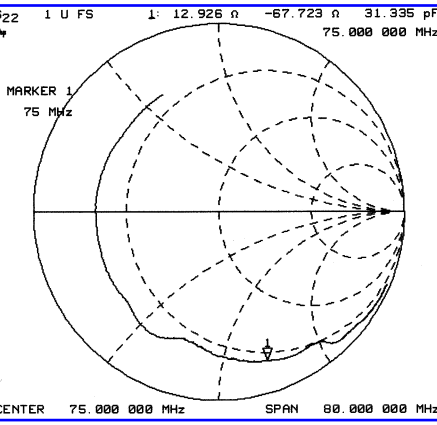
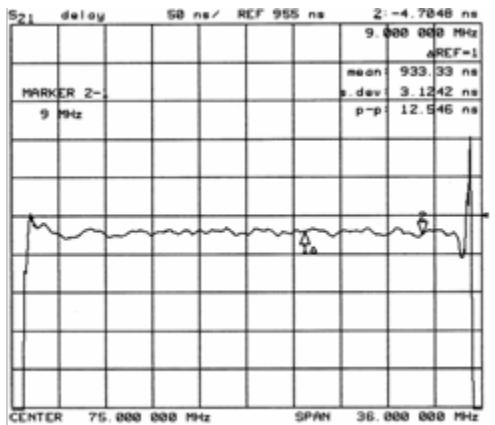
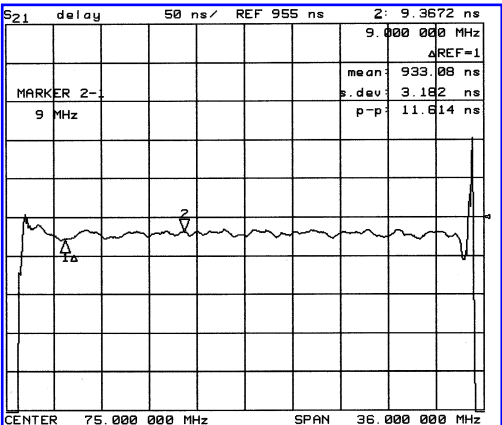
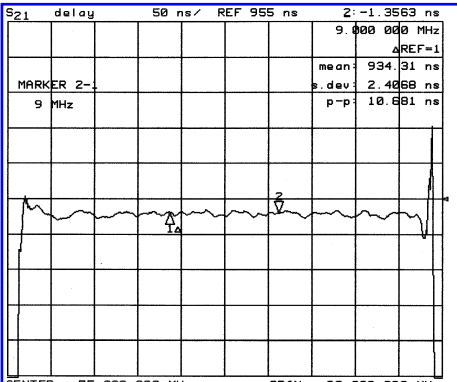
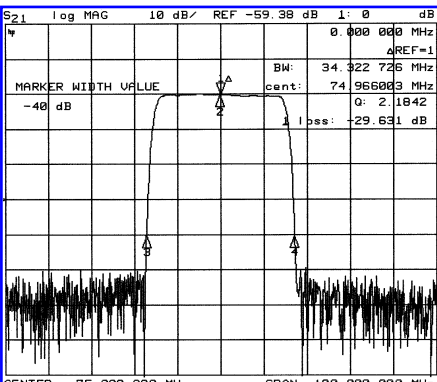
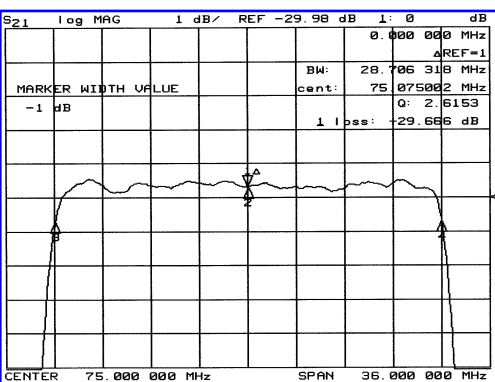
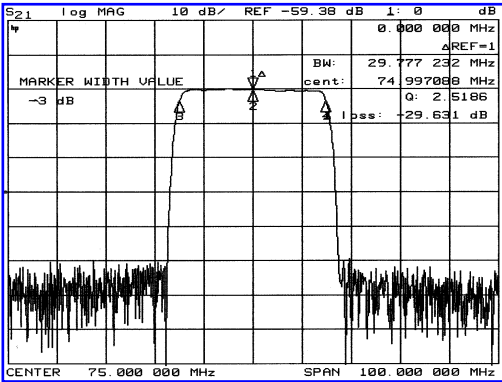
L1=180nH, L2=180nH, C1=16pF  
Source / Load Impedance = 50Ω  
Ambient Temperature = 25°C

# II. PASSIVE COMPONENT

- SAW FILTER (DIP TYPE)

