

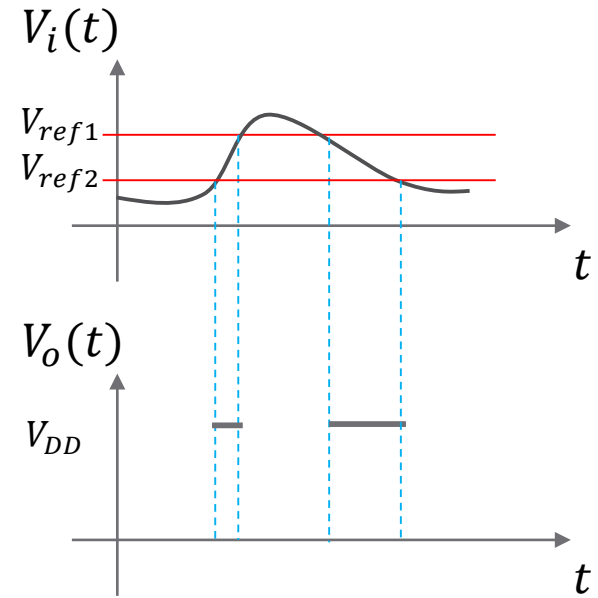
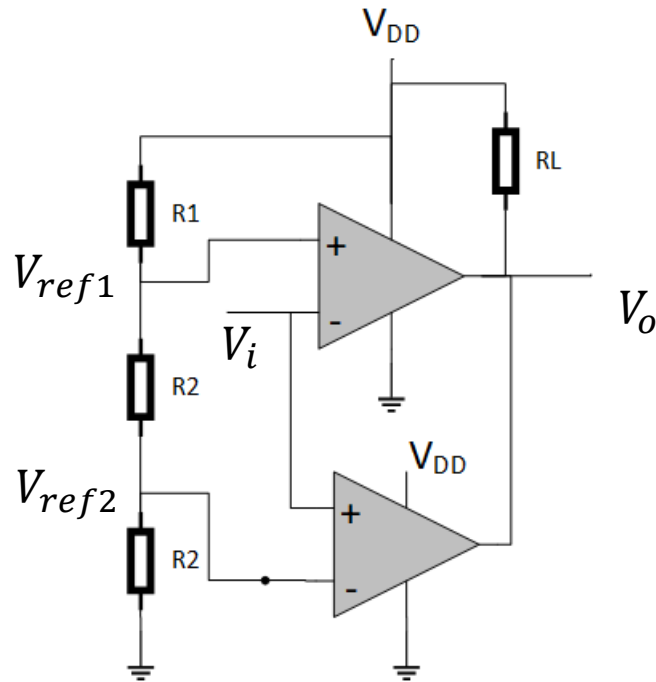
# ELM320 ANALOG ELEKTRONİK

Ders Materyali

İŞLEMSEL YÜKSELTEÇ  
UYGULAMA DEVRELERİ

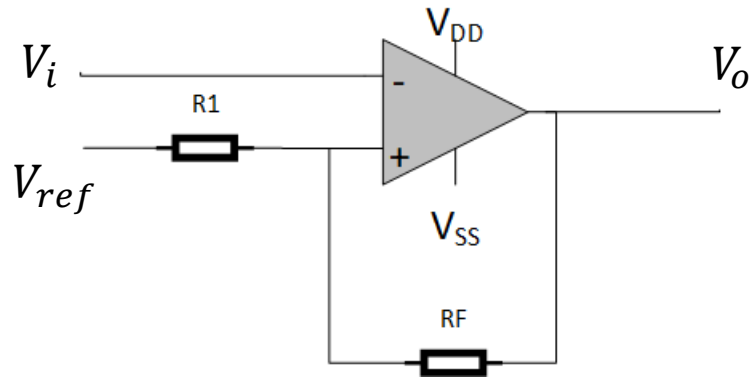
# İŞLEMSEL YÜKSELTEÇ UYGULAMA DEVRELERİ

Pencere karşılaştırıcısı:



# İŞLEMSEL YÜKSELTEÇ UYGULAMA DEVRELERİ

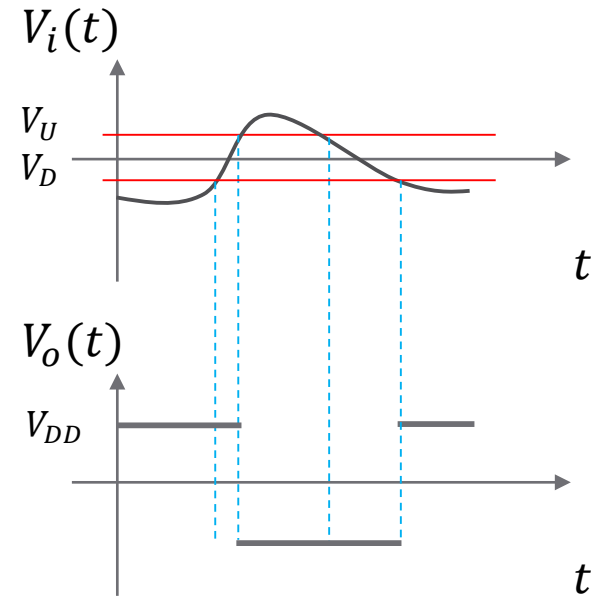
Eviren tip histeresis aralıklı karşılaştırıcı:



