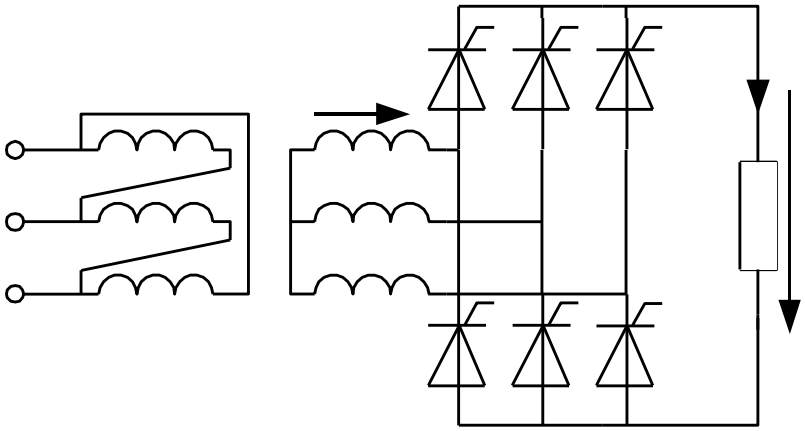
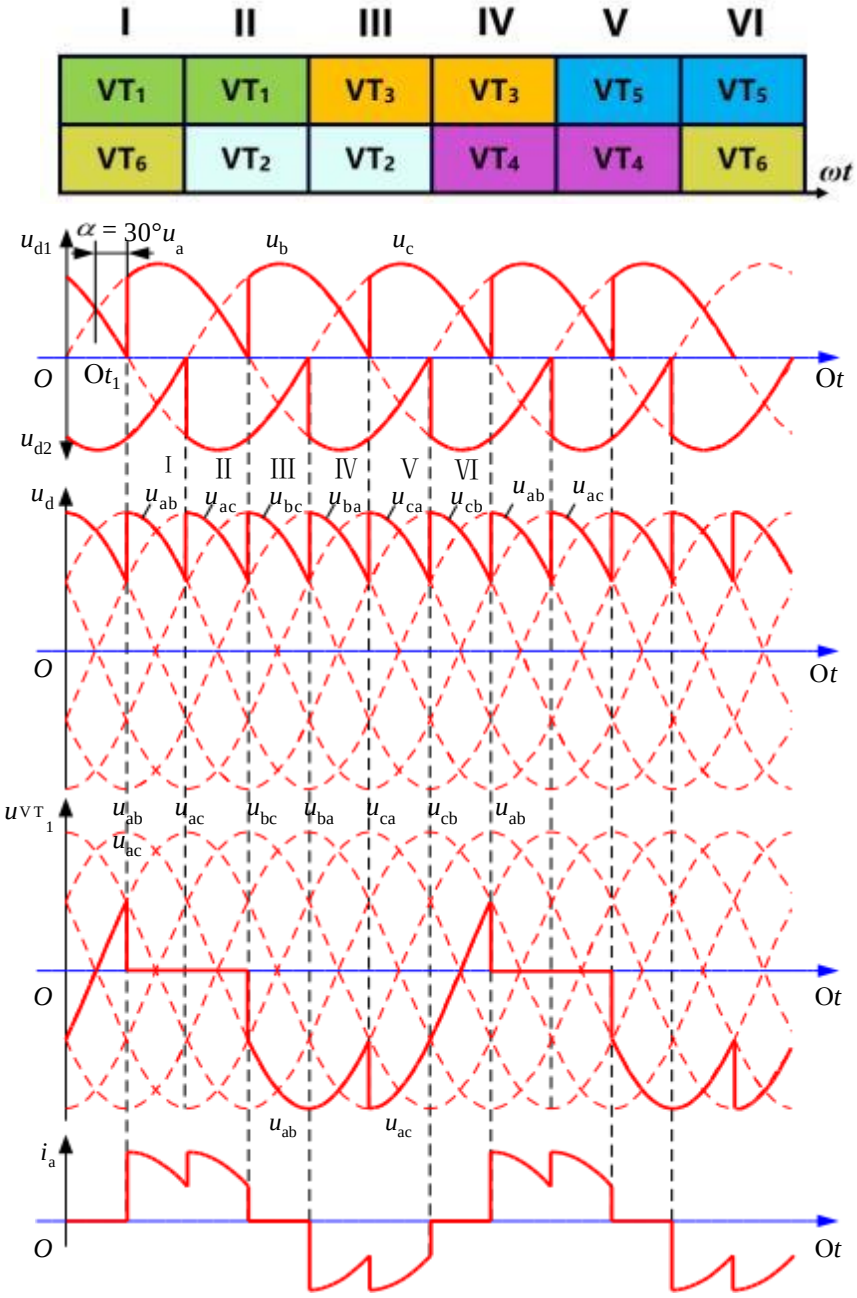
1. 电阻性负载

