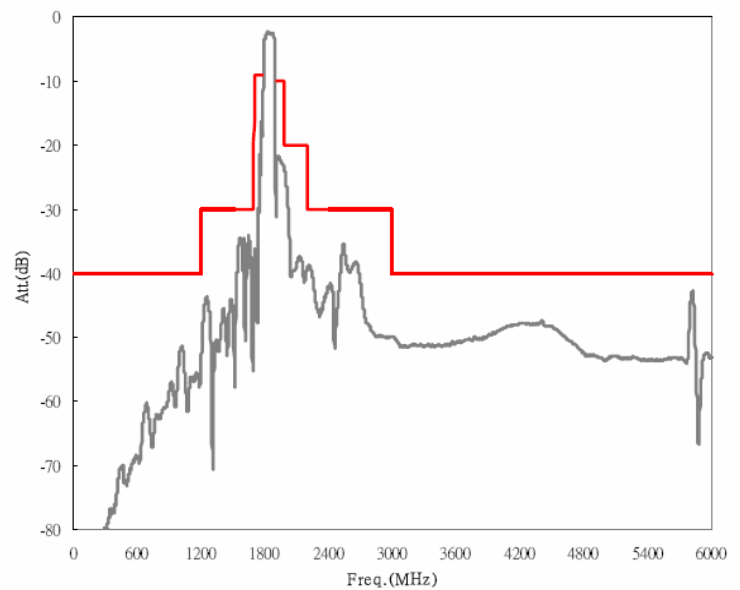
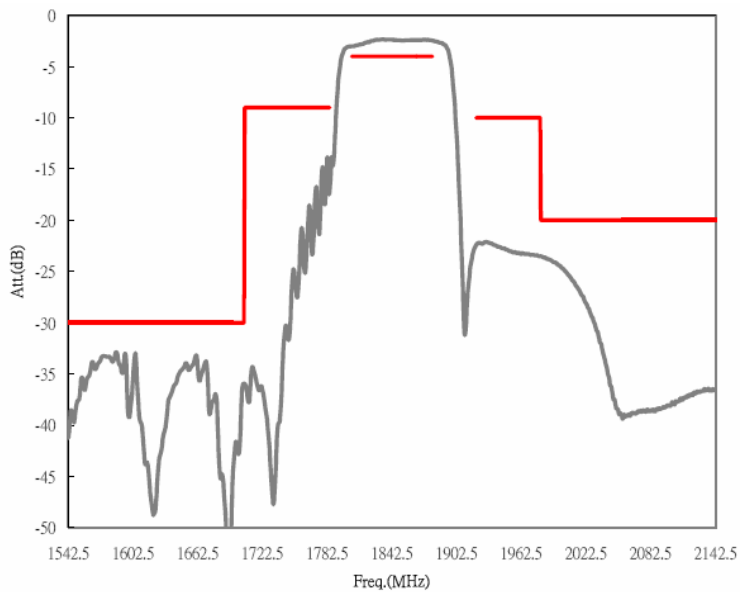


## DESCRIPTION

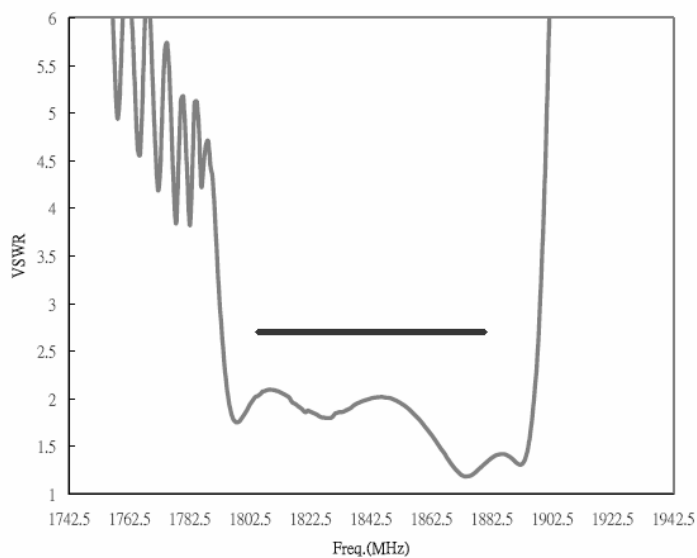
- 1842.5 MHz SAW bandpass filter with 75 MHz bandwidth for mobile communications.
- 2.5 x 2.0 mm ceramic LCC package.
- RoHS compliant.

