SUNTSU

Multilayer Ceramic Band Pass Filter

SRFBF-1GIJ5-WFB1

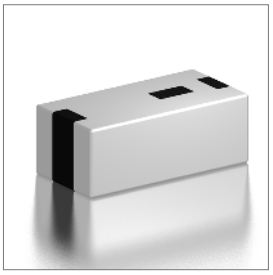
1.60mm x 0.80mm

Features

- Miniature Footprint
- Low Insertion Loss
- High Rejection Rate
- LTCC Process

Applications

- 2400~2500 Working Frequency
- Bluetooth
- Wireless LAN 802.11b/g
- HomeRF



Part Numbering Guide

S RF BF - 1GI J5 - WF B1

SUNTSU	RF COMPONENT	BAND PASS FILTER	* PACKAGE SIZE	* INSERT LOSS (dB)	APPLICATION	FREQUENCY BAND
			1GI = 1.60mm x 0.80mm	J5 = 0.95dB	WF : WiFi	B1 : 2400-2500

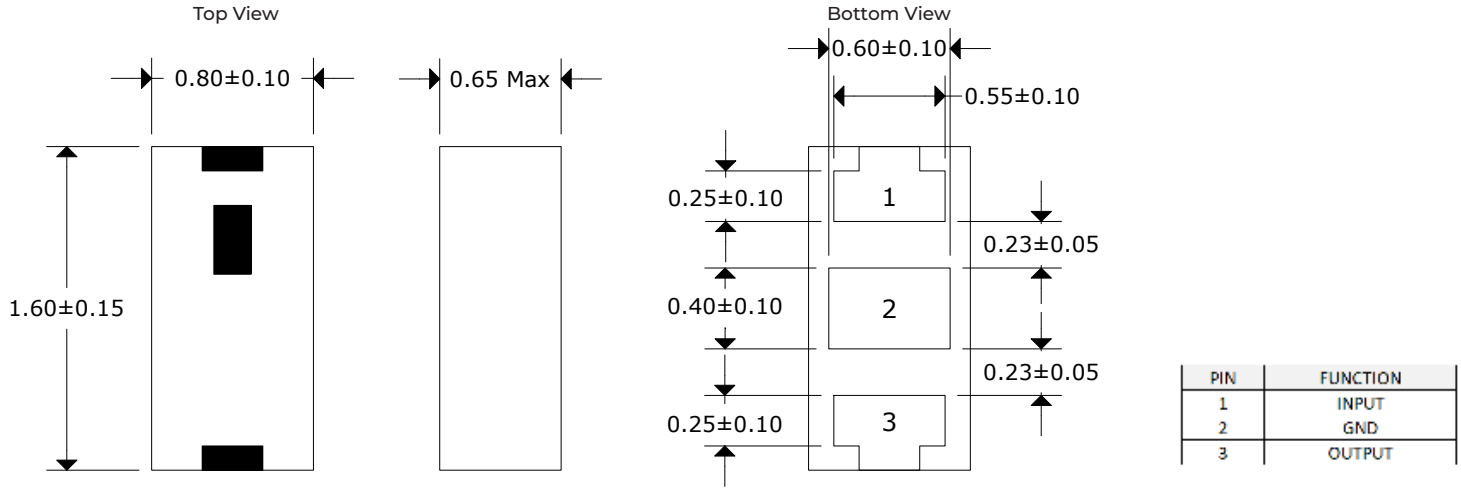
RoHS COMPLIANT

* Where letters denote decimal location (A=.0, B=.1, C=.2, etc.); e.g. B5=0.15, 3A5=3.05, 9A=9.0

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency	MHz	2400		2500	
Insertion Loss @ 25°C	dB			0.95	
Insertion Loss @ -40°~85°C	dB			1.25	
VSWR				2.0	
Impedance	Ω		50		
Power Capacity	W			3	
Operating Temperature Range	°C	-40		85	
Storage Temperature Range	°C	-40		85	
Attenuation @ 500~960MHz	dB	20			
Attenuation @ 3200MHz	dB	23			
Attenuation @ 4800~5000MHz	dB	30			
Attenuation @ 7200~7500MHz	dB	32			

Outline Drawing

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.



PIN	FUNCTION
1	INPUT
2	GND
3	OUTPUT

www.suntsu.com

Specifications are subject to change without notice.

