Glow Discharge Proc

SPUTTERING AND PLASMA ETCHING

Brian Chapman

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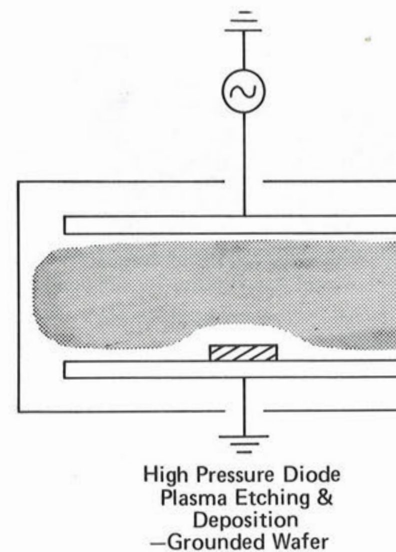

Figure 7-23. High pressure diode plasma etching and dep

quarter of the applied rf peak-to-peak voltage (Chapter
– 250 V for practical plasma etching processes. This is
measurements and by observation of the dark spaces fo
energy of ion bombardment on an electrode is determin
and by collisions in the sheath, as discussed in Chapters

Reactive ion etching systems (Figure 7-24) are essenti
systems. In sputtering, intense ion bombardment at the
nowhere else. This is achieved by making the target are
of the grounded chamber and baseplate. As a result, the
very small, but the sheath at the target, and hence at th
rf peak-to-peak, amounting typically to -300 V.

The different operating pressures of the two diode sys
ence ion bombardment energies very greatly, because th
collisions per unit length at the higher pressure is offset
much thinner dark space sheath. The two effects would

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