

from zero to $\frac{1}{2} \cdot s$. We can put $T_2 = 1$ for all practical purposes in this interval.

- 3) For a slice of finite extension and thickness the resistivity can be written:

$$\rho = G \frac{V}{I}, \quad G = \frac{\pi}{\ln 2} \cdot t \cdot T_2 \cdot C \cdot F(t, c), \quad (29)$$

where

$\frac{\pi}{\ln 2} \cdot t \cdot T_2$ is the afore-mentioned geometric factor for an infinite slice of thickness t , C is the correction factor for the limiting contour, for a slice of thickness $t \ll s$ and

$F(t, c)$ is an additional correction factor depending on both thickness and contour. From section E.3 we realize that $F(t, c)$ may be both smaller and greater than unity. $F(t, c)$ approaches unity in the two limits:

- 1) $F \rightarrow 1$ as $\frac{t}{s} \rightarrow 0$, in which case $T_2 \rightarrow 1$
- 2) $F \rightarrow 1$ as the slice becomes large, in which case $C \rightarrow 1$.

In case 1 the slice is so thin that the current distribution is essentially that found in a sheet, which is the assumption under which C is calculated.

In case 2 the slice is so large that the contour does not effect the current distribution, which is the condition for the validity of T_2 .

As a change in current distribution is reflected in a deviation from unity in the corresponding geometry factor, we can conclude:

- 1) Thin slice.

The sample is so thin, that the thickness correction $T_2(\frac{t}{s})$ is close to unity.

The resistivity may then be written:

$$\rho = G \frac{V}{I}, \quad G = \frac{\pi}{\ln 2} \cdot t \cdot T_2\left(\frac{t}{s}\right) \cdot C \quad (30)$$

where:

The thickness factor T_2 is given in section D.2.

The contour factor C is given in sections I.1-4 and K.1 for various configurations.

(30) is correct within a few procent, when $t \leq s$, in