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## Table of Contents

LAB7 Checks functionality of FIR window design .....	1
Part 1: Check filter design .....	1
Part II: Comparative behavior of window filters .....	1
Part III: Phone tones .....	6

# LAB7 Checks functionality of FIR window design

Place this file in same directory as your  
rectfilt, hammingfilt and kaiserfilt functions.  
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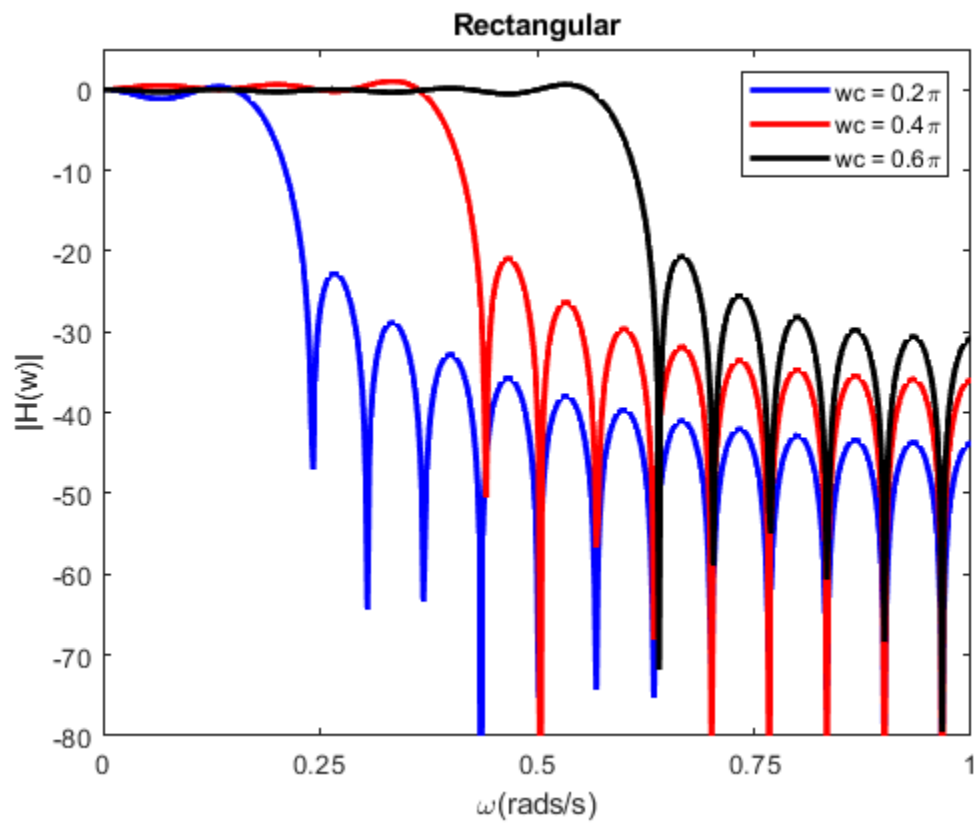
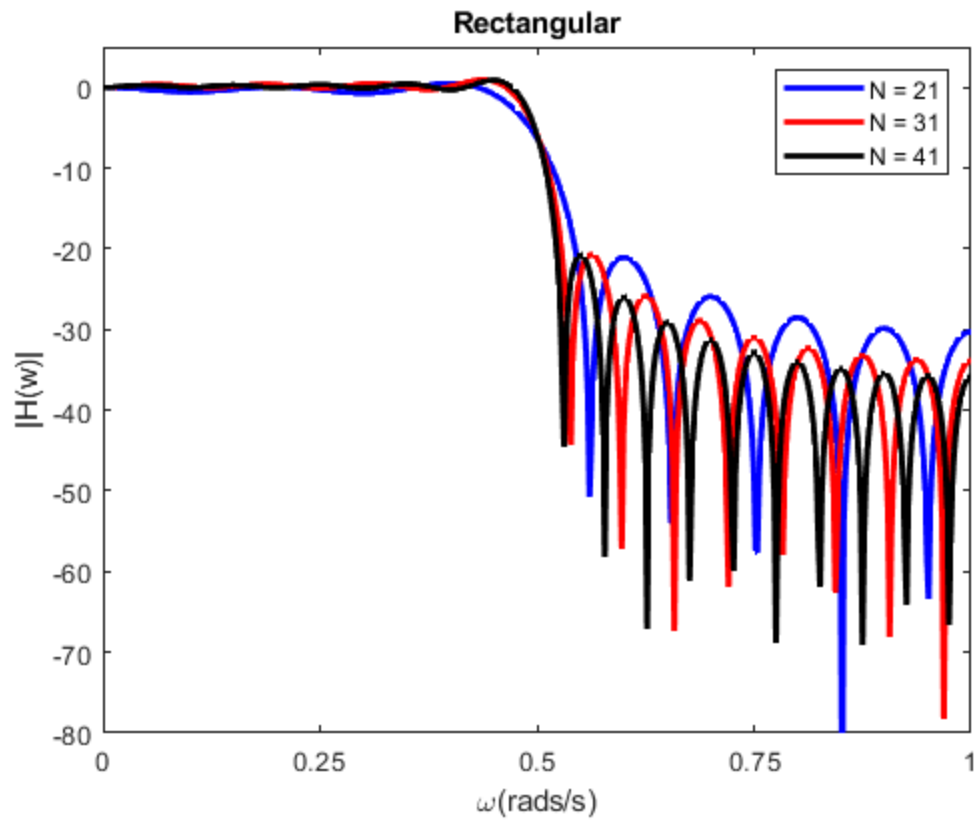
```
% Set-up  
clear  
delete(allchild(0));
```

