Surface Mount **Bandpass Filter**

50Ω 236 to 265 MHz

RBPF-246+



The Big Deal

Generic photo used for illustration purposes only CASE STYLE: CK605

- High rejection
- · Better passband insertion loss and return loss
- Miniature shielded package

Product Overview

The RBPF-246+ is a 50Ω bandpass filter fabricated using SMT technology. This bandpass filter covers from 236 to 256 MHz. The filter is built with high Q capacitors, chip inductors and wire wound inductors for superior performance. In addition it has repeatable performance across production lots and consistent performance across temperature.

Key Features

| Feature | Advantages |
|---------------------------------------|--|
| Low insertion loss | Can be used in high performance applications such as radio astronomy. |
| Good rejection | This enables the filter to attenuate spurious signals and reject harmonics for broad frequency band. |
| Small size, 0.500" x 0.500" x 0.180 " | The small surface mount package enables the RBPF-246+ to be used in compact designs. |

Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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Тур.

246

2.7

1.3

31

Max.

4

1.67

Unit

MHz

dB

:1

dB

:1

dB

:1

Min.

20

Features

- · Better passband insertion loss and return loss
- High rejection
- · Miniature shielded case

Applications

- Military-aircraft
- · Marine communication

| Maximum Ratings | | | | | |
|------------------|----------------|-------|----------|----|----|
| | | | | | |
| Stop Banu, opper | VSWR | F4-F5 | 315-3400 | | 13 |
| Ston Band Upper | Insertion Loss | F4-F5 | 315-3400 | 20 | 33 |
| Stop Band, Lower | VSWR | DC-F3 | DC-180 | - | 20 |
| Stop Bond Lower | Inseniori Loss | DC-F3 | DC-160 | 20 | 31 |

-40°C to 85°C

-55°C to 100°C

0.15 W

50.60

F#

F1-F2

F1-F2

DC-F3

Parameter

Pass Band

Operating Temperature

Storage Temperature

3400

RF Power Input

Center Frequency

Insertion Loss

Insertion Loss

VSWR

Permanent damage may occur if any of these limits are exceeded.

Functional Schematic



Typical Frequency Response





Frequency (MHz) Insertion Loss (dB) VSWR Group Delay Frequency (MHz) (:1) (nsec) 1737.18 105.36 1 236 15.66 150 53.97 86.86 237 15.57 238 239 180 31.90 29.96 15.47 182 30.29 27.16 15.40 193 20.83 15.39 240 15.34 198 16.28 10.62 241 15.31 242 207 8.47 4.26 15.26 228 2.85 1.18 243 15.23 236 2.80 1.22 244 15.21 2.90 245 15.23 246 1.14 256 3.26 1.07 246 15.23 272 6.04 2.11 247 15.27 288 16.26 7.73 248 15.30 294 20.59 10.56 249 15.33 310 30.88 18.11 250 15.38 315 33.72 20.49 251 15.45 390 64 98 54 29 252 15.53 1500 78.50 253 51.10 15.63 32.79 2500 62.67 254 15.74

27.16

Typical Performance Data at 25°C





256

15.98



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0.9 241 246

500

236

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M174392 RBPF-246+ EDU0901 URJ 200220 Page 2 of 3

REV C

Electrical Specifications at 25°C

Frequency (MHz)

236-256

236-256

DC-180

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|---------------------|--|--|

251 25

> 2500 3000 3500

1000 1500 2000 2 FREQUENCY (MHz)



Pad Connections

| INPUT | 2 |
|---------------|--------------------------------|
| OUTPUT | 10 |
| NOT CONNECTED | 14 |
| GROUND | 1,3,4,5,6,7,8,9,11,12,13,15,16 |

Demo Board MCL P/N: TB-10 Suggested PCB Layout (PL-012)





Note: Please refer to case style drawing for details

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