■ α =30°

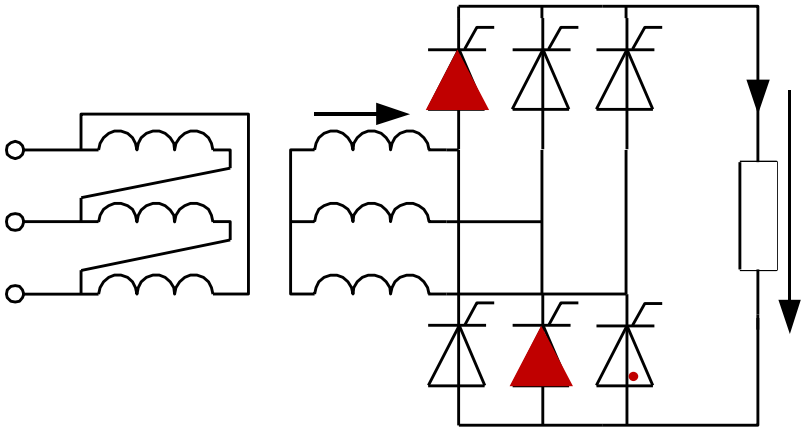
U_d连续

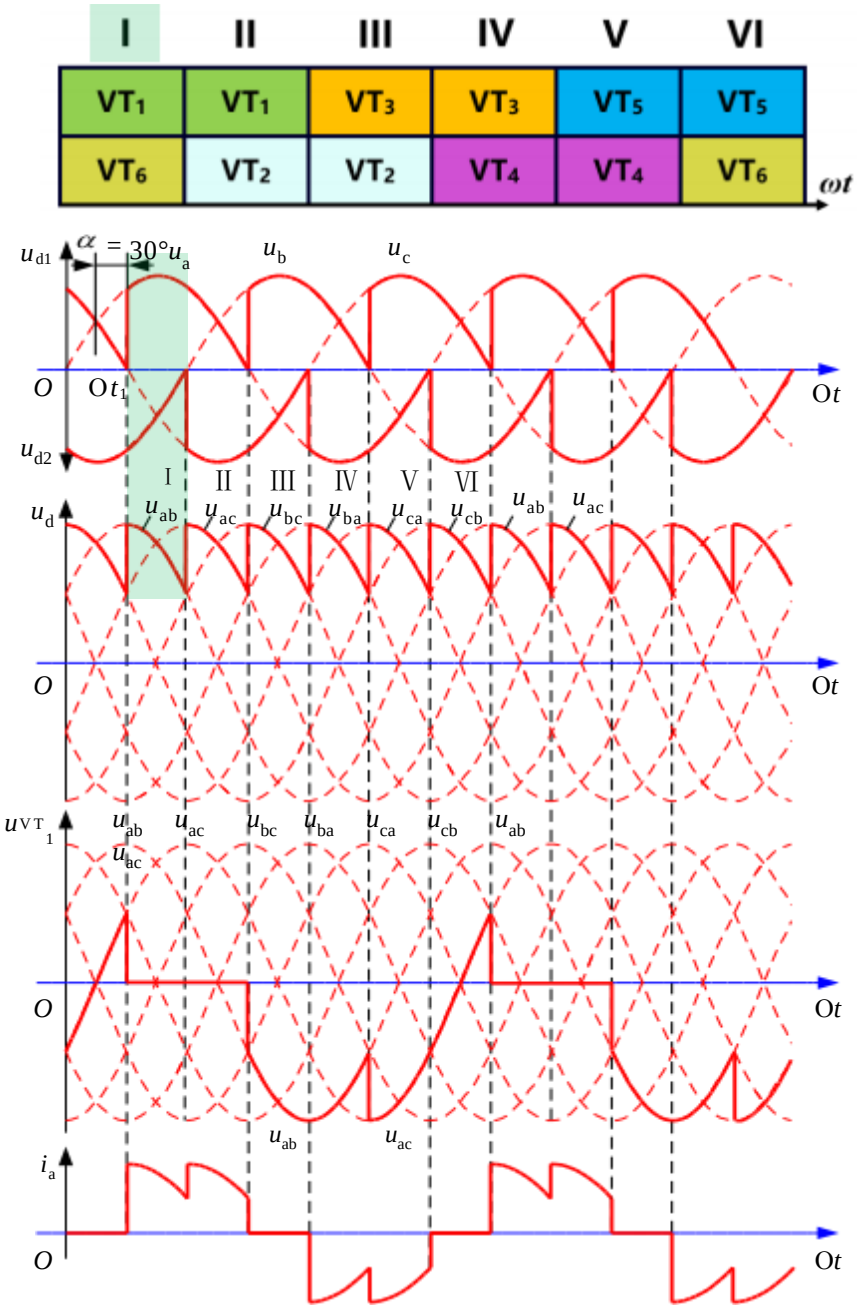




