

Figure 1.9 Single-feed CP patch antenna

where  $f_o$  is the resonant frequency of the antenna, and

 $\Delta f$  is the bandwidth of the antenna.

Another option for single-feed CP patch antenna design is to use the configuration shown in Figure 1.9(b), which is a nearly square patch fed at a point along the diagonal line of the patch. The length and width of the patch are L and W, respectively. The condition of circular polarization is satisfied when

$$L = W\left(1 + \frac{1}{Q}\right) \tag{1.16}$$