Part Number : Preliminary

Graph



## II. PASSIVE COMPONENT

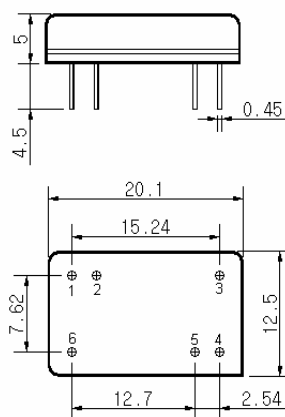
### - SAW FILTER (DIP TYPE)

**Part Number : Preliminary**

### **Specification**

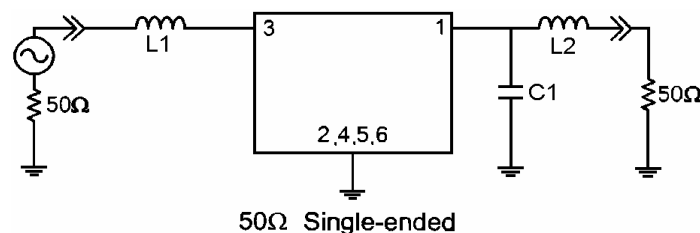
| Parameter               | Unit    | Min.                   | Typ.   | Max.   |
|-------------------------|---------|------------------------|--------|--------|
| Center Frequency        | MHz     | 124.85                 | 125.00 | 125.15 |
| Insertion Loss          | dB      | -                      | 22.00  | 25.00  |
| 1dB Bandwidth           | MHz     | -                      | 29.19  | -      |
| 3dB Bandwidth           | MHz     | 30.00                  | 30.24  | -      |
| 40dB Bandwidth          | MHz     | -                      | 34.43  | 34.80  |
| Passband Ripple         | dB      | -                      | 0.45   | 1.00   |
| Group Delay Variation   | nsec    | -                      | 20     | 50     |
| Absolute Delay          | μsec    | -                      | 0.92   | -      |
| Ultimate Attenuation    | dB      | 50                     | 60     | -      |
| Operating Temp. Range   | ° C     | -20                    | +25    | +70    |
| Substrate Material      | -       | 128-LiNbO <sub>3</sub> |        |        |
| Temperature Coefficient | ppm/° C | -72                    |        |        |

### **Dimension**



1 : Output , 6 : Output Gnd  
3 : Input , 4 : Input Gnd  
2, 5 : Case Gnd

### **Matching Configuration**



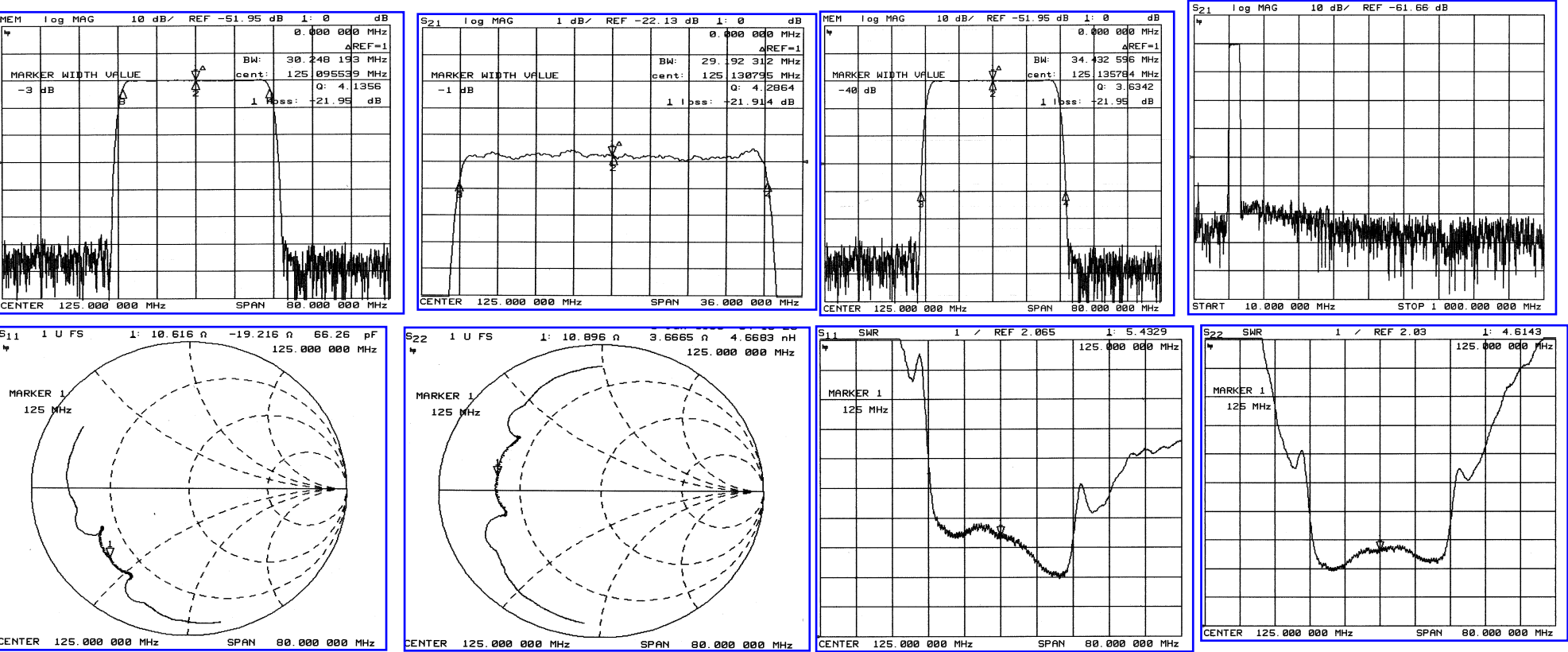
L1=56nH, L2=82nH, C1=3pF  
Source / Load Impedance = 50Ω  
Ambient Temperature = 25°C