■ α=30°

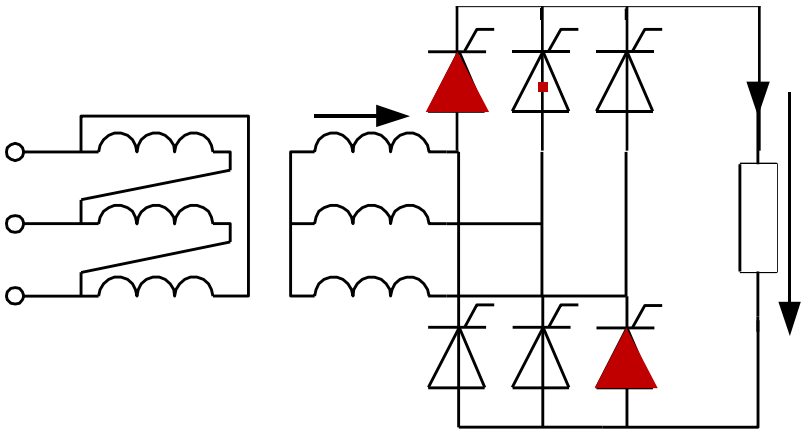
U_d连续

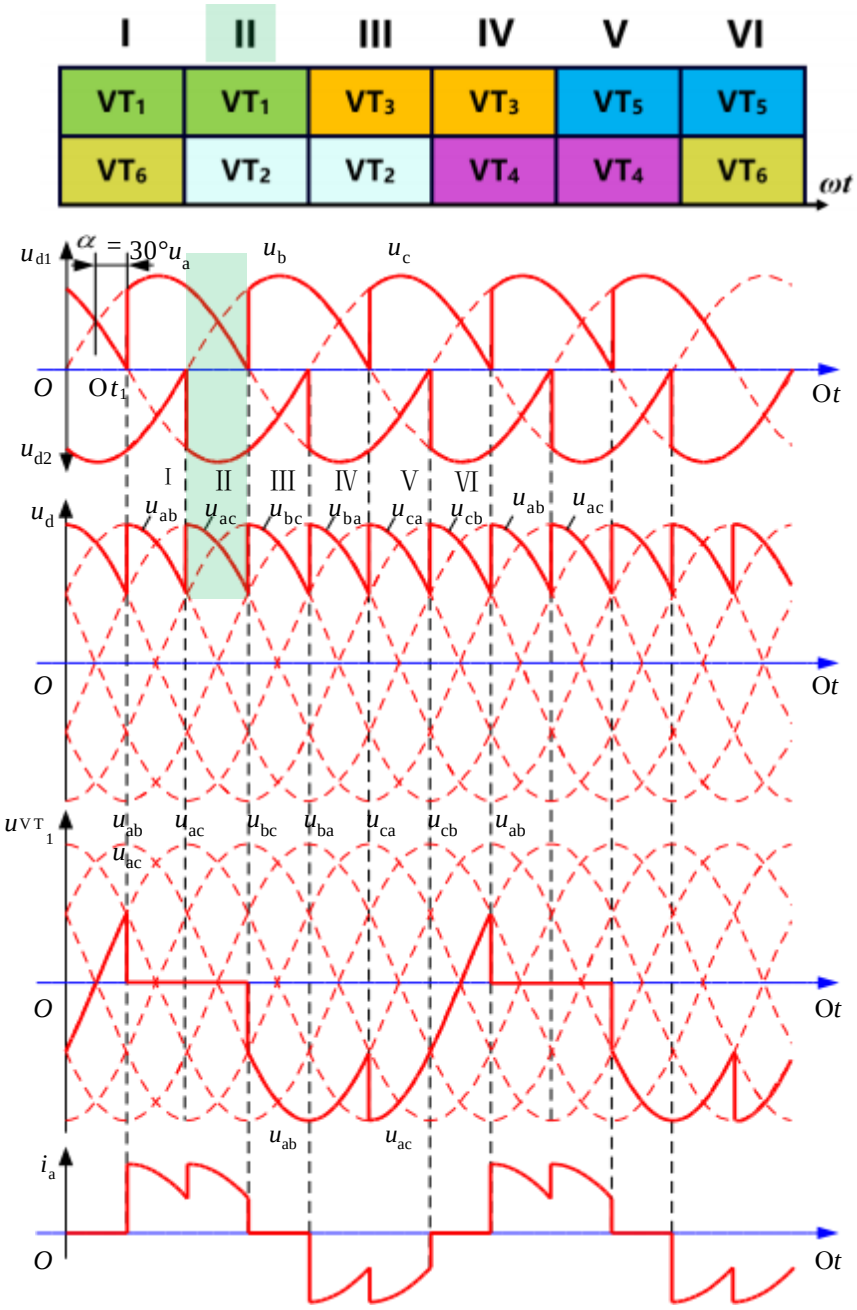




■ α=30°

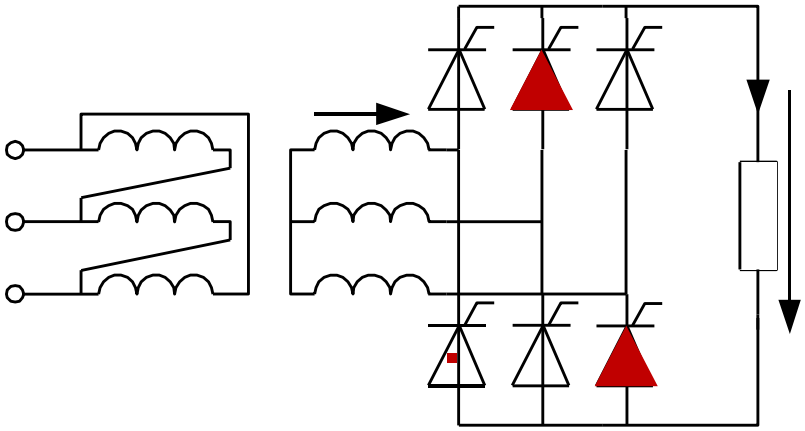
