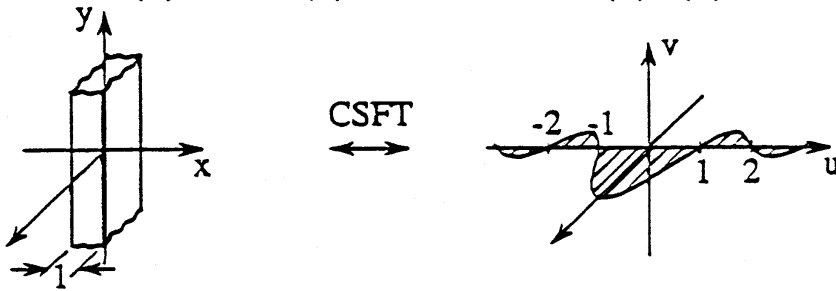
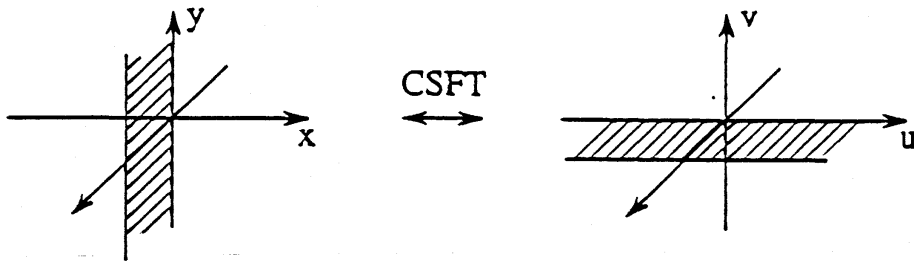


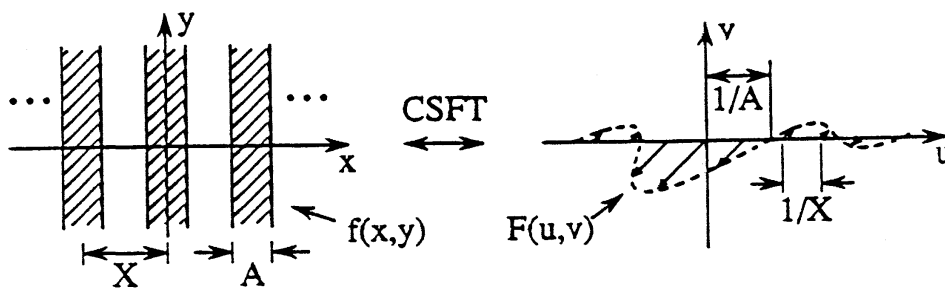
$$7. \text{rect}(x) = \text{rect}(x) \cdot 1 \xleftrightarrow{\text{CSFT}} \text{sinc}(u) \delta(v)$$



$$8. \delta(x) = \delta(x) \cdot 1 \xleftrightarrow{\text{CSFT}} 1 \cdot \delta(v) = \delta(v)$$