## II. PASSIVE COMPONENT

- SAW FILTER (DIP TYPE)

Part Number : Preliminary

Graph



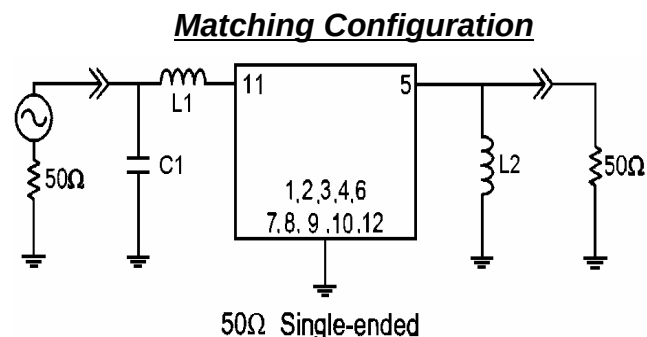
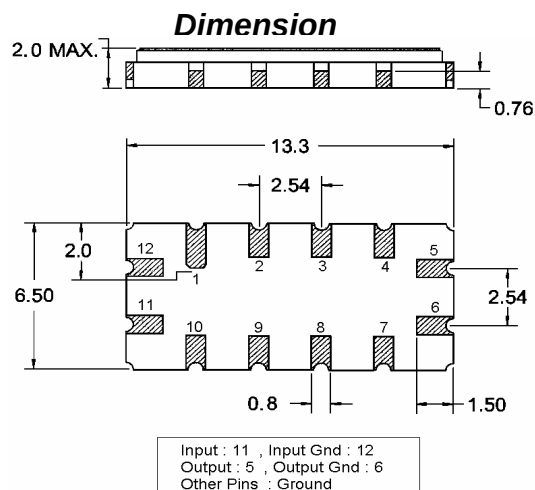
## II. PASSIVE COMPONENT

### - SAW FILTER (SMD TYPE)

**Part Number : Preliminary**

### **Specification**

| Parameter               | Unit    | Min.                  | Typ.   | Max.   |
|-------------------------|---------|-----------------------|--------|--------|
| Center Frequency        | MHz     | 124.80                | 125.00 | 125.20 |
| Insertion Loss          | dB      | -                     | 11.50  | 13.00  |
| 1dB Bandwidth           | MHz     | -                     | 29.89  | -      |
| 3dB Bandwidth           | MHz     | 30.50                 | 31.05  | -      |
| 40dB Bandwidth          | MHz     | -                     | 36.60  | 39.00  |
| Passband Ripple         | dB      | -                     | 0.45   | 0.80   |
| Group Delay Variation   | nsec    | -                     | 35     | 50     |
| Absolute Delay          | μsec    | -                     | 0.7    | -      |
| Ultimate Attenuation    | dB      | 40                    | 50     |        |
| Substrate Material      | -       | YZ-LiNbO <sub>3</sub> |        |        |
| Temperature Coefficient | ppm/° C | -86                   |        |        |



