

② In the received amplitude-modulated signal,

$$s_i(t) = A[1 + m(t)] \cos 2\pi f_c t$$

$m(t)$ has the power spectral density

$$G_m(f) = \begin{cases} \frac{\eta_m}{2} \frac{|f|}{f_m}, & |f| \leq f_m \\ 0, & |f| > f_m \end{cases}$$

The received signal is accompanied by noise of power spectral density $\eta/2$.

② The output signal-to-noise ratio is then

⑤

a) $\frac{\eta_m}{\eta}$

b) $\frac{A^2 \eta_m}{4\eta}$

c) $\frac{A^2}{\eta_m}$

d) $\frac{A^2}{\eta}$