

Frequency Emission Registration

Necessary Bandwidth

Bandwidth calculation method:

$$BW = R * (1/CR) * (1/Y)$$

where

BW = the necessary bandwidth, Hz

R = the baseband data rate, bits per second (bps)
= 150 kbps (kilo bits per second)

CR = the forward-error-correction (FEC) code rate
= 1/2

Y = the number of transmission bit per symbol
= 2 for QPSK

$$\begin{aligned} BW &= 150k * (1/(1/2)) * (1/2) \\ &= 150k * (2) * (1/2) \\ &= 150k \text{ Hz} \end{aligned}$$