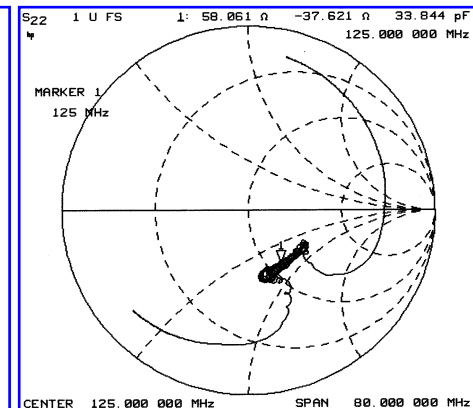
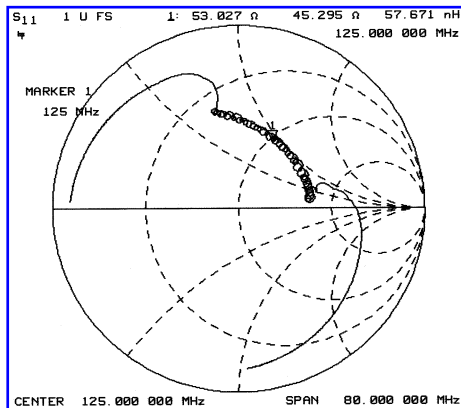
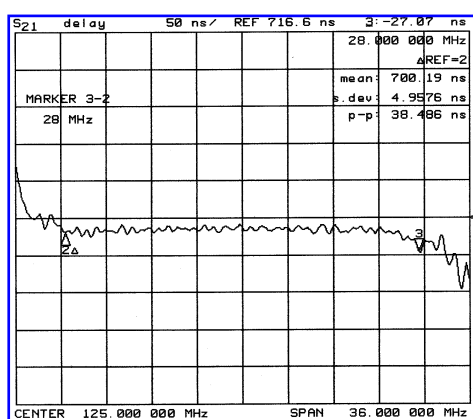
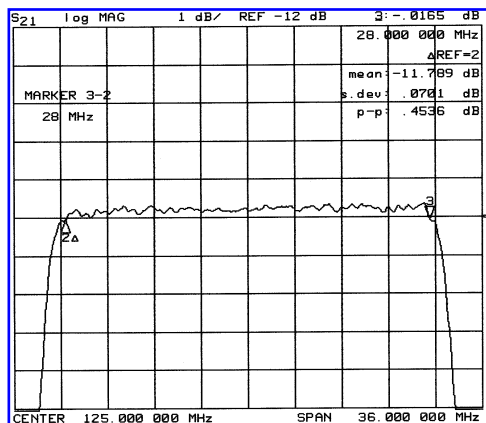
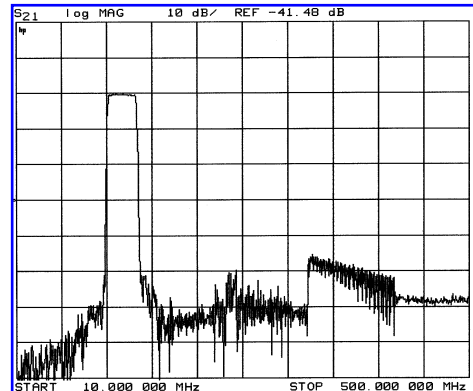
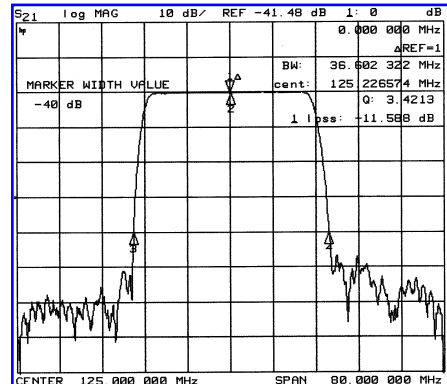
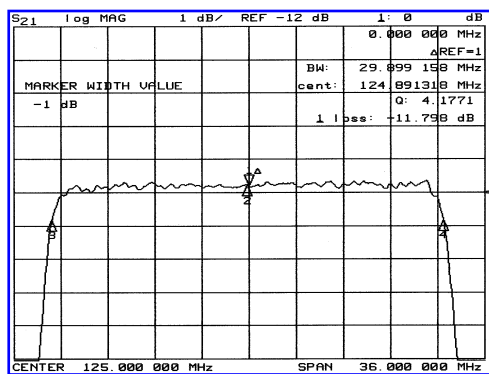
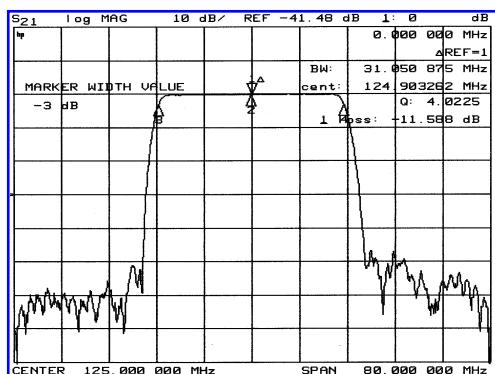
L1=56nH, L2=56nH  
Source / Load  
Ambient Temp

## II. PASSIVE COMPONENT

- SAW FILTER (SMD TYPE)