U_d连续

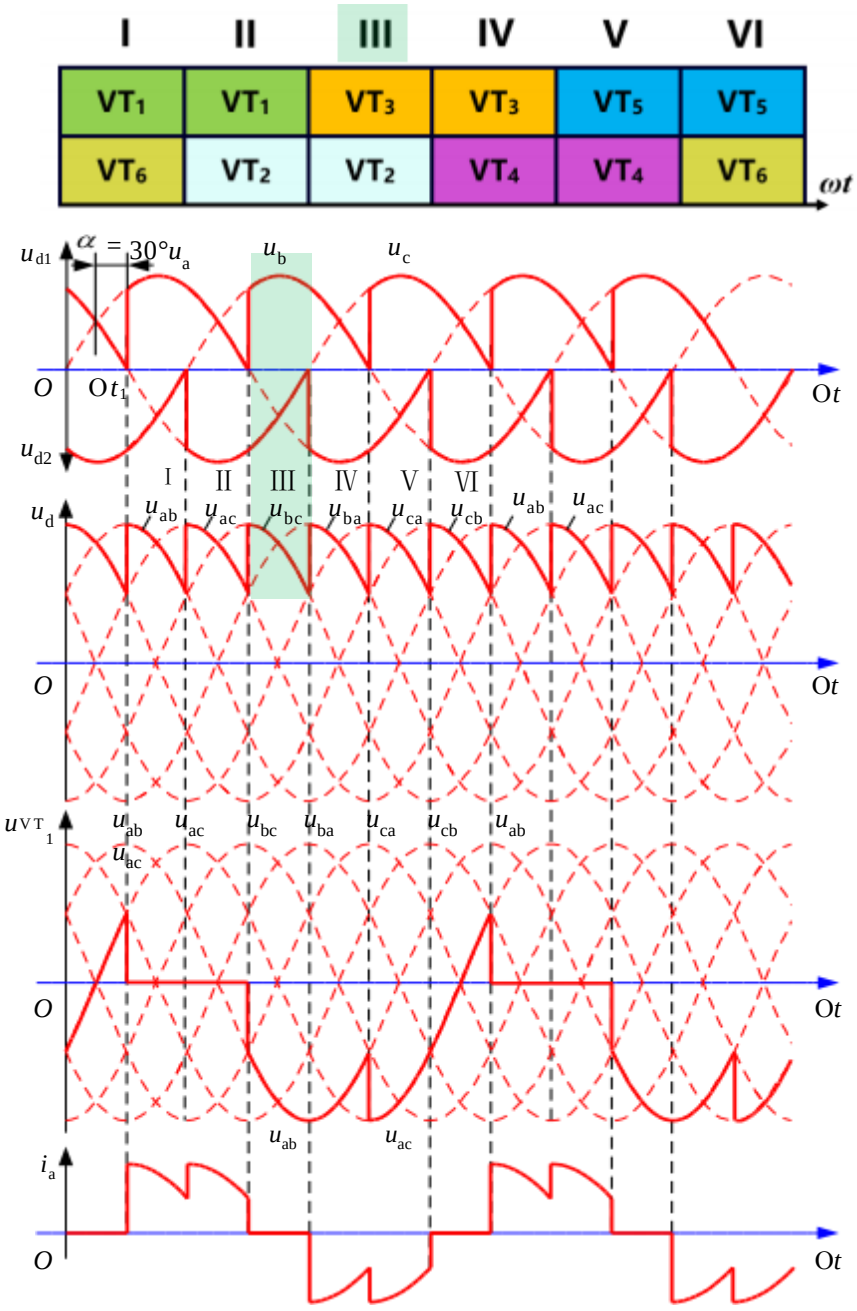




■ α=30°