## TYPICAL PERFORMANCE

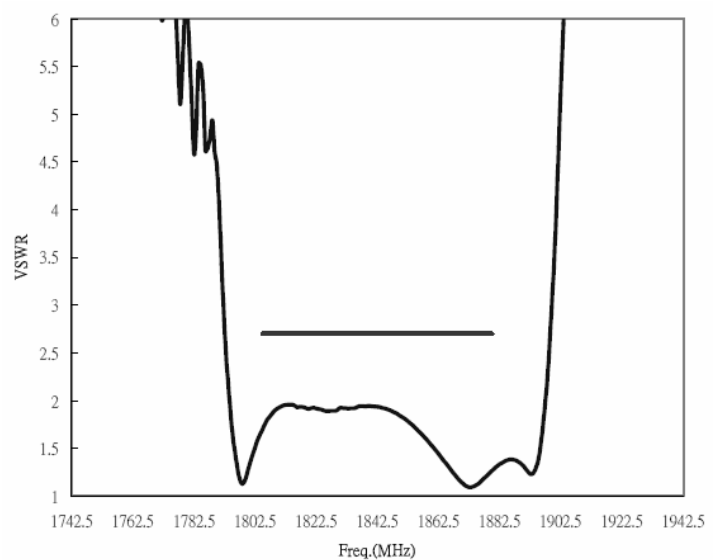
**Frequency Response**



**VSWR (Unbalanced Input)**



**VSWR (Balanced Output)**



## SPECIFICATION

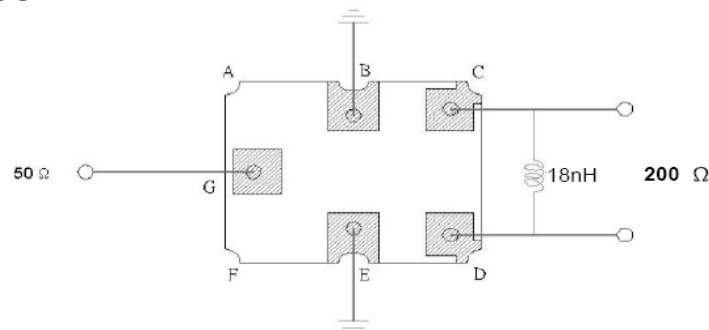
| Parameter   | Min                | Typ    | Max | Units  |
|---|--------------------|--------|-----|--------|
| Center Frequency (Fc) <sup>1</sup>                                  | -                  | 1842.5 | -   | MHz    |
| Insertion Loss (1805 to 1880 MHz)                                   | -                  | 2.9    | 4.0 | dB     |
| Amplitude Ripple (1805 to 1880 MHz)                                 | -                  | 1.0    | 2.1 | dB p-p |
| Input VSWR (1805 to 1880 MHz)                                       | -                  | 2.1    | 2.7 | :1     |
| Output VSWR (1805 to 1880 MHz)                                      | -                  | 2.0    | 2.7 | :1     |
| Attenuation (1 to 1200 MHz) <sup>2</sup>                            | 40                 | 49     | -   | dB     |
| Attenuation (1200 to 1705 MHz) <sup>2</sup>                         | 30                 | 34     | -   | dB     |
| Attenuation (1705 to 1785 MHz) <sup>2</sup>                         | 9                  | 14     | -   | dB     |
| Attenuation (1920 to 1980 MHz) <sup>2</sup>                         | 10                 | 22     | -   | dB     |
| Attenuation (1980 to 2200 MHz) <sup>2</sup>                         | 20                 | 23     | -   | dB     |
| Attenuation (2200 to 3000 MHz) <sup>2</sup>                         | 30                 | 36     | -   | dB     |
| Attenuation (3000 to 6000 MHz) <sup>2</sup>                         | 40                 | 44     | -   | dB     |
| Output Amplitude Balance ( S <sub>31</sub> /S <sub>21</sub>  )      | -2                 | 0      | 2   | dB     |
| Output Phase Balance (∠(S <sub>31</sub> )-∠(S <sub>21</sub> )+180°) | -12                | 0      | 12  | deg    |
| Source Impedance  | 50 ohms unbalanced |        |     |        |
| Load Impedance  | 200 ohms balanced  |        |     |        |
| Ambient Temperature   | -                  | 25     | -   | ° C    |

- Notes:
1. Fixed reference point.
  2. Reference level from 0 dB.
  3. Symmetry in band, referenced to the matched operating condition, 1805 to 1880 MHz).