Part Number : Preliminary

### Graph



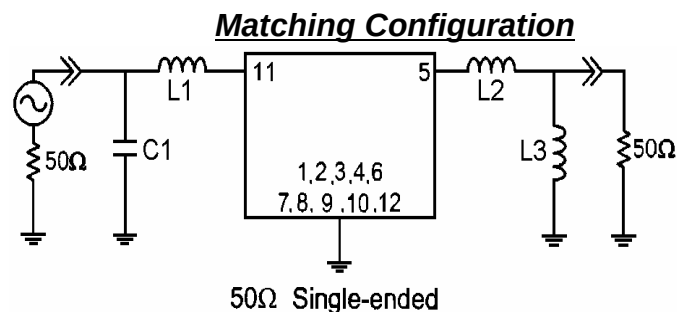
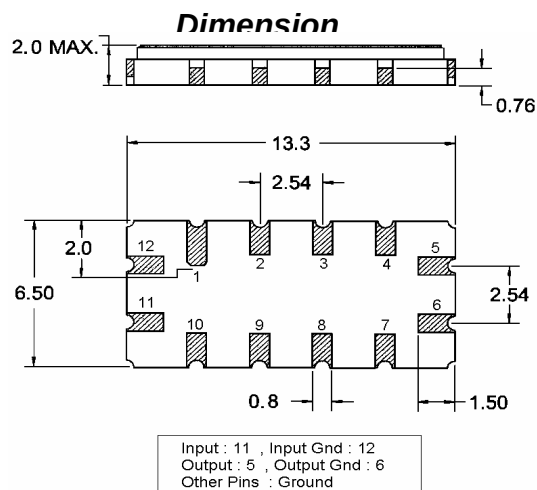
## II. PASSIVE COMPONENT

### - SAW FILTER (SMD TYPE)

**Part Number : Preliminary**

### **Specification**

| Parameter               | Unit    | Min.                  | Typ.  | Max.  |
|-------------------------|---------|-----------------------|-------|-------|
| Center Frequency        | MHz     | 74.90                 | 75.00 | 75.10 |
| Insertion Loss          | dB      | -                     | 15.50 | 18.00 |
| 1dB Bandwidth           | MHz     | -                     | 29.30 | -     |
| 3dB Bandwidth           | MHz     | 30.50                 | 30.89 | -     |
| 40dB Bandwidth          | MHz     | -                     | 38.25 | 39.00 |
| Passband Ripple         | dB      | -                     | 0.45  | 0.80  |
| Group Delay Variation   | nsec    | -                     | 20    | 50    |
| Absolute Delay          | μsec    | -                     | 0.7   | -     |
| Ultimate Attenuation    | dB      | 40                    | 45    |       |
| Substrate Material      | -       | YZ-LiNbO <sub>3</sub> |       |       |
| Temperature Coefficient | ppm/° C | -94                   |       |       |



L1=150nH, L2=120nH, L3=150nH  
Source / Load Impedance : 50Ω  
Ambient Temperature : 25°C

