

Общество с ограниченной ответственностью  
«Научно-производственное предприятие «Техно-ПАРК»  
(ООО «НПП «Техно-ПАРК»)

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## Технические характеристики фильтра на ПАВ

**SF2042B**

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Производитель: RFM Integrated Device, Inc.

Поставщик: ООО «НПП «Техно-ПАРК» - авторизованный дистрибьютор компании  
RFM Integrated Device Inc.

Научно-производственное предприятие ООО «НПП «Техно-ПАРК» разрабатывает и поставляет полосно-пропускающие радиочастотные фильтры на поверхностных акустических волнах (ПАВ) и устройства на их основе. «НПП «Техно-ПАРК» имеет собственную научную и производственную базу, а также является надежным поставщиком ведущих предприятий радиоэлектронной промышленности.

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AEC-Q200

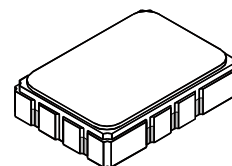
This component was always RoHS compliant from the first date of manufacture.

- Designed for 802.16 and WIMAX Receiver IF Application
- Low Insertion Loss
- 5.0 X 7.0 mm Surface-Mount Case
- Differential Input and Output
- Complies with Directive 2002/95/EC (RoHS)



**SF2042B**

**456.00 MHz  
SAW Filter**



**SMP-03**

#### Absolute Maximum Ratings

| Rating                                                   | Value          | Units |
|----------------------------------------------------------|----------------|-------|
| Maximum Incident Power in Passband                       | +13            | dBm   |
| Max. DC voltage between any 2 terminals                  | 30             | VDC   |
| Storage Temperature Range                                | -40 to +85     | °C    |
| Suitable for lead-free soldering - Max Soldering Profile | 260°C for 30 s |       |

#### Electrical Characteristics

| Characteristic                                | Sym                                         | Notes                             | Min  | Typ    | Max | Units  |
|-----------------------------------------------|---------------------------------------------|-----------------------------------|------|--------|-----|--------|
| Nominal Center Frequency @ 25°C               | CF                                          |                                   |      | 456.00 |     | MHz    |
| Insertion Loss @ 25°C                         |                                             |                                   |      | 12     | 14  | dB     |
| Differential Impedance line-to-line           |                                             |                                   |      | 200    |     | Ohms   |
| Passband 1dB                                  |                                             |                                   | ±6.4 | ±7.5   |     | MHz    |
| Passband 3dB                                  |                                             |                                   | ±7.5 | ±8.8   |     |        |
| Group Delay                                   | Absolute Group Delay Variation; CF ±6.4 MHz |                                   |      | 50     | 150 | nsec   |
|                                               | Return Loss                                 |                                   |      | 8      | 15  | dB     |
| Rejection                                     | DC to 256 MHz                               |                                   | 30   | 55     |     | dB     |
|                                               | 256 to 360 MHz                              |                                   | 36   | 50     |     |        |
|                                               | 360 to 416                                  |                                   | 36   | 40     |     |        |
|                                               | 416 to 443 MHz                              |                                   | 25   | 35     |     |        |
|                                               | 470 to 656 MHz                              |                                   | 32   | 35     |     |        |
|                                               | 656 to 946 MHz                              |                                   | 30   | 50     |     |        |
| Equivalent Circuit                            | Input 320 ohm                               |                                   |      | 5.1    |     | pF     |
|                                               | Output 400 ohm                              |                                   |      | 4.5    |     | pF     |
| Center Frequency Temperature Coefficient      |                                             |                                   |      | -15    |     | kHz/°C |
| Maximum Peak RF Input Power                   |                                             |                                   |      |        | 13  | dBm    |
| Temperature                                   | Operating                                   |                                   | -40  |        | 85  | °C     |
|                                               | Storage                                     |                                   | -40  |        | 85  |        |
| Case Style                                    |                                             | SMP-03 5 x 7 mm Nominal Footprint |      |        |     |        |
| Lid Symbolization (YY=year, WW=week, S=shift) |                                             | RFM, SF2042B, YYWWS               |      |        |     |        |



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

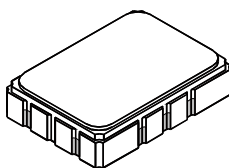
#### NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.

