

Exp 3. Single Time Constant Circuits



Tom Brewer

Specification for Low Pass Filter

$R=10k$ $C=0.1\mu$

Measured Values

$R=9.85k$ $C=104nF$

$F_p=1/(2\pi RC) = 155.364Hz$

Computer Name: BREWDESK

User Name: Tom

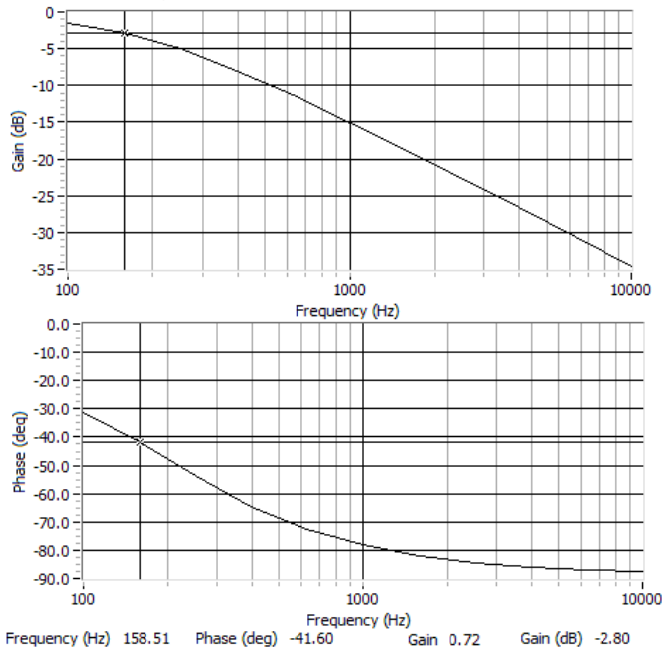
Time stamp: 12/30/2012 7:46:48 PM

CHO Real



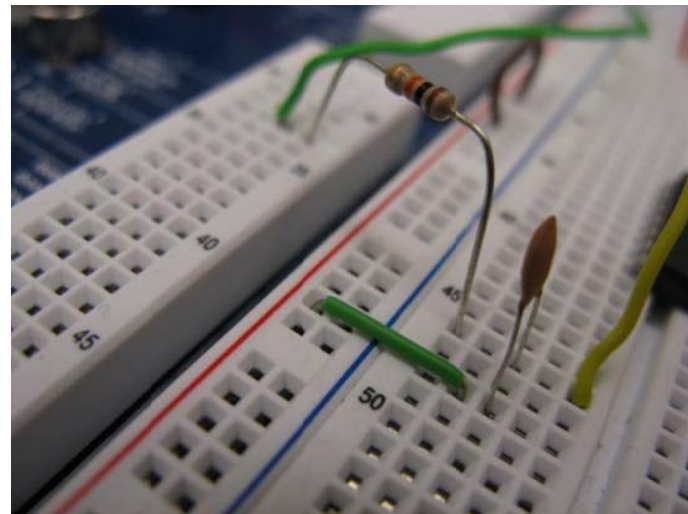
LabVIEW

Connections: AI 0 - FGEN AI 1 - Signal

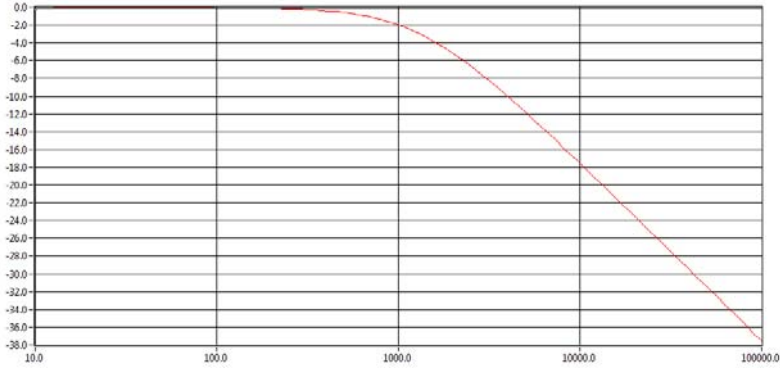


Frequency (Hz) 158.51 Phase (deg) -41.60 Gain 0.72 Gain (dB) -2.80

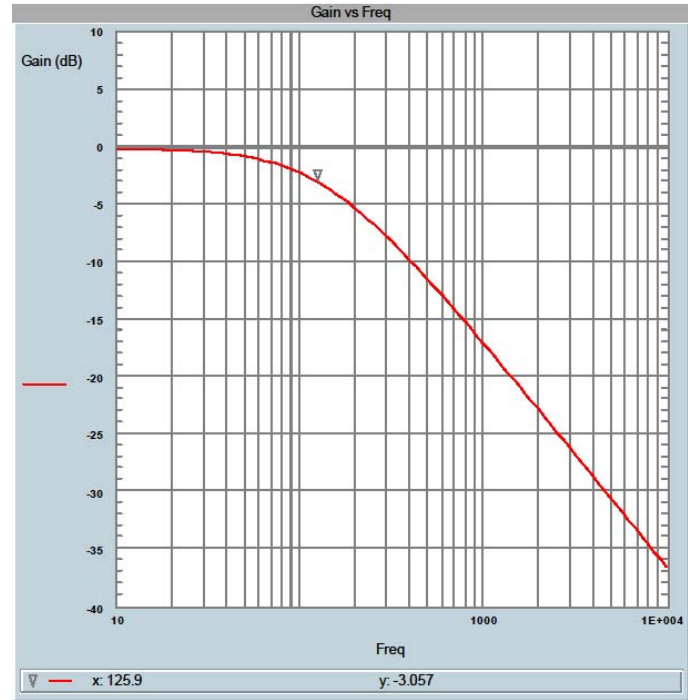
Parameter	Value	Parameter	Value
Device	ELVIS (NI ELVIS II+)	Op-Amp Polarity	Normal
Stimulus Channel	AI 0	Graph Mapping	Logarithmic
Response Channel	AI 1	Cursor Linked Plot	Cursor (Real)
Start Frequency	10.00 Hz		
Stop Frequency	10.00k Hz		
Steps / decade	100		
Peak Amplitude	2.00		



Circuit on Breadboard



FG and DMM Amplitude Frequency Response with LabVIEW



FG and DMM Amplitude Frequency Response with VEE

The agreement between the theoretical and experimental results is acceptable. No significant sources of error exists.