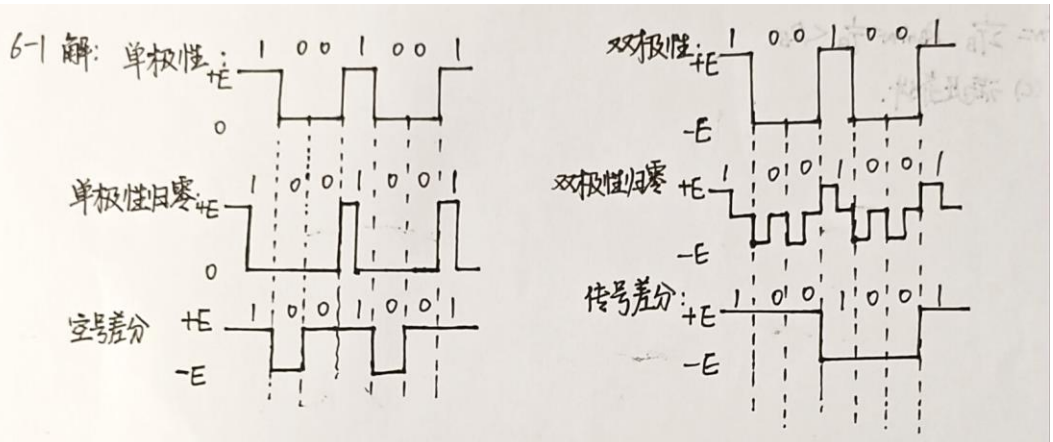
通信原理第 6 章作业

6-1 解：

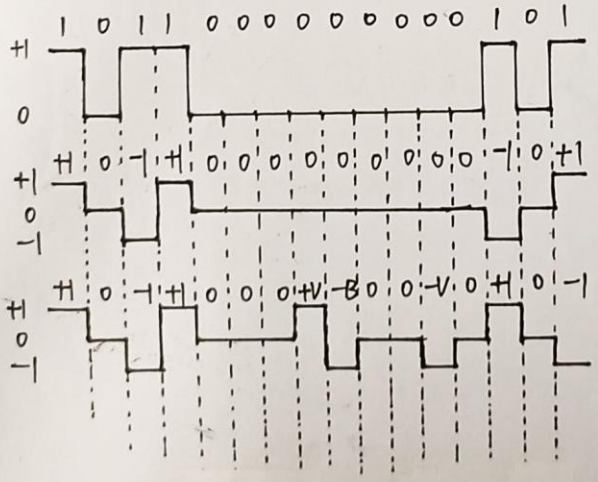


6-7 解：

信码：1 0 1 1 0 0 0 0 0 0 0 0 0 1 0 1

AMI码：+1 0 −1 +1 0 0 0 0 0 0 0 0 0 −1 0 +1

HDB3码：+1 0 −1 +1 0 0 0 +V −B 0 0 −V 0 +1 0 −1



6-11 解：无码间串扰的最高传码率 $R_{Bmax}=2f_N$

若 $R_{Bmax}=nR_B=\frac{2n}{T_B}$ $n=1,2,3\cdots$ 则无码间串扰

(a) $f_N=\frac{1}{2T_B}$ $R_{Bmax}=\frac{1}{T_B}<R_B=\frac{2}{T_B}$

(b) $R_{Bmax}=\frac{3}{T_B}\neq\frac{2n}{T_B}$

(c) $f_N=\frac{1}{T_B}$ $R_{Bmax}=\frac{2}{T_B}=R_B$

(d) $f_N=\frac{1}{2T_B}$ $R_{Bmax}=\frac{1}{T_B}<R_B$

∴ (c) 满足条件.