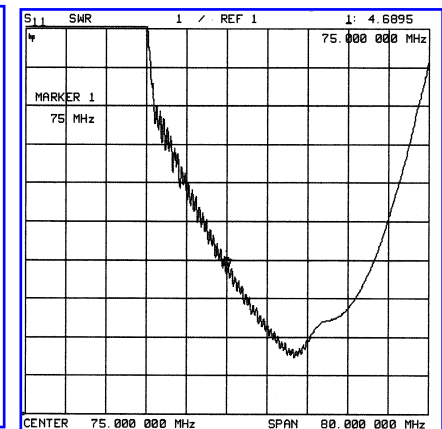
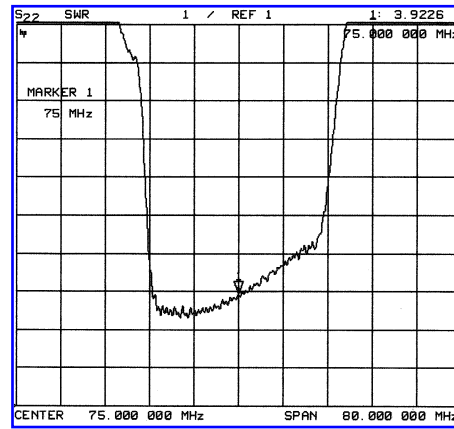
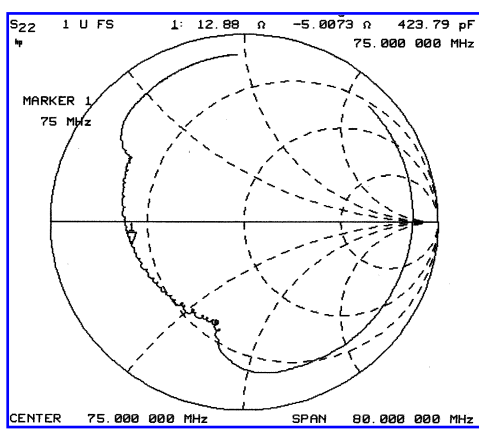
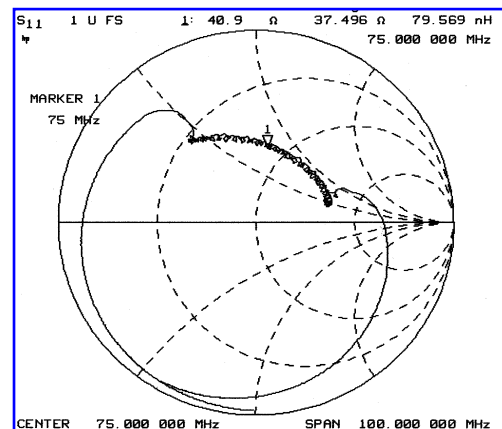
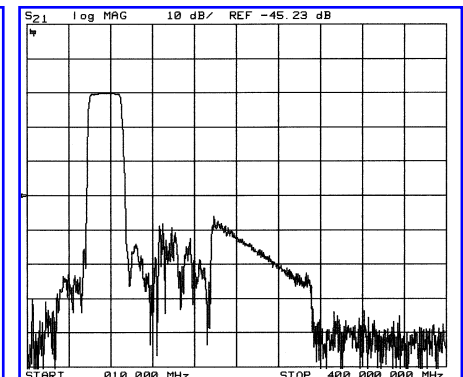
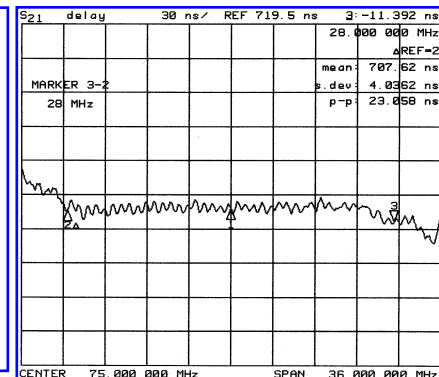
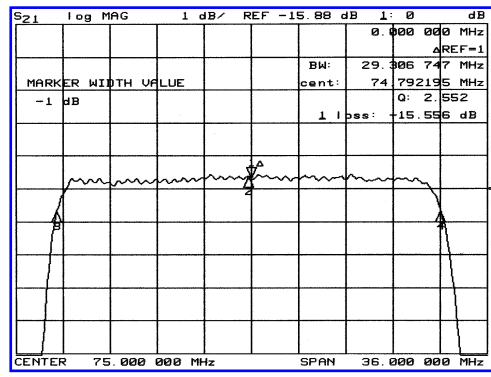
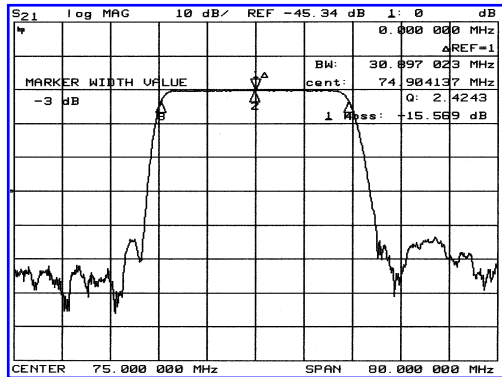


## II. PASSIVE COMPONENT

- SAW FILTER (SMD TYPE)

Part Number : Preliminary

### Graph



### III. TRANSCEIVER MODULE

#### - UP/DOWN CONVERTER

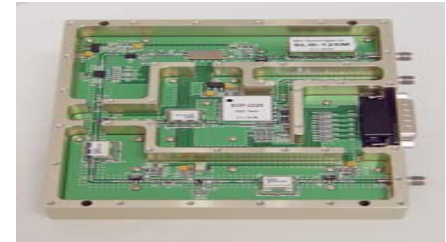
**Part Number : SC 1001/ 1002**

The Model No SC1001& SC1002 of SGC Down Converter can be used in the 2.3GHz to 2.7GHz Portable Internet ( WiBro, WiMAX) for Wireless Broadband Access and microwave markets. Also, It can be in Base Transceiver Stations (BTS) ,Top Tower Amplifiers (TTA) and Repeaters

#### **Features**

- Small Size (120mm×130mm×20mm)
- BPF,PLL, Mixer and IF AMP into one module
- High Linearity, Low power consumption

