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Figure 7.8 $\mathrm{BaTi}_{1-\mathrm{x}} \mathrm{Sn}_{\mathrm{x}} \mathrm{O}_{3}(\mathrm{x}=0.15)$ plots of (a) Permittivity $\left(\varepsilon^{\prime}\right)$ vs. Temperature at various frequencies (b) Permittivity ( $\varepsilon^{\prime}$ ) vs. $\log f$ at various temperature (c) Dielectric loss vs. Temperature at various frequencies (d) Dielectric loss vs. $\log \mathrm{f}$ at various temperatures.

Figure 7.9 Inverse permittivity vs. temperature curve fitted according to Curie-Weiss law and $\ln \left(1 / \varepsilon^{\prime}-1 / \varepsilon^{\prime}{ }_{\mathrm{m}}\right)$ vs. $\ln \left(\mathrm{T}-\mathrm{T}_{\mathrm{m}}\right)$ curve fitted according to Modified Curie-Weiss law shown in inset for $\mathrm{BaTi}_{1-\mathrm{x}} \mathrm{Sn}_{\mathrm{x}} \mathrm{O}_{3}$ (a) $\mathrm{x}=0.05$, (b) $\mathrm{x}=0.10$.

Figure 7.10 Experimental and fitted plots of (a) $Z^{\prime \prime}$ vs. $Z^{\prime}$ (b) $Z^{\prime}, Z^{\prime \prime}$ vs. $\log f$ at 573 K for $\mathrm{BaTi}_{1-\mathrm{x}} \mathrm{Sn}_{\mathrm{x}} \mathrm{O}_{3}(\mathrm{x}=0.05)$

Figure 7.11 Experimental and fitted plots of (a) $Z^{\prime \prime}$ vs. $Z^{\prime}$ (b) $Z^{\prime}, Z^{\prime \prime}$ vs. $\log \mathrm{f}$ at 523 K for $\mathrm{BaTi}_{1-\mathrm{x}} \mathrm{Sn}_{\mathrm{x}} \mathrm{O}_{3}(\mathrm{x}=0.10)$

Figure 7.12 Experimental and fitted plots of (a) $Z^{\prime \prime}$ vs. $Z^{\prime}$ and (b) $Z^{\prime}, Z^{\prime \prime}$ vs. 151 $\log \mathrm{f}$ at 573 K for $\mathrm{BaTi}_{1-\mathrm{x}} \mathrm{Sn}_{\mathrm{x}} \mathrm{O}_{3}(\mathrm{x}=0.15)$

Figure 7.13 P-E Hysteresis loop for $\mathrm{BaTi}_{1-\mathrm{x}} \mathrm{Sn}_{\mathrm{x}} \mathrm{O}_{3}$ (a) $\mathrm{x}=0.05$ and (b) $\mathrm{x}=0.10$
Figure 7.14 Variation of (a) $\varepsilon^{\prime}$ as function of frequency and (b) loss as function of frequency for $\mathrm{BaTi}_{1-\mathrm{x}} \mathrm{Sn}_{\mathrm{x}} \mathrm{O}_{3}(\mathrm{x}=0.15)$ in X -Band (8 Ghz-12 Ghz).

Figure 8.1 Schematic diagram of aperture coupled RDRA (a) 3-D view and (b) top view.

Figure 8.2 (a) Variation of reflection coefficient with frequency and (b) gain
for single RDRA.
$\begin{array}{lll}\text { Figure 8.3 } & \begin{array}{l}\text { (a) Design, (b) Variation of reflection coefficient with frequency } \\ \text { and (c) gain for aperture coupled array of three RDRAs with } \\ \text { middle element parasitic. }\end{array}\end{array}$
Figure 9.1 (a) Recipe for obtaining equivalent circuit model involving CPE. 174
Figure 9.1 (b, c) Recipe for obtaining equivalent circuit model involving 175 (contd.) CPE