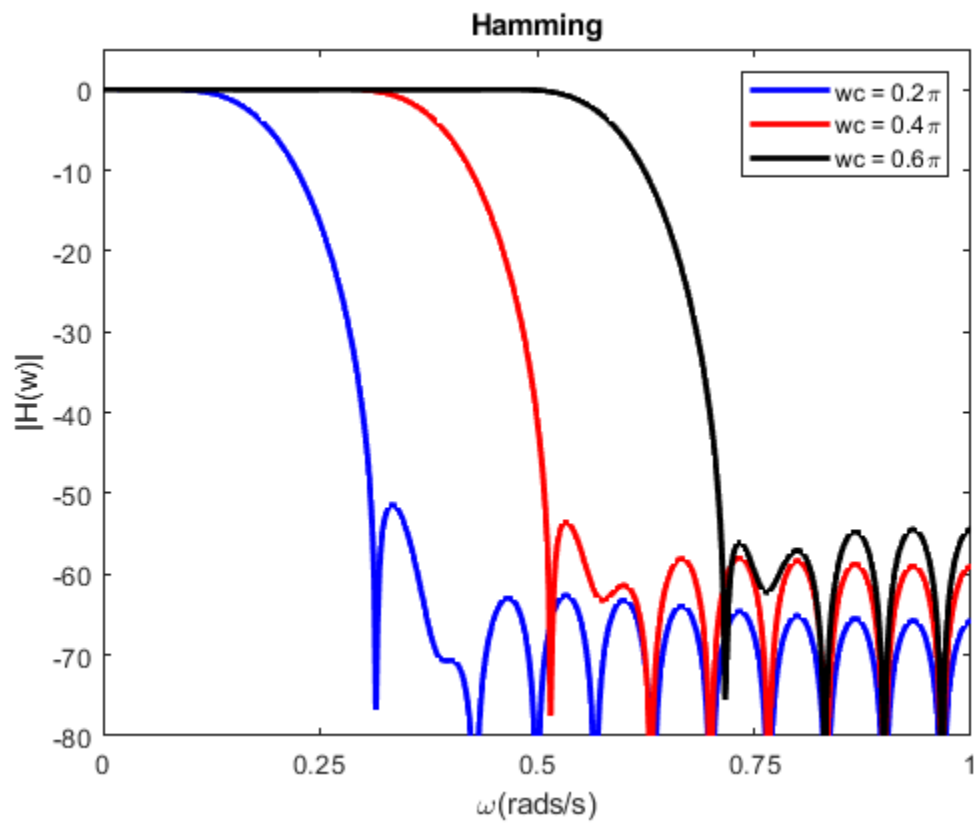
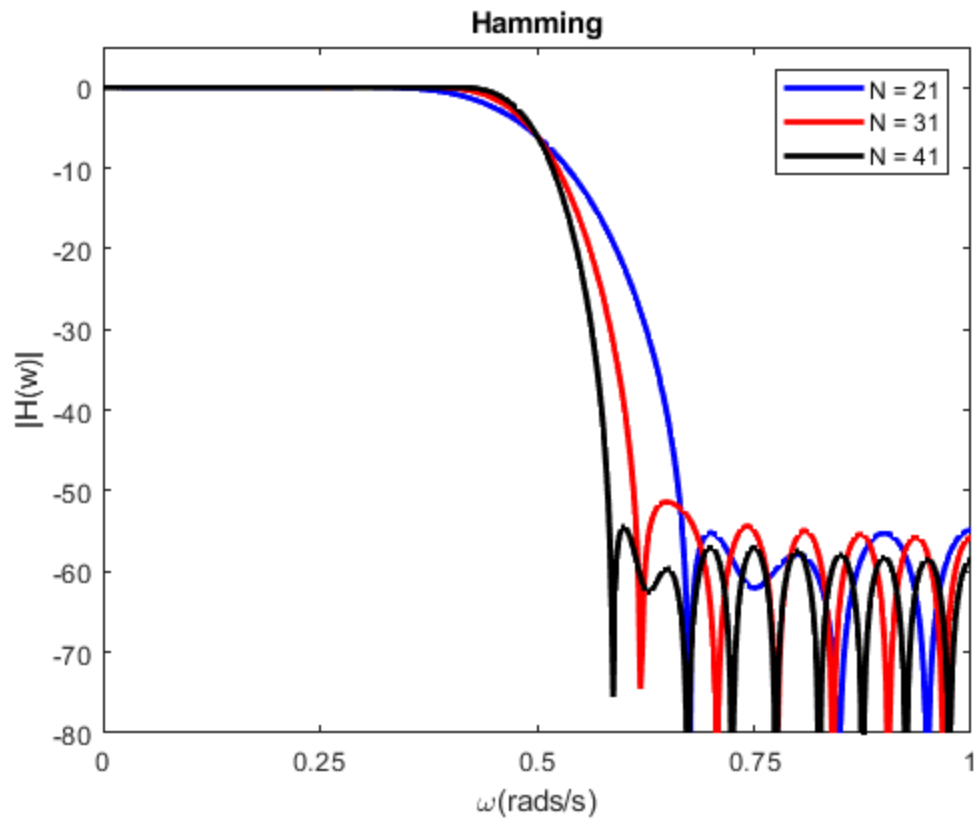
## Part 1: Check filter design