$$B = \frac{R1}{R1 + RF}$$

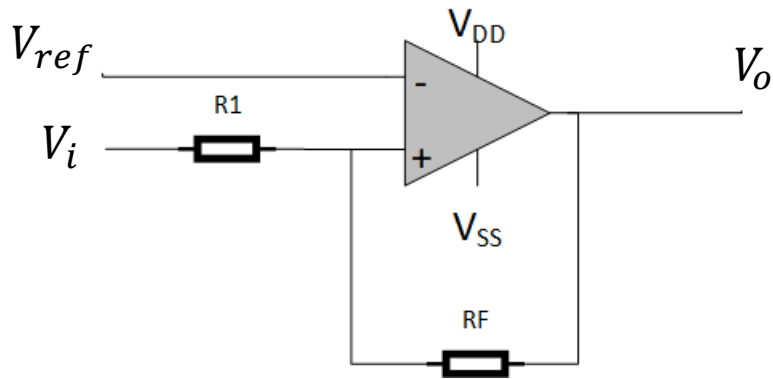
$$V_U = B \times V_{DD}$$

$$V_D = B \times V_{SS}$$



## İŞLEMSEL YÜKSELTEÇ UYGULAMA DEVRELERİ

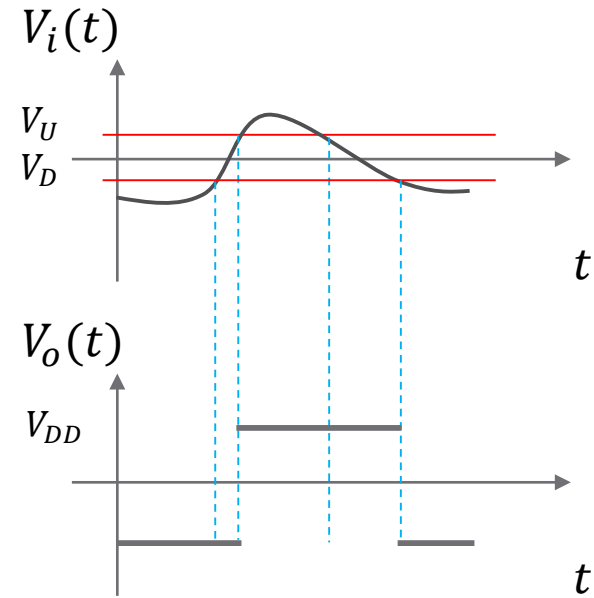
Evirmeyen tip histeresis aralıklı karşılaştırıcı:



$$B = \frac{R1}{R1 + RF}$$

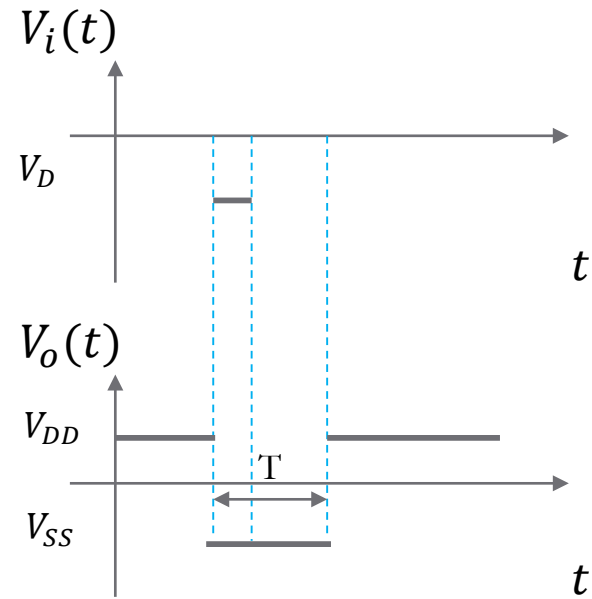
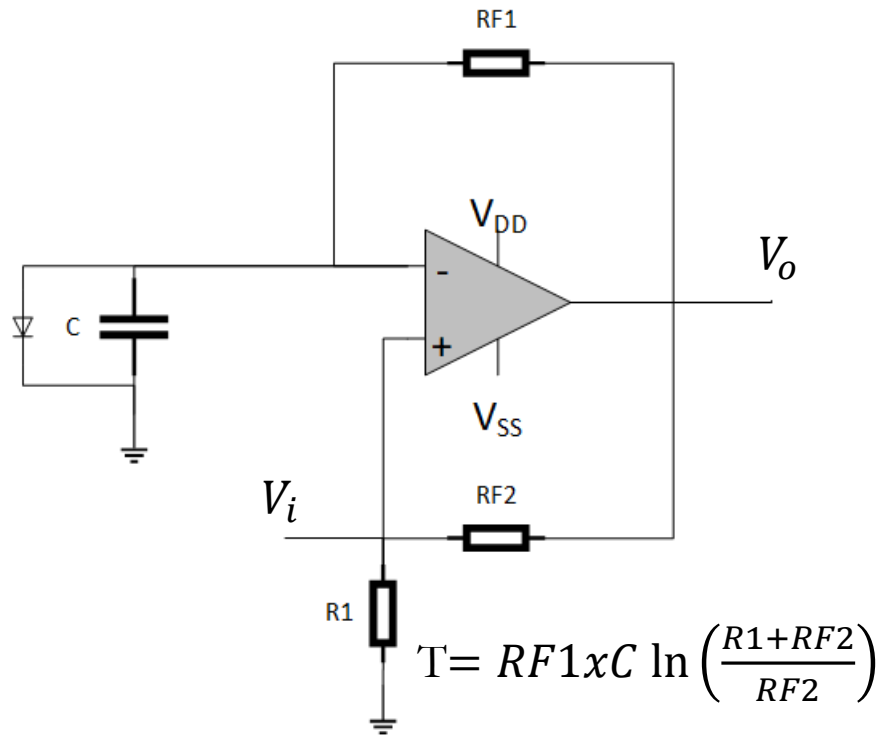
$$V_U = B \times V_{DD}$$

