

- **RF Filter Designed for Front End GPS Applications**
- **Low Insertion Loss**
- **Improved Rejection**
- **2.0 x 1.6 mm Surface-mount Case**
- **Complies with Directive 2002/95/EC (RoHS)**
- **AEC-Q200 Compliant**

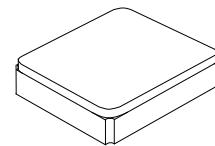


#### Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	+10	dBm
Maximum DC Voltage on any Non-grounded Terminal	3	VDC
Filter Operating Temperature Range	-40 to +105	°C
Filter Storage Temperature Range	-55 to +105	°C
Storage Temperature Range in Tape & Reel	-40 to +85	°C
Maximum Soldering Profile	265°C for 10 s	

**SF1186H-3**

**1575.42 MHz**  
**SAW Filter**



**SM2016-4**

#### Electrical Characteristics

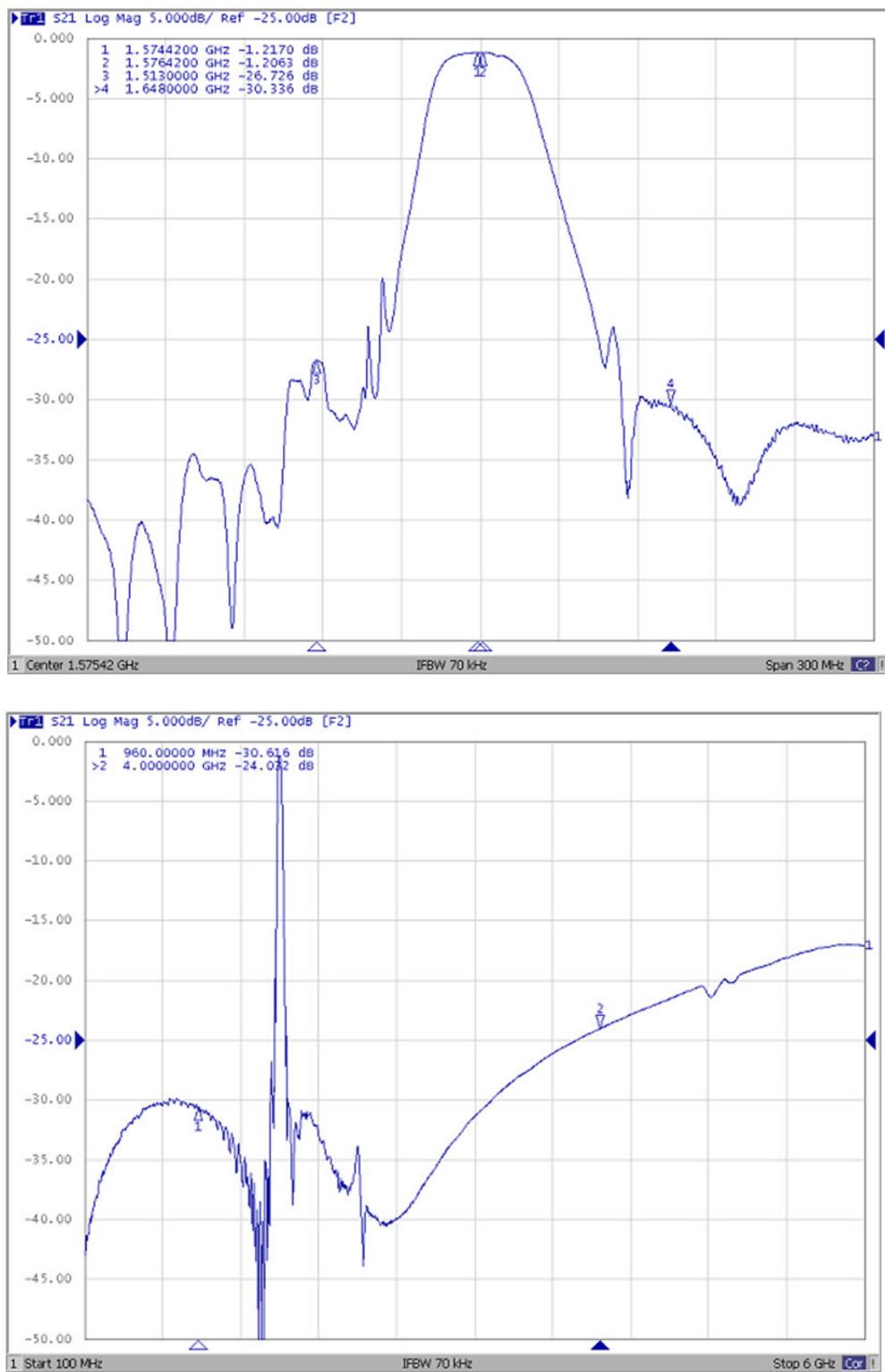
Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_C$			1575.42		MHz
Maximum Insertion Loss, 1574.42 to 1576.42 MHz	$IL_{MAX}$			1.2	1.8	dB
Amplitude Ripple, 1574.42 to 1576.42 MHz				0.1	0.5	dB
VSWR, 1574.42 to 1576.42 MHz				1.2	1.9	
Attenuation:						
100 to 960 MHz			26	29		dB
960 to 1460 MHz			27	30		
1460 to 1513 MHz			22	26		
1648 to 1710 MHz			22	30		
1710 to 1990 MHz			25	30		
1990 to 2300 MHz			25	33		
2300 to 4000 MHz			21	24		
4000 to 6000 MHz			13	16		
Temperature Coefficient of Frequency				-36		ppm/°C
Source impedance	$Z_S$			50		Ω
Load impedance	$Z_L$			50		Ω
Single-ended Input / Output Impedance Match			No matching network required for operation at 50 ohms			
Case Style			SM2016-4			
Lid Symbolization, Device, Date Code			3A			