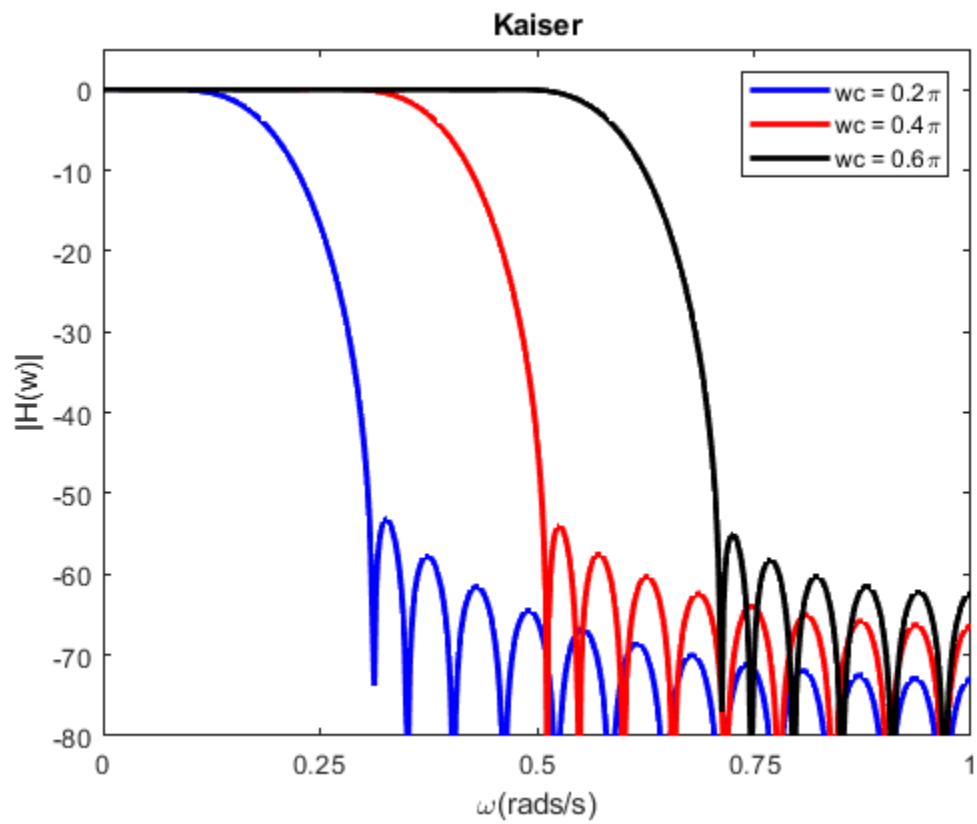
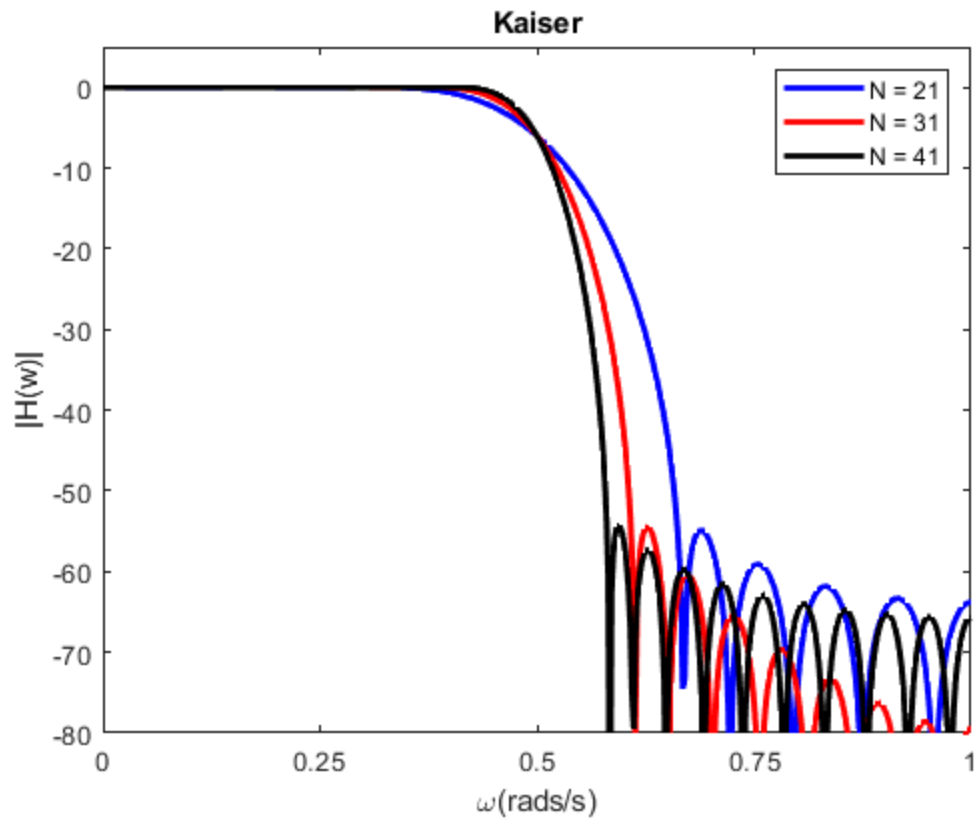
```
test_lab7a  
  
Testing 'rectfilt' with N=21 and wc=0.25: O.K.  
Testing 'rectfilt' with N=31 and wc=0.25: O.K.  
Testing 'rectfilt' with N=41 and wc=0.25: O.K.  
Testing 'rectfilt' with N=21 and wc=0.50: O.K.  
Testing 'rectfilt' with N=31 and wc=0.50: O.K.  
Testing 'rectfilt' with N=41 and wc=0.50: O.K.  
Testing 'rectfilt' with N=21 and wc=0.75: O.K.  
Testing 'rectfilt' with N=31 and wc=0.75: O.K.  
Testing 'rectfilt' with N=41 and wc=0.75: O.K.  
  
Testing 'hammingfilt' with N=21 and wc=0.25: O.K.  
Testing 'hammingfilt' with N=31 and wc=0.25: O.K.  
Testing 'hammingfilt' with N=41 and wc=0.25: O.K.  
Testing 'hammingfilt' with N=21 and wc=0.50: O.K.  
Testing 'hammingfilt' with N=31 and wc=0.50: O.K.  
Testing 'hammingfilt' with N=41 and wc=0.50: O.K.  
Testing 'hammingfilt' with N=21 and wc=0.75: O.K.  
Testing 'hammingfilt' with N=31 and wc=0.75: O.K.  
Testing 'hammingfilt' with N=41 and wc=0.75: O.K.  
  
Testing 'kaiserfilt' with deltaOmega=0.1, delta=0.01:  
N (141) is incorrect, beta (3.39532) is incorrect  
Testing 'kaiserfilt' with deltaOmega=0.2, delta=0.01:  
N (71) is incorrect, beta (3.39532) is incorrect
```