#### **Specification**



| Parameter       | Unit | Specification         | Remark   |
|-----------------|------|-----------------------|----------|
| Frequency       | MHz  | 2331.5 ~ 2358.5       | KT KOREA |
| Power Output    | dBm  | -10                   | 3FA      |
| Gain            | dB   | 18 ± 0.5              |          |
| OIP3            | dBm  | 33                    |          |
| Pass Ripple     | dB   | 1.0                   | Max      |
| VSWR            |      | 1.3 : 1               | IN/OUT   |
| ALC Range       | dBm  | 20 ± 0.3              |          |
| ATT Range       | dB   | 30 ± 0.5 / ± 0.5 Step |          |
| Detection Range | dBm  | -48 ~ -18             |          |
| DC Power        | V/A  | 6 / 0.5 (Max)         |          |
| Operating Temp  | °C   | -30 ~ 80              |          |
| Connector       |      | RF : SMA Female       |          |
| Impedance       | Ω    | 50                    |          |

### III. TRANSCEIVER MODULE

#### - IF INTERFACE MODULE

**Part Number : : MHU IF 75MHz, MHU IF 125MHz**



SGC Down Converter can be used in the 2.3GHz to 2.7GHz Portable Internet ( WiBro, WiMAX) for Wireless Broadband Access and microwave markets.

#### **Specification ( MHU IF 75MHz )**

| PARAMETER        |                | SPECIFICATION          | COMMENTS                           |
|------------------|----------------|------------------------|------------------------------------|
| FREQUENCY        |                | 75MHz                  | RX IF FREQUENCY                    |
| GAIN             |                | 18dB                   |                                    |
| GAIN FLATNESS    |                | 2 dB pk-pk@27MHz BW 이하 | MAX                                |
| INPUT CONDITION  |                | -28dBm/FA              |                                    |
| IMD              |                | -10dBm/2tone@ 50dBc 이상 |                                    |
| Emission Mask    | 4.77MHz        | 44Bc                   | 계측기 측정 방법<br>RBW: 100KHz VBW: 1KHz |
|                  | 8.73MHz        | 48.5dBc                |                                    |
| ATT Range        |                | 25dB                   | 0.5dB @ step Latch Enable 기능       |
| VSWR             |                | <1.3:1(MAX.)           |                                    |
| ALARM            |                | Normal 'Low'           | AMP SUM Alarm                      |
| INPUT DC VOLTAGE |                | +5.5V DC               |                                    |
| DC CURRENT       |                | 500mA                  | MAX.                               |
| PORT             | INPUT(SMA(F))  |                        | From Optic                         |
|                  | OUTPUT(SMA(F)) |                        | To BTS                             |
|                  |                |                        | To Monitor (20dB±1)                |
| Detect Voltage   |                | 3.2V@-10dBm/FA         | Output                             |
| Detect Range     |                | 0 ~ -30 dBm/FA         |                                    |
| Coupling Port    |                | 20dB± 1dB              | Output Coupling                    |

### III. TRANSCEIVER MODULE

#### - IF INTERFACE MODULE

**Part Number : : MHU IF 75MHz, MHU IF 125MHz**



SGC Down Converter can be used in the 2.3GHz to 2.7GHz Portable Internet ( WiBro, WiMAX) for Wireless Broadband Access and microwave markets.

#### **Specification ( MHU IF 125MHz )**

| PARAMETER        |         | SPECIFICATION          | COMMENTS                            |
|------------------|---------|------------------------|-------------------------------------|
| FREQUENCY        |         | 125MHz                 | TX IF FREQUENCY                     |
| GAIN             |         | 25dB                   |                                     |
| GAIN FLATNESS    |         | 2 dB pk-pk@27MHz BW 이하 | MAX.                                |
| INPUT CONDITION  |         | -35 ~ -10dBm/FA        | FA                                  |
| Emission Mask    | 4.77MHz | 44 dBc                 | 계측기 측정 방법<br>RBW: 100KHz VBW: 1KHz  |
|                  | 8.73MHz | 48.5 dBc               |                                     |
| ATT Range        |         | 25dB                   | 0.5dB @ step <b>Latch Enable 기능</b> |
| VSWR             |         | < 1.3:1(MAX.)          |                                     |
| ALARM            |         | Normal 'Low'           | AMP SUM Alarm                       |
| INPUT DC VOLTAGE |         | +5.5V DC               |                                     |
| DC CURRENT       |         | 500mA                  | MAX                                 |
| PORT             |         | OUTPUT(SMA(F))         | To Optic                            |
|                  |         | INPUT(SMA(F))          | From RAS                            |
|                  |         |                        | To Monitor (20dB±1dB)               |
| Detect Voltage   |         | 3.2V@-10dBm/FA         | Output기준                            |
| Detect Range     |         | -35 ~ -10dBm/FA        |                                     |
| Coupling Port    |         | 20dB ± 1dB             | Input Coupling                      |
| SIZE             |         | TBD                    | mm                                  |