## MAXIMUM RATINGS

| Parameter                   | Min | Typ | Max | Units |
|-----------------------------|-----|-----|-----|-------|
| Storage Temperature Range   | -40 | 25  | 85  | °C    |
| Operating Temperature Range | -20 | 25  | 75  | °C    |
| Input Power Level           | -   | 10  | 13  | dBm   |

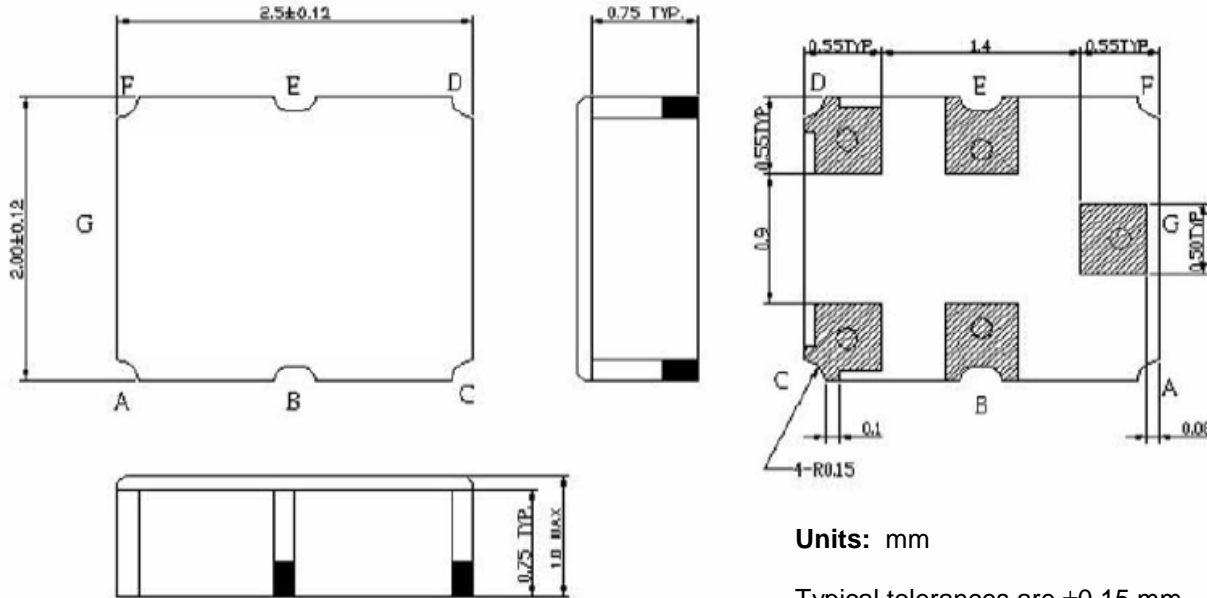
## MATCHING CIRCUIT



Notes:

1. Recommend use of 2% tolerance matching component. Typical Inductor Q=45.
2. Component value is for reference only and may change depending on board layout.

**PACKAGE OUTLINE**



Package Material:  
Body:  $Al_2O_3$  ceramic  
Lid: Kovar, Ni plated  
Terminations: Au plating 1  $\mu$ m min,  
over a 1.3-8.9  $\mu$ m Ni plating

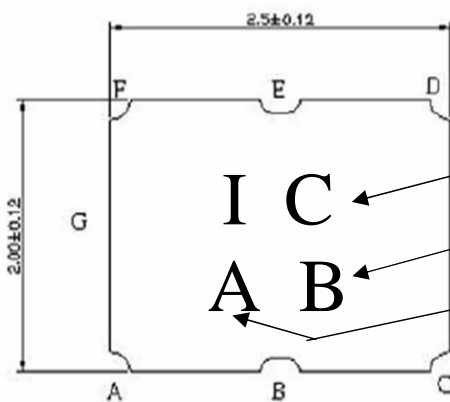
**Units:** mm

Typical tolerances are  $\pm 0.15$  mm  
except where indicated.

**Pad Configuration:**

Unbalanced Input: G  
Balanced Output: C  
Balanced Output: D  
Ground: B, E

**MARKING**



Model Identification: IC = SF1843BA02542S

Week Code: A through Z followed by a through z equals 52 weeks.

Year Code: A = 2001, B=2002, C=2003, to J=2010 (Code A through J repeats every 10 years)

ISO 9001  
Registered

All specifications are believed to be accurate and reliable. However, Spectrum Microwave reserves the right to make changes without notice.  
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**Spectrum Microwave**  
00 Nickerson Road, Marlborough MA, USA • Phone 1-508-251-6400 • Fax 1-508-251-6401  
[www.SpectrumMicrowave.com](http://www.SpectrumMicrowave.com)

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