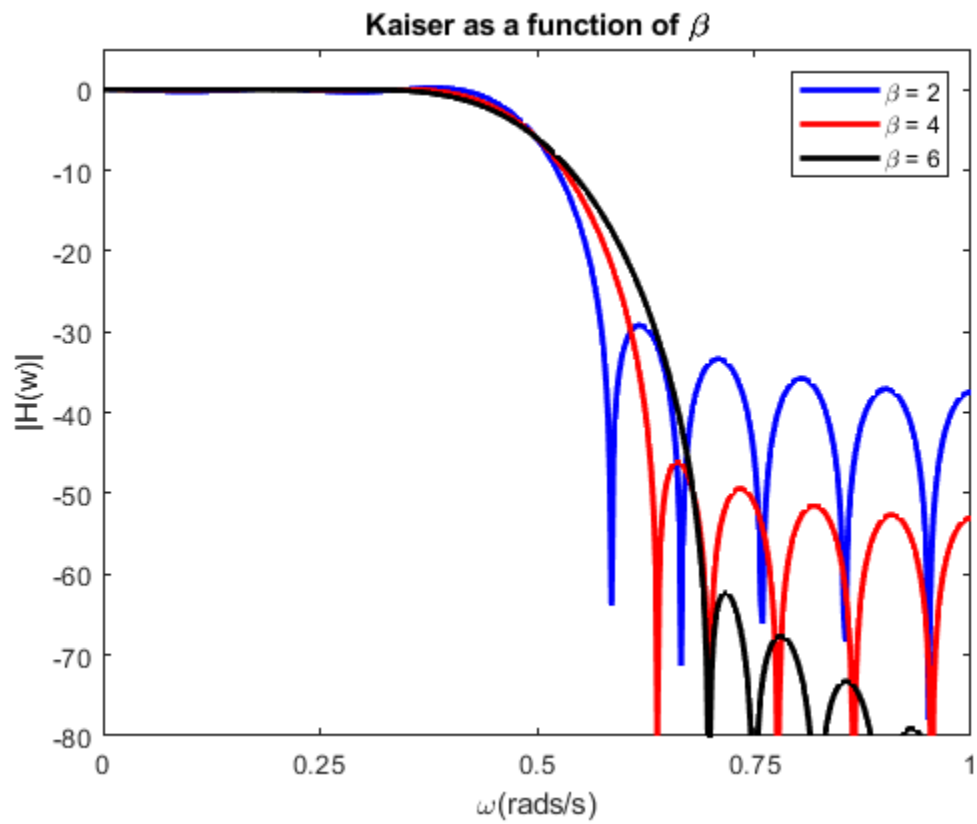
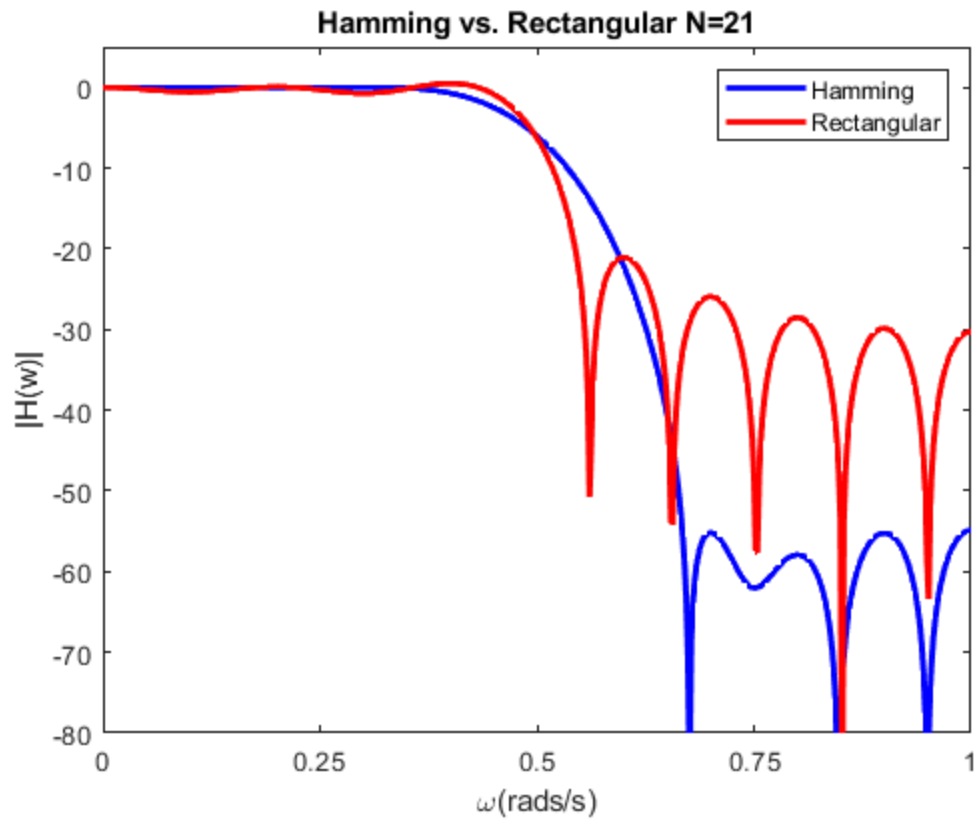
## Part II: Comparative behavior of window filters