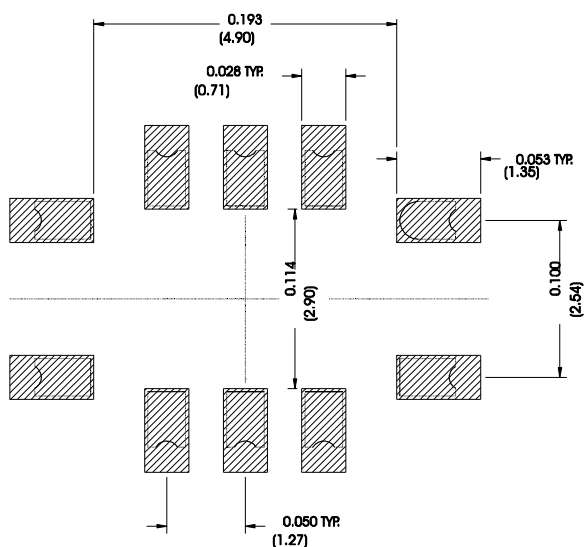
# SMP-03 Case

## 10-Terminal Ceramic Surface-Mount Case

### 7 x 5 mm Nominal Footprint



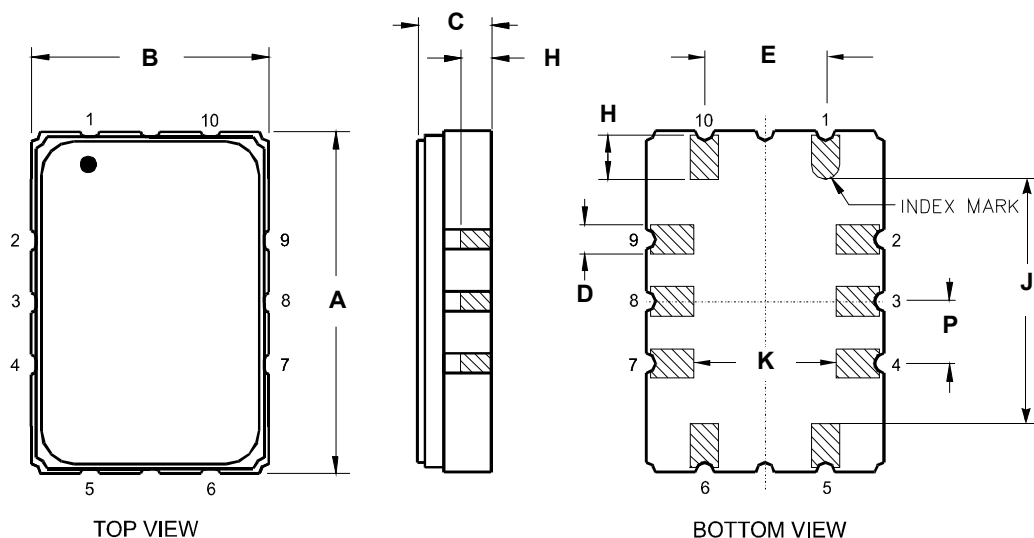
Recommended PCB Footprint



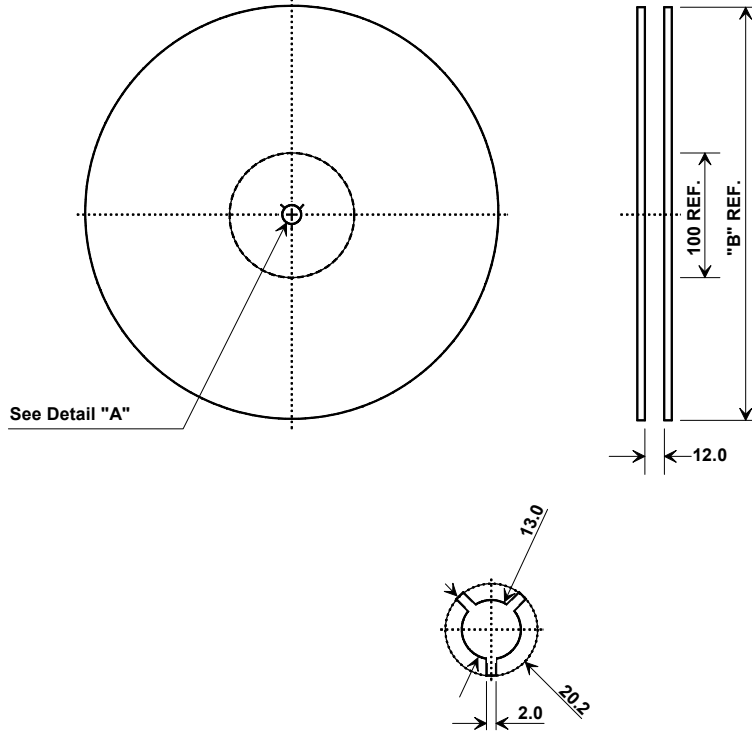
| Case Dimensions |      |      |      |        |       |       |
|-----------------|------|------|------|--------|-------|-------|
| Dimension       | mm   |      |      | Inches |       |       |
|                 | Min  | Nom  | Max  | Min    | Nom   | Max   |
| A               | 6.80 | 7.00 | 7.20 | 0.268  | 0.276 | 0.283 |
| B               | 4.80 | 5.00 | 5.20 | 0.189  | 0.197 | 0.205 |
| C               |      | 1.65 | 2.00 |        | 0.065 | 0.079 |
| D               | .47  | 0.60 | .73  | 0.019  | 0.024 | 0.029 |
| E               | 2.41 | 2.54 | 2.67 | 0.095  | 0.100 | 0.105 |
| H               | 0.87 | 1.0  | 1.13 | 0.034  | 0.039 | 0.044 |
| J               | 4.87 | 5.00 | 5.13 | 0.192  | 0.197 | 0.202 |
| K               | 2.87 | 3.00 | 3.13 | 0.113  | 0.118 | 0.123 |
| P               | 1.14 | 1.27 | 1.40 | 0.045  | 0.050 | 0.055 |

