یا لطیف

رضا دیندیدار
۹۸۱۴۳۰۳
کوئیز سوم مدار مخابراتی

#2

$BW = 500^{KHZ}$

$F = 8^{dB}$

$f = 6900^{MHZ}$

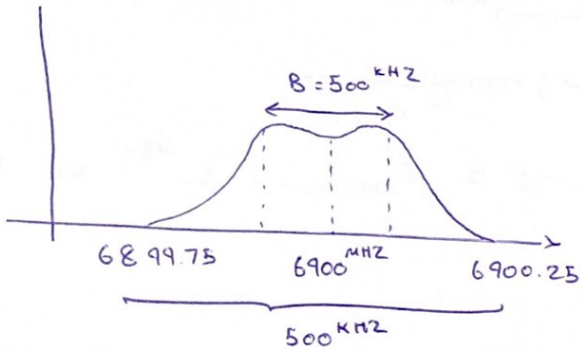
$Z_{in} = 50^{\Omega}$

$P_{IP} = 10^{dB}$

$Gain = 50^{dB}$

$DR = ?$

$$DR^{(dB)} = \frac{2}{3}\left[P_{IP} + 174^{dBm} - 10\log B - G^{dB} - F^{dB}\right]$$



$$DR^{dB} = \frac{2}{3}\left[10^{dB} + 174^{dBm} - 10\log\left(500\times10^{3}\right) - 50 - 8\right] =$$

$$= \frac{2}{3}\left[126 - 10\log\left(500\times10^{3}\right)\right] = \frac{2}{3}\left[69.01\right] = 46.0069^{dB}$$