LIST OF TABLES

Table 1.1	Properties and some applications of ferroelectric materials	6
Table 3.1	Details of the starting materials used for preparation of $Ba_{1-x}Sr_xTiO_3$, $BaFe_xTi_{1-x}O_3$ and $BaTi_{1-x}Sn_xO_3$ samples	33
Table 5.1	Rietveld refinement parameters for $Ba_{1-x}Sr_xTiO_3$	84
Table 5.2	Dielectric Constant , Loss (at 1MHz, Room Temperature) and Temperature T_m corresponding to ε'_m	92
Table 5.3	The best fit values for ε'_m, T_m, γ and C at 100 kHz for $Ba_{1-x}Sr_xTiO_3$ (x= 0.15, 0.20, 0.25 and 0.30) in accordance with modified Curie-Weiss Law (Equation (5.2))	94
Table 5.4	Values of the components of the model for BST15	100
Table 5.5	Values of the components of the model for BST20.	101
Table 5.6	Values of the components of the model for BST25	101
Table 5.7	Values of the components of the model for BST30.	102
Table 5.8	Values of the components of the model for BST35.	102
Table 5.9	Approximate Saturation Polarization (P_s), Retentivity (P_r) and Coercivity (E_c) for all the samples	105
Table 6.1	Fitted cell parameters and figure of merits for the compositions x=0.03, 0.05 and 0.10 where Ref 1 and Ref 2 correspond to JCPDS 79-2264 and JCPDS 82-1175 respectively.	115
Table 6.2	EDS results for compositions x = 0.03, 0.05 and 0.10.	117
Table 6.3	The best fit values for ε_m, T_m, γ and C at 1 kHz for $BaFe_xTi_{1-x}O_3$ (x = 0.03, 0.05) in accordance with modified Curie-Weiss Law (Equation (6.2))	124
Table 6.4	Values of the components for equivalent circuit model for BFT3 (x = 0.03)	130

Table 6.5	Values of the components for equivalent circuit model for BFT5 (x = 0.05)	131
Table 6.6	Values of the components for equivalent circuit model for BFT10 (x = 0.10)	132
Table 7.1	Rietveld refinement parameters	139
Table 7.2	EDS results for $BaTi_{1-x}Sn_xO_3$ (x = 0.0, 0.10 and 0.15)	141
Table 7.3	Dielectric Constant, Loss (at 1MHz, Room Temperature) and Temperature T_m corresponding to ε'_m	146
Table 7.4	The best fit values for ε_m, T_m , γ and C at 100 kHz for $BaTi_{1-x}Sn_xO_3$ (x = 0.05 and 0.10) in accordance with modified Curie-Weiss Law (Equation (7.2))	149
Table 7.5	Values of the components of the model for BTS5	153
Table 7.6	Values of the components of the model for BTS10	154
Table 7.7	Values of the components of the model for BTS15	154
Table 7.8	Approximate Saturation Polarization (P_s), Retentivity (P_r) and Coercivity (E_c) for all the samples	155
Table 8.1	Optimized values of parameters for the proposed antenna comprising substrate of length L_{sub} and width W_{sub} with height H_{sub}, RDRA of length L (= *a*) and width W(=*b*) with height H(=d), microstrip feed line of length L_f, width W_f, aperture/slot of length L_s and width W_s, the input impedance being 50 Ω.	167
Table 8.2	Variation of bandwidth and gain in RDRA arrangements with loss	170
Table 8.2 (contd.):	Variation of bandwidth and gain in RDRA arrangements with loss	171
Table 9.1	Values of room temperature permittivity ε'_{RT} , loss , temperature corresponding to maximum permittivity T_m , and diffusiveness parameter γ	178