 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

#### NOTES:

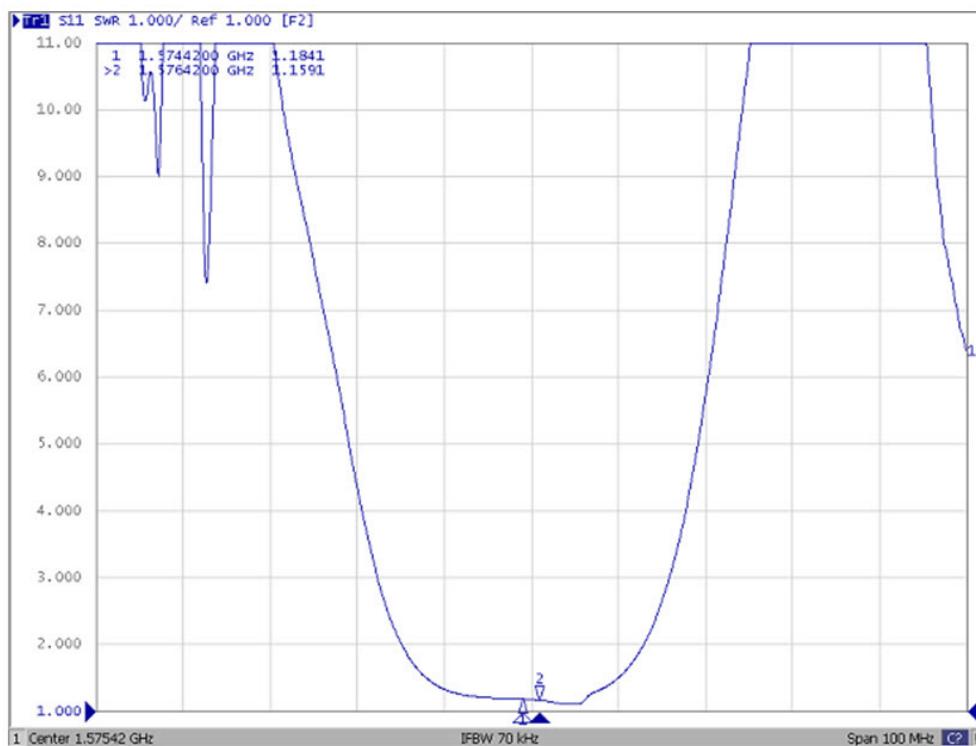
1. US and international patents may apply.
2. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

