

Book . Example 6-2

Q. 已知 i_s 的波形如图, $C = 2F$ $u_C(0) = 0.5V$
求 $t > 0$ 时的 voltage capacity

Solution $u(t) = u_C(0) + \frac{1}{C} \int_0^t i(\xi) d\xi$

$$= 0.5 + \frac{1}{2} \int_0^t i(\xi) d\xi$$

当 $0 \leq t \leq 1$ 时, $i_s = 1$, $u(t) = 0.5 + \frac{1}{2} t$

当 $t > 1$ 时, $u(t) = 0.5 + \frac{1}{2} = 1$

$u(t)$

