

are being built in pilot quantities and are being operated in a computer controlled test system. Modules capable of 10^8 bits and similar transfer rates and access times have been operated successfully in limited test situations.

REFERENCES

1. W.C. Hughes, C.W. Lemmond, H.G. Parks, G.W. Ellis, G.E. Possin and R.H. Wilson, "A Semiconductor Nonvolatile Electron Beam Accessed Mass Memory", Proc. IEEE, 63, p. 1230-40 (August 1975).

2. G.W. Ellis, G.E. Possin, and R.H. Wilson, "Diode Detection of Information Stored in Electron Beam-Addressed MOS Structure", Applied Physics Letters, 24, 419 (1974).

3. H.G. Parks and W.C. Hughes, "Advances in Matrix Lens Technology", Presentation at the 13th Symposium on Electron, Ion and Photon Beams, Colorado Springs, Colo., May 1975.

4. A.J.A. Van Stratum and P.N. Kuin, "Tracer Study of the Decrease of Emission Density of Osmium Coated Impregnated Cathodes", Journal of Applied Physics, 42, p. 4436 (1971).

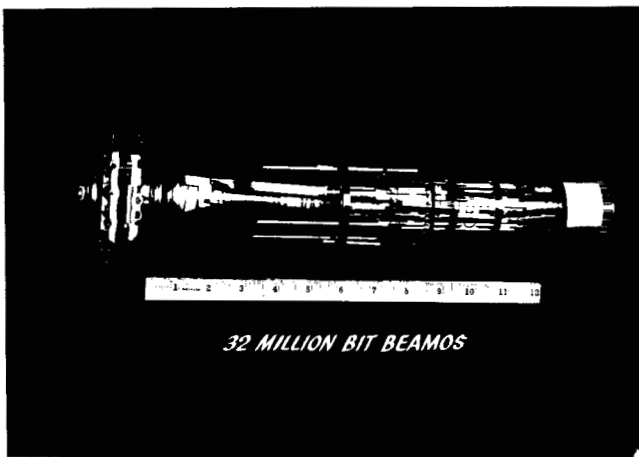


Fig. 1 BEAMOS memory component

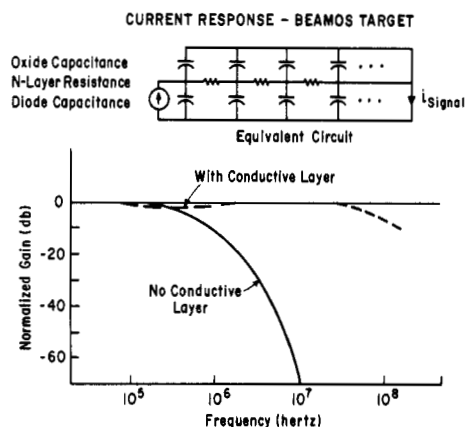


Fig. 3 Current Response -- BEAMOS Target

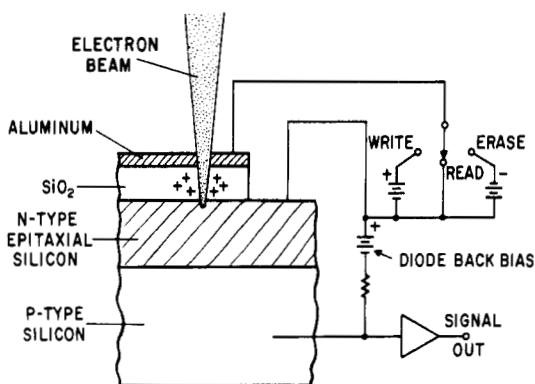


Fig. 2 Cross section of MOS memory chip

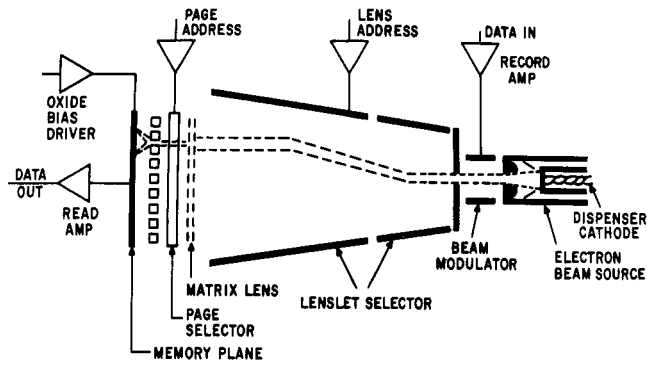


Fig. 4 BEAMOS electron optical system

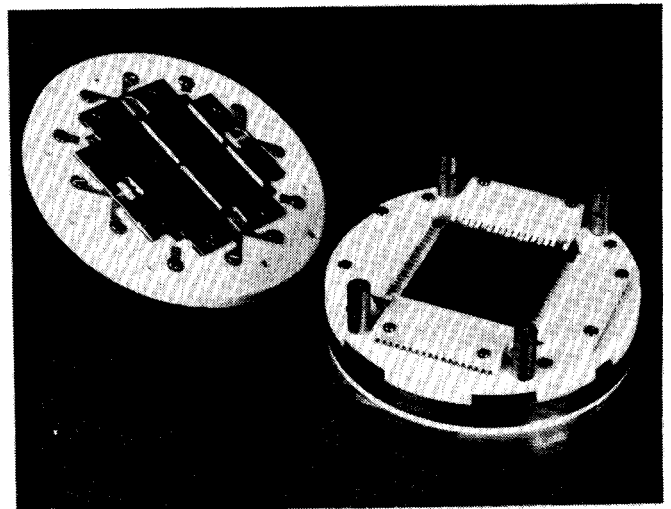


Fig. 5 Matrix lens with target plane removed showing page selector deflection bars

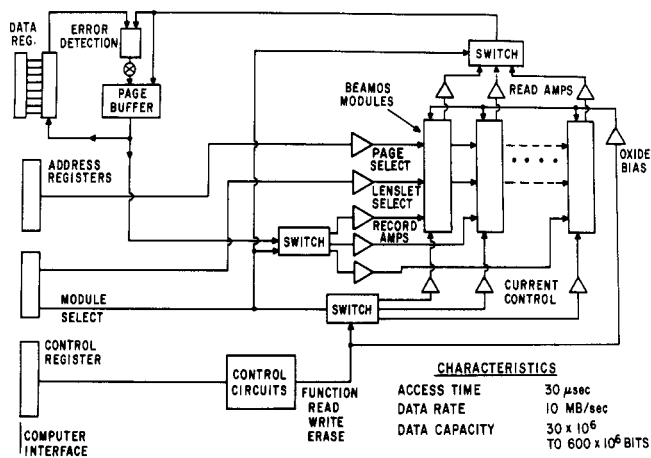


Fig. 6 Conceptual multimodule system - serial operation