Contents

Prefac	ce ix
Funda	amentals 1
1.2 1.3 1.4 1.5 1.6 1.7 1.8	Frequency and Time 1 Time and Distance 6 Lumped Versus Distributed Systems 7 A Note About 3 dB and RMS Frequencies 8 Four Kinds of Reactance 10 Ordinary Capacitance 11 Ordinary Inductance 17 A Better Method for Estimating Decay Time 22 Mutual Capacitance 25 Mutual Inductance 29
High-	Speed Properties of Logic Gates 37
2.2	Historical Development of a Very Old Digital Technology 37 Power 39 Speed 59 Packaging 66
	1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 High- 2.1 2.2 2.3

Collected References 385

A Points to Remember 389

B Calculation of Rise Time 399

total and the lactor of the

C MathCad Formulas 409

Index 441