Suntsu Electronics, Inc.
142 TECHNOLOGY DR., SUITE 150
IRVINE, CA 92618

Call: +1-949-783-7300 | Fax: +1-949-783-7301

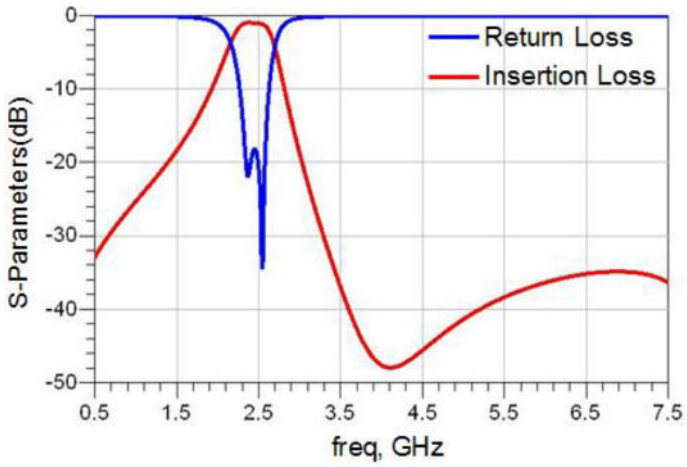
SUNTSU

Multilayer Ceramic Band Pass Filter

SRFBF-1GIJ5-WFB1

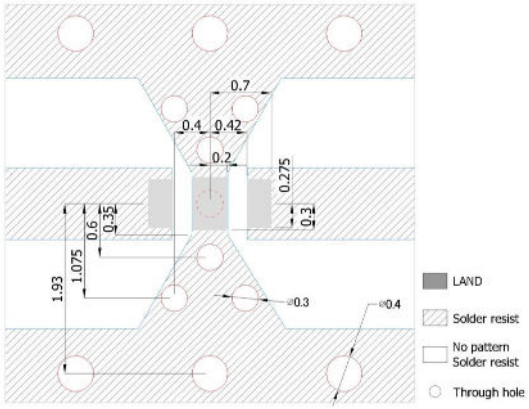
1.60mm x 0.80mm

Typical Electrical Chart



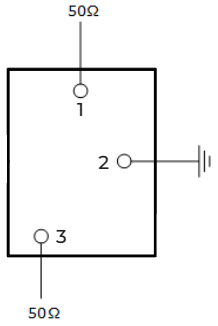
Land Pattern

All dimensions are in millimeters (mm) unless otherwise noted.
Drawings are not to scale.

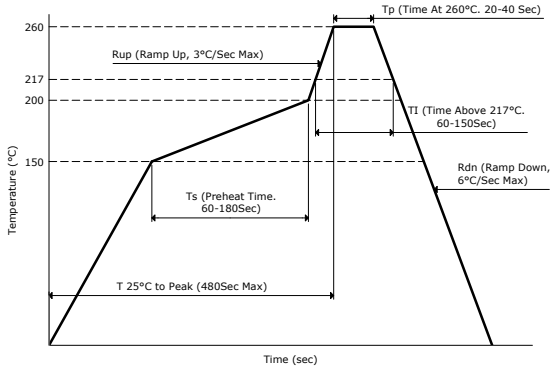


Line width to be designed to match 50Ω characeristic impedance, depending on PCB material and thickness.

Test Circuit



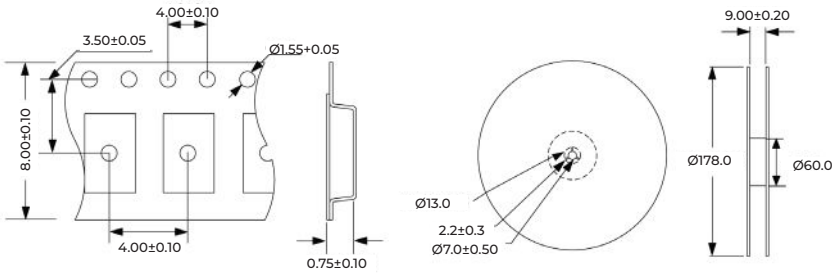
Reflow Profile



Tape and Reel Dimensions

4,000 pcs/reel

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.



www.suntsu.com

Specifications are subject to change without notice.