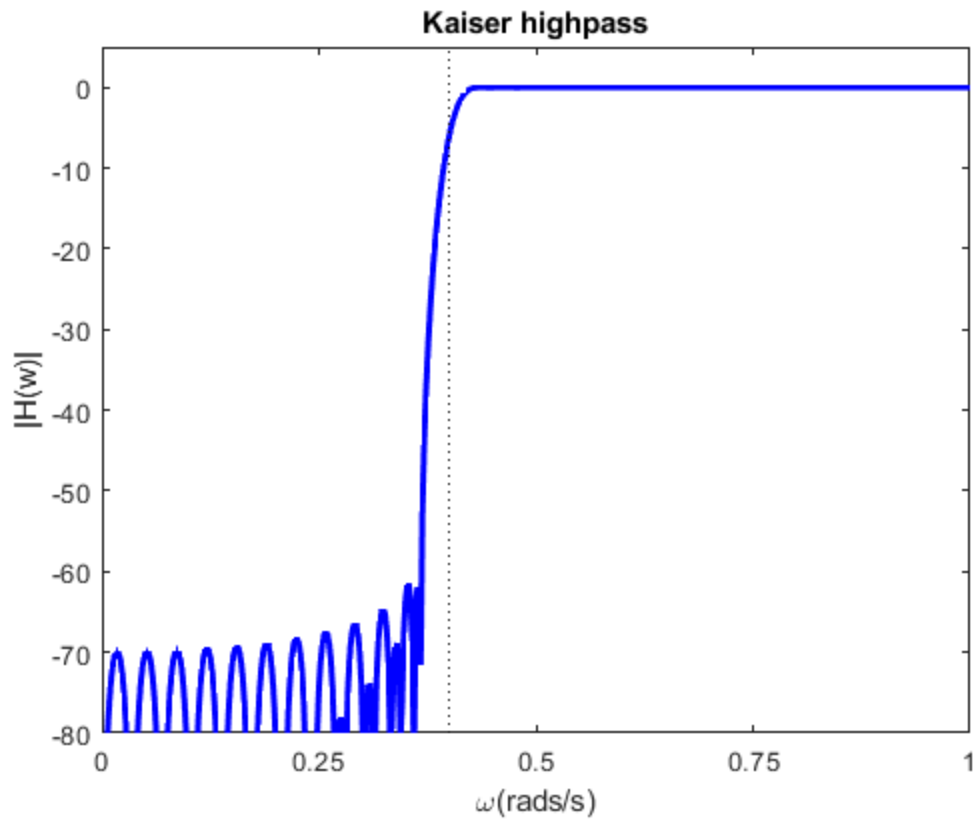
```
test_lab7b
```











## Part III: Phone tones

test\_lab7c

*Signal to noise ratio of row tones: 26.3701*

*Signal to noise ratio of column tones: 46.3116*

*Published with MATLAB® R2020b*