### III. TRANSCIVER MODULE

- RF SWITCH (Single Pole Single Throw Switch): SPST

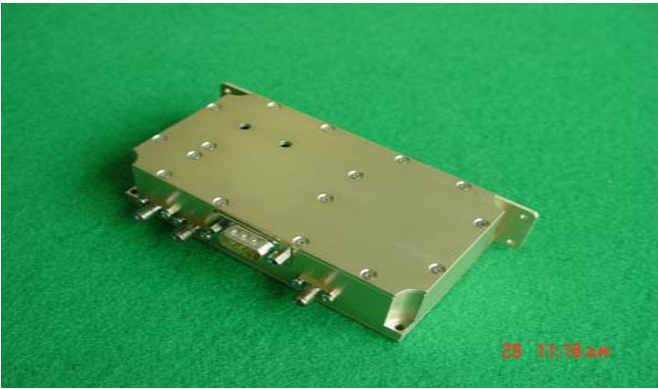
**Part Number : SRS 1001**

The Model No SC1001& SC1002 of SGC Down Converter can be used in the 2.3GHz to 2.7GHz Portable Internet ( WiBro, WiMAX) for Wireless Broadband Access and microwave markets. Also, It can be in Base Transceiver Stations (BTS) ,Top Tower Amplifiers (TTA) and Repeaters

**Features**

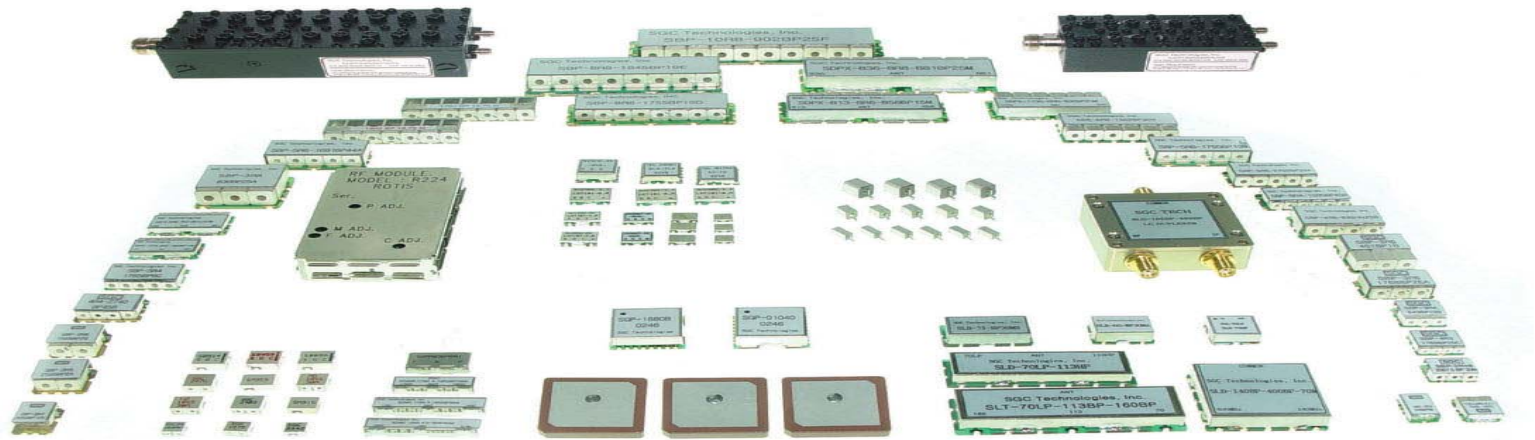
- Compact Module Size (145mm × 95mm × 50mm)
- Low Current and Voltage
- High Power Rating ( 60W min AVR)
- SMA-Female Connector

**Specification**



| Parameter       | Unit  | Specification | Remark  |
|-----------------|-------|---------------|---------|
| Frequency       | MHz   | 2300 ~ 2400   |         |
| Gain            | dB    | 30            | TYPICAL |
| Switching Speed | uS    | 6us@ 90%      |         |
| Noie Figure     | dB    | 2             | TYPICAL |
| Control Logic   |       | TTL(5V Tx On) |         |
| Ripple in Band  | 0.5dB | 0.5           |         |
| OIP3            |       | 36dBm @5dBm   |         |
| Path type       |       | Single        |         |
| Temp. Range     | ℃     | -30 to +60    |         |
| Supply Voltage  |       | +8 to +20V/1A |         |
| Switched Type   |       | Half-SPDT     |         |
| Connector Type  |       | SMA-Female    |         |

# Wireless and Internet Communications



## SGC Technologies Inc.

***SGC Technologies provides dielectric filter, antenna duplexer filter designs and manufacturing in the frequency range of 200MHz through 6GHz and voltage controlled oscillator(VCO) designs and manufacturing in the frequency range of 40MHz through 6GHz.***

***SGC Technologies' all the products are available for the ODM, OEM by your requirements.***