## Frequency Characteristics

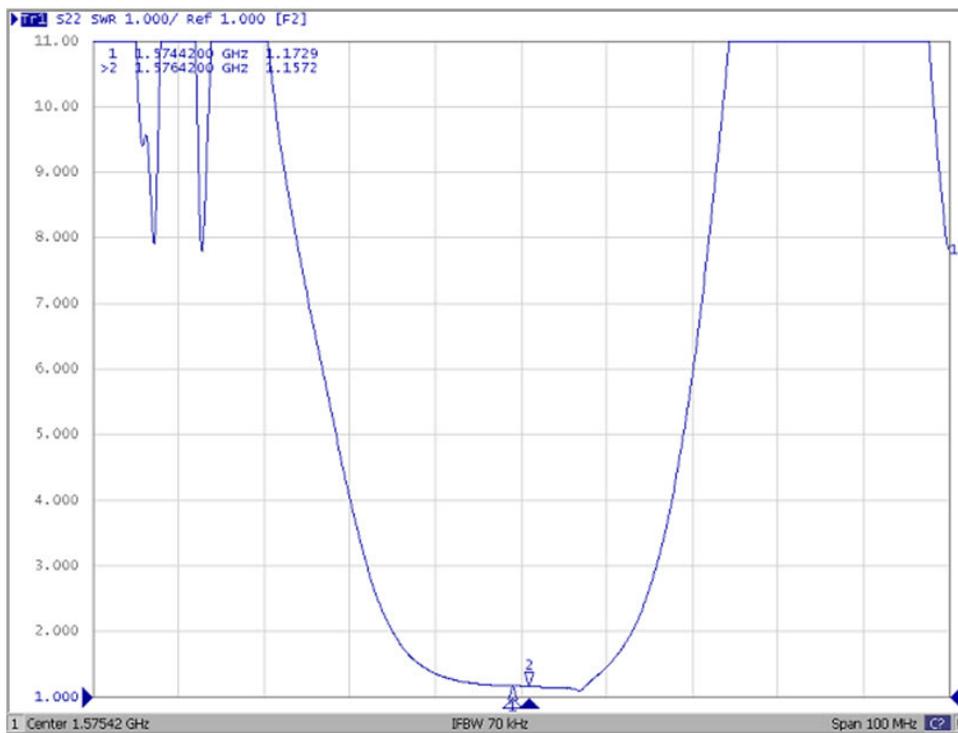


## Reflection Functions

S11



S22



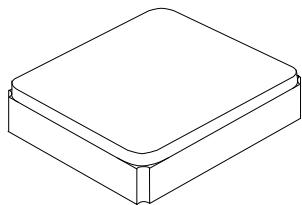
# SM2016-4 Case

## 4-Terminal Ceramic Surface-Mount Case

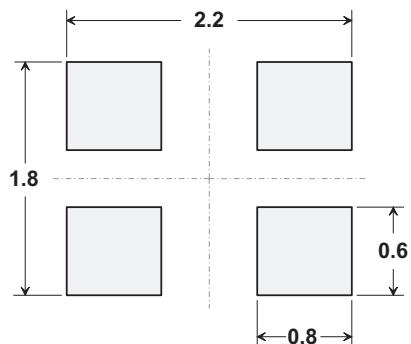
2.0 X 1.6 mm Nominal Footprint

### Electrical Connections

Connection	Terminals
Input	1
Output	3
Ground	2, 4



PCB PAD LAYOUT



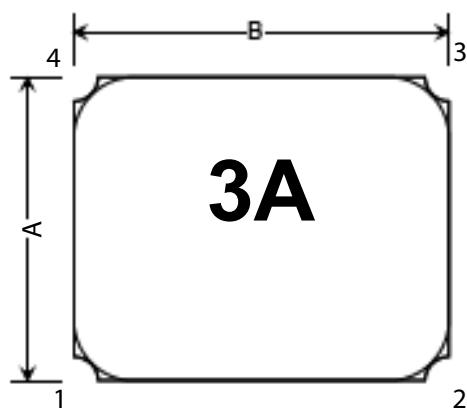
Dimensions in mm  
All pads have the same dimensions

Dimensions	Millimeters			Inches		
	Min	Nom	Max	Min	Nom	Max
A		1.60				
B		2.00				
C		0.90				
D		0.10				
E		0.10				
F		0.70				
G		0.50				
H		0.10				