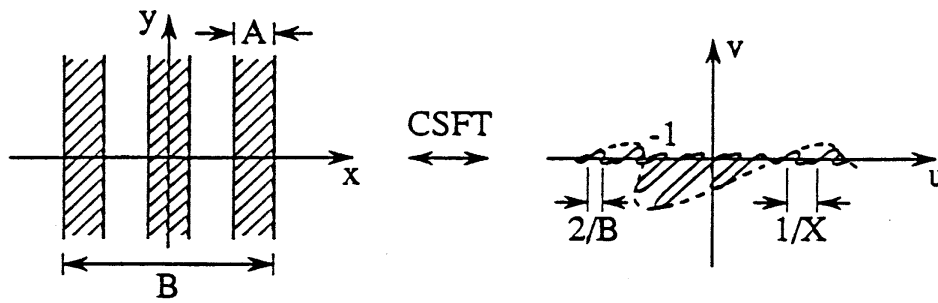


### 2.1.4 PERIODIC STRUCTURES



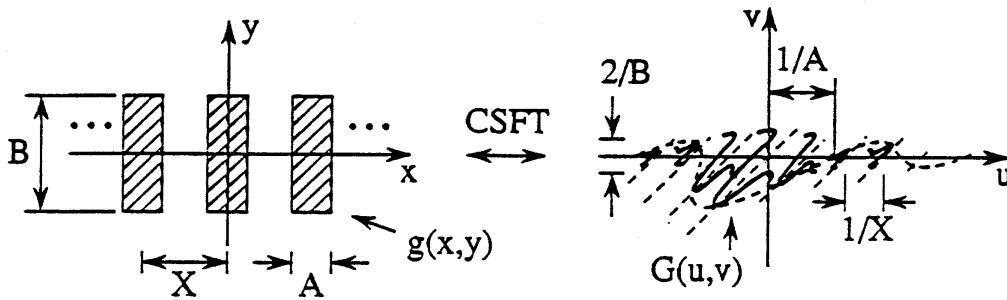
$$f(x,y) = \text{rep}_X[\text{rect}(x/A)] \cdot 1$$

$$F(u,v) = \frac{1}{X} \text{comb} \frac{1}{X} [A \text{sinc}(Au)] \delta(v)$$



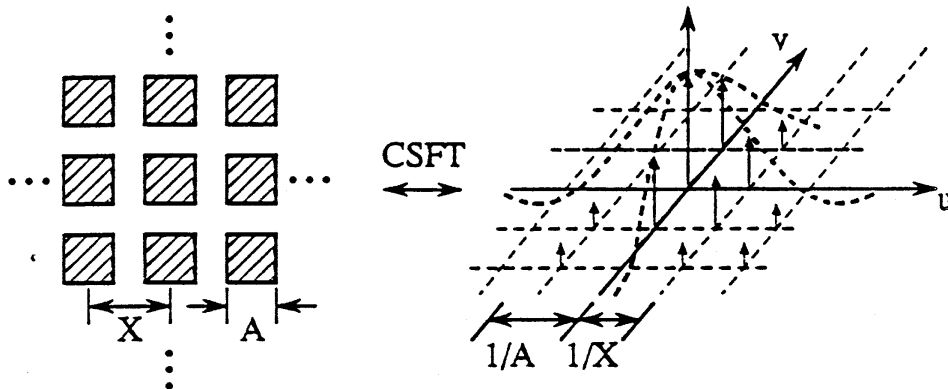
$$g(x,y) = [\text{rect}(x/B) \cdot 1] f(x,y)$$

$$G(u,v) = B \text{sinc}(Bu) \delta(v) ** F(u,v)$$



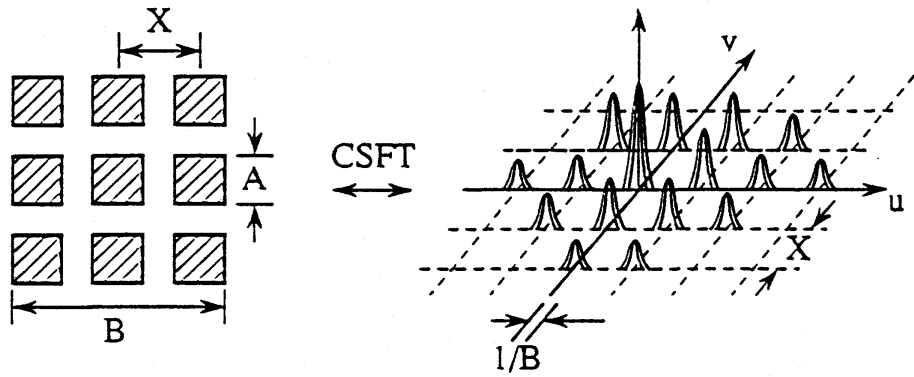
$$g(x,y) = [1 \cdot \text{rect}(y/B)] f(x,y)$$

$$G(u,v) = \delta(u) B \text{sinc}(Bv) ** F(u,v)$$



$$f(x,y) = \text{rep}_{XX} \left[ \text{rect}\left(\frac{x}{A}, \frac{y}{A}\right) \right]$$

$$F(u,v) = \frac{1}{X^2} \text{comb} \frac{1}{X} \frac{1}{X} [A^2 \text{sinc}(Au, Av)]$$



$$g(x,y) = \text{rect}\left(\frac{x}{B}, \frac{y}{B}\right) f(x,y)$$

$$G(u,v) = B^2 \text{sinc}(Bu, Bv) ** F(u,v)$$