

$$ROC = \{ z \mid |z| > 0.5 \}$$

H1(z) × H2(z) =
$$\frac{0.5+z^{-1}+0.5z^{-2}}{1-0.4z^{-1}+0.08z^{-2}}$$
 × $\frac{1-z^{-1}+0.25z^{-2}}{1-0.6z^{-1}+0.25z^{-2}}$

Fig. Magnitude frequency response 1*2 is same as

Fig. Magnitude frequency response

Fig. y[n] is same as Fig. h[n]