※ *Complex Envelope Function for Various of Modulation*		
Type	Mapping Functions $g(m)$	$x(t)$ $y(t)$
AM	$A_c[1+m(t)]$	$A_c[1+m(t)]$ 0
DSB-SC	$A_c m(t)$	$A_c m(t)$ 0
PM	$A_c e^{jD_p m(t)}$	$A_c \cos[D_P m(t)]$ $A_c \sin[D_P m(t)]$
FM	$A_c e^{jD_f \int_{-\infty}^{t} m(\sigma)\,d\sigma}$	$A_c \cos[D_f \int_{-\infty}^{t} m(\sigma)\,d\sigma]$ $A_c \sin[D_f \int_{-\infty}^{t} m(\sigma)\,d\sigma]$
SSB-AM-SC[b]	$A_c[m(t) \pm j m(t)]$	$A_c m(t)$ $\pm A_c m(t)$
SSB-PM[b]	$A_c e^{jD_P[m(t) \pm j m(t)]}$	$A_c e^{\mp D_P m(t)} \cos[D_P m(t)]$ $A_c e^{\mp D_P m(t)} \sin[D_P m(t)]$
SSB-FM[b]	$A_c e^{jD_f \int_{-\infty}^{t} [m(\sigma) \pm j m(\sigma)]\,d\sigma}$	$A_c e^{\mp D_f \int_{-\infty}^{t} m(\sigma)\,d\sigma} \cos[D_f \int_{-\infty}^{t} m(\sigma)\,d\sigma]$ $A_c e^{\mp D_f \int_{-\infty}^{t} m(\sigma)\,d\sigma} \sin[D_f \int_{-\infty}^{t} m(\sigma)\,d\sigma]$
SSB-EV[b]	$A_c e^{\{\ln[1+m(t)] \pm j \ln\lvert 1+m(t)\rvert\}}$	$A_c[1+m(t)]\cos\{\ln[1+m(t)]\}$ $\pm A_c[1+m(t)]\sin\{\ln[1+m(t)]\}$
SSB-SQ[b]	$A_c e^{(1/2)\{\ln[1+m(t)] \pm j \ln\lvert 1+m(t)\rvert\}}$	$A_c\sqrt{1+m(t)}\cos\left\{\frac{1}{2}\ln[1+m(t)]\right\}$ $\pm A_c\sqrt{1+m(t)}\sin\left\{\frac{1}{2}\ln[1+m(t)]\right\}$
QM	$A_c m_1(t) + j m_2(t)$	$A_c m_1(t)$ $A_c m_2(t)$

Type	*Phase Mod. R(t)*	$\Theta(t)$
AM	$A_c[1+m(t)]$	$\begin{cases} 0 & , m(t) > -1 \\ 180^\circ & , m(t) < -1 \end{cases}$
DSB-SC	$A_c\lvert m(t)\rvert$	$\begin{cases} 0 & , m(t) > 0 \\ 180^\circ & , m(t) < 0 \end{cases}$
PM	A_c	$D_P m(t)$
FM	A_c	$D_f \int_{-\infty}^{t} m(\sigma)\,d\sigma$
SSB-AM-SC[b]	$A_c\sqrt{[m(t)]^2+[m(t)]^2}$	$\tan^{-1}[\pm m(t)/m(t)]$
SSB-PM[b]	$A_c e^{\pm D_p m(t)}$	$D_P m(t)$
SSB-FM[b]	$A_c e^{\pm D_f \int_{-\infty}^{t} m(\sigma)\,d\sigma}$	$D_f \int_{-\infty}^{t} m(\sigma)\,d\sigma$
SSB-EV[b]	$A_c\lvert 1+m(t)\rvert$	$\pm\ln[1+m(t)]$
SSB-SQ[b]	$A_c\sqrt{1+m(t)}$	$\pm\frac{1}{2}\ln[1+m(t)]$
QM	$A_c\sqrt{m_1^2(t)+m_2^2(t)}$	$\tan^{-1}[m_2(t)/m_1(t)]$