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ELECTRICAL CHARACTERISTICS

OF

CARD STOCK

F. [illegible] WOOD

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LABORATORY
S[illegible]

NOTE

[illegible] CONFIDENTIAL. [illegible] IBM [illegible]

ELECTRICAL CHARACTERISTICS

OF

CARD STOCK

E. [illegible] NGOOD

IBM RESEARCH AND DEVELOPMENT LABORATORY
S[illegible]

ABSTRACT

[illegible]

ρ

ϵ' ϵ/ϵ_0

$\epsilon\rho$ $\left(\frac{\text{farads}}{\text{cm.}}\right)$ ϵ' ρ ( )

[illegible] IBM [illegible]

[illegible]

$$C_1 = \frac{\epsilon' \epsilon A}{\ell} = [illegible]$$

[illegible] $R_1 C_1$ [illegible]

$$\tau_1 = R_1 C_1 = [illegible]$$

[illegible]

[illegible]

$$[illegible]$$

[illegible]

$$C_2 = \frac{\epsilon' \epsilon_o A}{\ell} = \frac{3.15 \times 8.85 \times 10^{-14} \times 2.54 \times .0553 \times .1249}{.001} =$$

$$= 0.87 \times 10^{-12} \text{ farads}$$

[illegible] R_2 [illegible]

$$R_2 = \frac{\rho \ell}{A} = \frac{3.1 \times 10^{11} \text{ ohm-cm.} \times .032 \text{ in}}{.007 \text{ in} \times .125 \text{ in} \times 2.54 \text{ cm/in}} =$$

$$= 4.5 \times 10^{12} \text{ ohms}$$

$$T_2 = \frac{R_2 C_2}{3} = \frac{4.5 \times 10^{12} \times 0.87 \times 10^{-12}}{3} \approx 1.3 \text{ seconds}$$

TABLE I [illegible]

	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

TABLE II [illegible]

[illegible]	[illegible]		[illegible]	
	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]