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# İŞLEMSEL YÜKSELTEÇ UYGULAMA DEVRELERİ

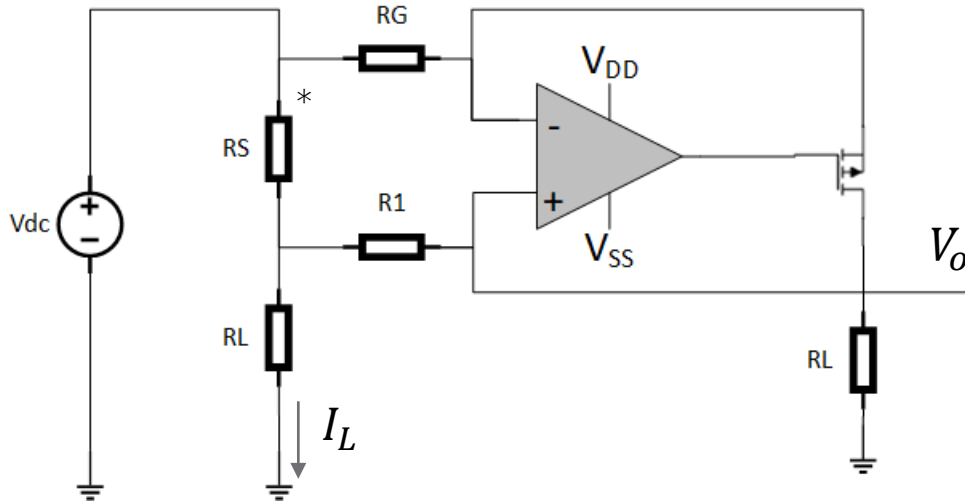
Tek kararlı multivibratör:



$$T = RF1 \times C \ln \left( \frac{R1 + RF2}{RF2} \right)$$

# İŞLEMSEL YÜKSELTEÇ UYGULAMA DEVRELERİ

Akım izleyici:

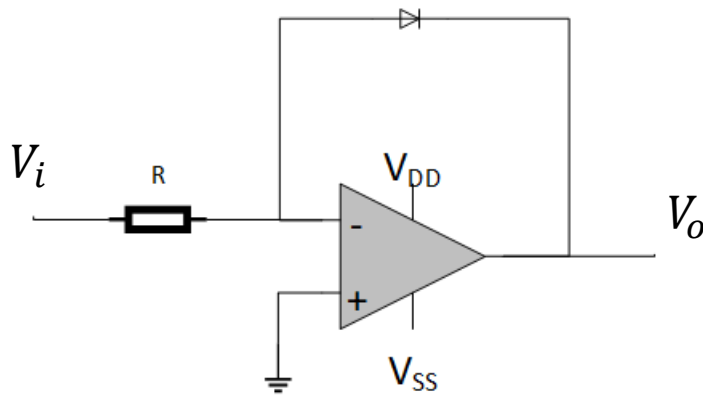


$$V_o = I_L \times \left( \frac{R_S \times R_L}{R_G} \right)$$

\*  $R_S$  algılama direnci küçük değerlidir.

## İŞLEMSEL YÜKSELTEÇ UYGULAMA DEVRELERİ

Logaritmik yükselteç:



$$V_o = -V_T \ln \left( \frac{V_i}{I_S R} \right)$$

$$V_T = \frac{kT}{q}$$

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