Let us start with the below equality obtained using phasor formula, that is

|  |  |
| --- | --- |
|  | (1) |

where substituting both and with chirp frequency component yields

where In case of Doppler existence within the channel, the total received signal is

where denotes Doppler’s frequency defined as a function .

1. How to obtain Equation (1)?
2. How to approximate the pulseshape ?