

* Equation

$$s(t) = A\cos(\omega_c t + \beta \sin(\omega_m t))$$

• $s(t) = A_c \sum_{n=-\infty}^{\infty} J_n(\beta) \cos[2\pi (f_c + nf_m)t]$

 $J_n(\beta)$ = Bessel functions

- Single - tone FM wave for an arbitrary value of β

* Terms

s(t) output signal (fn. of time)

A output amplitude

 ω_c carrier frequency, in radians/sec

β modulation index

ω_m modulator frequency, in radians/sec

 $\omega_c t$, $\omega_m t$ instantaneous car, mod phase, in radians