

DESIGNING LOW PASS FILTER FOR RF APPLICATION

The thesis is presented as a partial fulfillment for the award of the

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ABSTRACT

This project focused on designing and building a low pass microstrip filter with a passband up to 3 GHz. The filter is intended to operate with other specifications: Equal-ripple *Chebyshev* filter, passband ripple less than 0.5 dB and stopband attenuation at 6 GHz is more than 40 dB. This project was designed and simulated using CAD packages called *Genesys* and *HP Eesof Libra*. The microstrip laminates used was *Duroid/Rogers 5872* with 0.5 mm substrate thickness and relative permittivity ζ_r equal to 2.33. The filter is then measured using a *Wiltron Scalar Network Analyzer* to obtain its precision.

TABLE OF CONTENTS

CHAPTER		PAGE
1	INTRODUCTION	
	1.1 RF Circuit	1
	1.2 S-Parameters	2
	1.3 Filter	4
	1.3.1 Types of filter	5
	1.3.2 Filter Specifications	8
	1.3.3 Microstrip Low Pass Filter	10
	1.4 Methodology	11
2	MICROSTRIP	
	2.1 Introduction	12
	2.2 Quasi TEM Pattern	13
	2.3 Losses In Microstrip	15
	2.3.1 Conductor Loss	15
	2.3.2 Dielectric Loss	15
	2.3.3 Radiation Loss	15
	2.4 Characteristics Impedance Values	16
3	DESIGN AND CALCULATIONS	
	3.1 Introduction	17
	3.2 Design Procedures	18
	3.2.1 Filter Specifications	19
	3.2.2 Number of elements	20
	3.2.3 Prototypes values	21
	3.2.4 Actual Values of Inductor and Capacitor	22

	3.2.5 Conversion to Distributed Elements	24
	3.2.6 Optimization Stage	27
4	SIMULATION	
	4.1 Introduction	28
	4.2 Computer Aided Design of Microwave Circuit	
	4.2.1 HP Eesof Libra	29
	4.2.2 Genesys	30
	4.3 Methods of Simulation	
	4.3.1 Method of Moments (MoM)	31
	4.3.2 Finite Elements Method (FEM)	32
	4.3.3 Transmission Line Modeling (TLM)	32
	4.4 Optimization	33
5	FABRICATION	
	5.1 Introduction	34
	5.2 Fabrication Technique	36
	5.3 Problems Encountered During Fabrication Process	37
	5.4 Grounding	38
6	MEASUREMENT	
	6.1 Introduction	40
	6.2 Equipment	40
	6.3 Calibration	41
	6.4 Measurement Procedures	42
7	RESULTS AND ANALYSIS	
	7.1 Introduction	43
	7.2 Results and Analysis	
	7.2.1 Lumped Elements Circuit (Genesys)	43