Dimensions in mm

All pads have the same dimensions

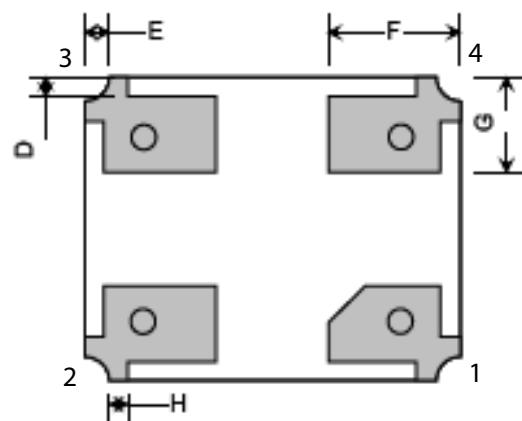
TOP VIEW



SIDE VIEW



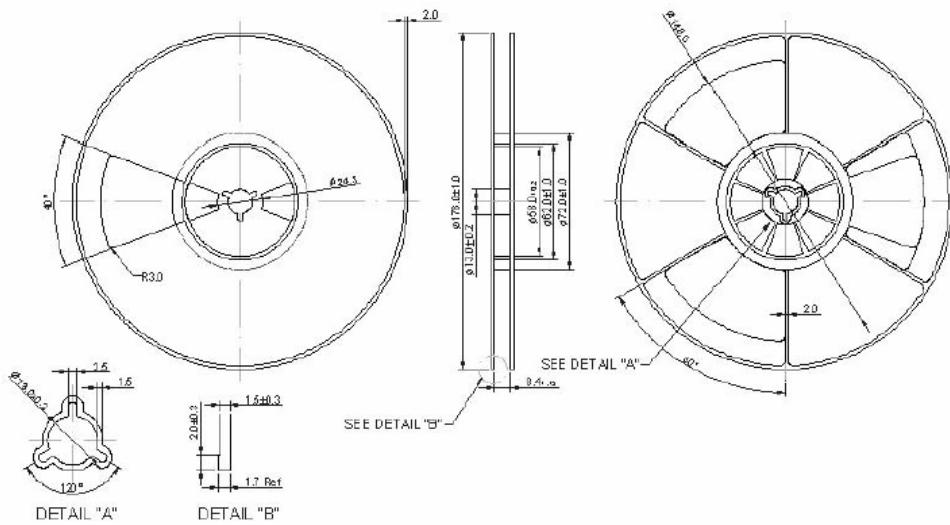
BOTTOM VIEW



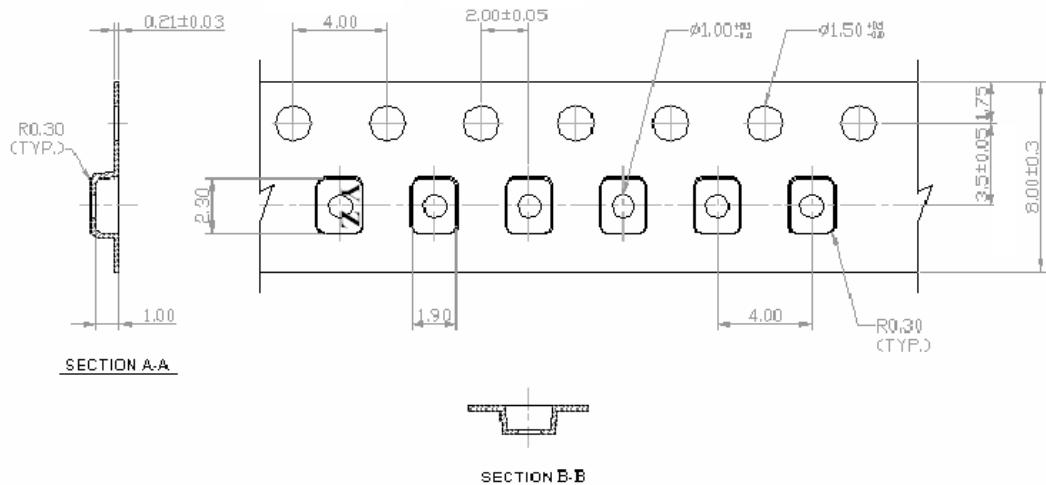
## F. PACKING:

### 1. REEL DIMENSION

Reel Count: 7" = 2000 typ; 13" = 10000 typ.



### 2. TAPE DIMENSION



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