| Materials              |                                                                                  |
|------------------------|----------------------------------------------------------------------------------|
| Solder Pad Termination | Au plating 30 - 60 ulnches (76.2-152 uM) over 80-200 ulnches (203-508 uM) Ni.    |
| Lid                    | Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 ulnches Thick |
| Body                   | Al <sub>2</sub> O <sub>3</sub> Ceramic                                           |
| Pb Free                |                                                                                  |

| Electrical Connections |                  |                  |
|------------------------|------------------|------------------|
| Connection             |                  | Terminals        |
| Port 1                 | Input or Return  | 10               |
|                        | Return or Input  | 1                |
| Port 2                 | Output or Return | 5                |
|                        | Return or Output | 6                |
| Ground                 |                  | All others       |
| Single Ended Operation |                  | Return is ground |
| Differential Operation |                  | Return is hot    |



## Tape and Reel Specifications

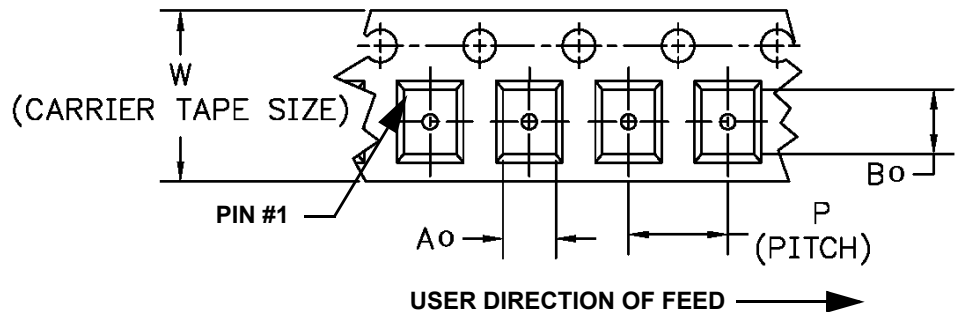
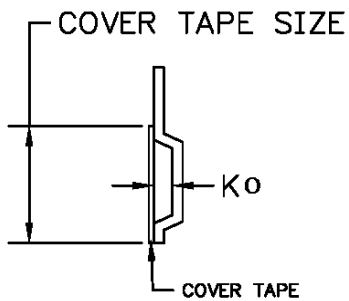


Tape and Reel Standard per ANSI/EIA-481

| "B"    |             | Quantity Per Reel |
|--------|-------------|-------------------|
| Inches | millimeters |                   |
| 7      | 178         | 500               |
| 13     | 330         | 2000              |

### COMPONENT ORIENTATION and DIMENSIONS

| Carrier Tape Dimensions |         | Tolerance |
|-------------------------|---------|-----------|
| Ao                      | 5.5 mm  | ± 0.1mm   |
| Bo                      | 7.5 mm  | ± 0.1mm   |
| Ko                      | 2.0 mm  | ± 0.1mm   |
| Pitch                   | 8.0 mm  | ± 0.1mm   |
| W                       | 16.0 mm | ± 0.2mm   |



## Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