Suntsu Electronics, Inc.
142 TECHNOLOGY DR., SUITE 150
IRVINE, CA 92618

Call: +1-949-783-7300 | Fax: +1-949-783-7301

SUNTSU

Multilayer Ceramic Band Pass Filter

SRFBF-1GIJ5-WFB1

1.60mm x 0.80mm

Reliability Test		
Test Item	Test Conditions/Test Method	Specification
Solderability **JIS C 0050-4.6** **JESD22-B102D**	*Solder bath temperature : 235±5°C *Immersion time : 2±0.5 sec Solder : Sn3Ag0.5Cu for lead-free	At least 95% of a surface of each terminal electrode must be covered by fresh solder.
Leaching (Resistance to dissolution of metallization) **IEC 60068-2-58**	*Solder bath temperature : 260±5°C *Leaching immersion time : 30±0.5 sec Solder : SN63A	Loss of metallization on the edges of each electrode shall not exceed 25%
Resistance to soldering heat **JIS C 0050-5.4**	*Preheating temperature : 120~150°C, 1 minute *Solder temperature : 270±5°C *Immersion time : 10±1 sec Solder : Sn3Ag 0.5Cu for lead-free Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Eletrical specification shall satisfy the descriptions in electrical characteristics under the operational temperature ranger within -40~85°C. Loss of metallization on the edges of each electrode shall not exceed 25%
Drop Test **JIS C 0044**	*Height : 75 cm *Test surface : Rigid surface of concrete or steel. *Times : 6 surfaces for each unit; 2 times each side.	No mechanical damage. Electrical specification shall satisfy the description in electrical characteristics under the operational temperature range within -40~85°C.
Vibration **JIS C 0040**	*Frequency : 10Hz~55Hz~10Hz (1 min) *Total amplitude : 1.5mm *Test times : 6hrs (two hrs each in three mutually perpendicular directions)	No mechanical damage. Eletrical specification shall satisfy the descriptions in electrical characteristics under the operational temperature range within -40~85°C.
Adhesive Strength of Termination **JIS C 0051-7.4.3**	*Pressurizing force : 5N(≤603) ; 10N(>0603) *Test time : 10±1 sec	No remarkable damage or removal of the termination
Bending Test **JIS C 0051-7.4.1**	The middle part of substrate shall be pressurized by means of the pressurizing rod at a rate of about 1mm/s per second until the deflection becomes 1mm/s and then pressure shall be maintained for 5±1 sec. Measurement to be made after keeping at room temperature for 24±2 hours.	No mechanical damage. Eletrical specification shall satisfy the descriptions in electrical characteristics under the operational temperature range within -40~85°C.
Temperature Cycle **JIS C 0025**	1. 30±3 minutes at -40°C±3°C 2. 10~15 minutes at room temperature 3. 30±3 minutes at 85°C±3°C 4. 10~15 minutes at room temperaure Total 100 continuous cycles Measurement to be made after keeping at room temperature for 24±2 hous.	No mechanical damage. Eletrical specification shall satisfy the descriptions in electrical characteristics under the operational temperature range within -40~85°C.
High Temperature **JIS C 0021**	*Temperature : 85°C±2°C *Test duration : 1000+24/-0 hours Measurement to be made after keeping at room temperature for 24±2 hours.	No mechanical damage. Eletrical specification shall satisfy the descriptions in electrical characteristics under the operational temperature range within -40~85°C.
Humidity (steady conditions) **JIS C 0022**	*Humidity : 90% to 95% Relative Humidity *Temperature : 40°C±2°C *Time : 1000+24/-0 hours Measurement to be made after keeping at room temperature for 24±2 hours. **500hrs measuring the first data then 1000hrs data	No mechanical damage. Eletrical specification shall satisfy the descriptions in electrical characteristics under the operational temperature range within -40~85°C.
Low Temperature **JIS C 0020**	*Temperature : -40°C±2°C *Test duration : 1000+24/-0 hours Measurement to be made after keeping at room temperature for 24±2 hours.	No mechanical damage. Eletrical specification shall satisfy the descriptions in electrical characteristics under the operational temperature range within -40~85°C.

Suntsu Electronics, Inc.
142 TECHNOLOGY DR., SUITE 150
IRVINE, CA 92618

Call: +1-949-783-7300 | Fax: +1-949-783-7301