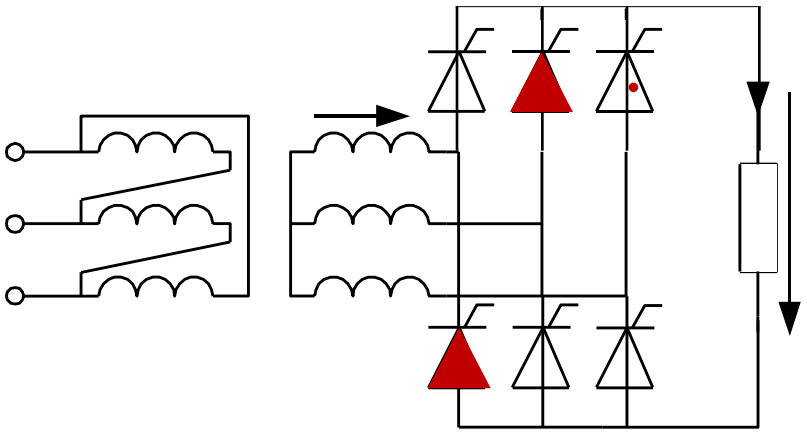
U_d连续

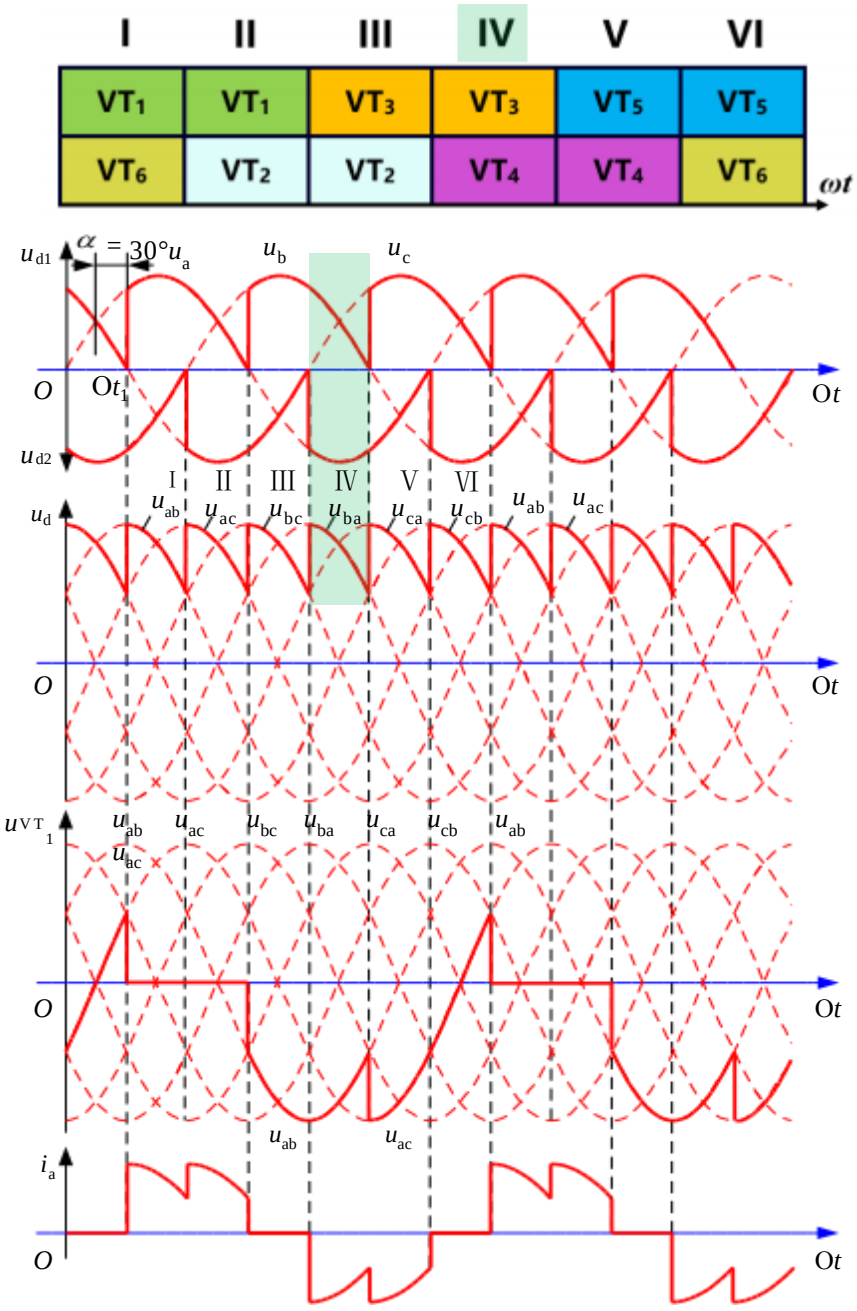




■ α=30°

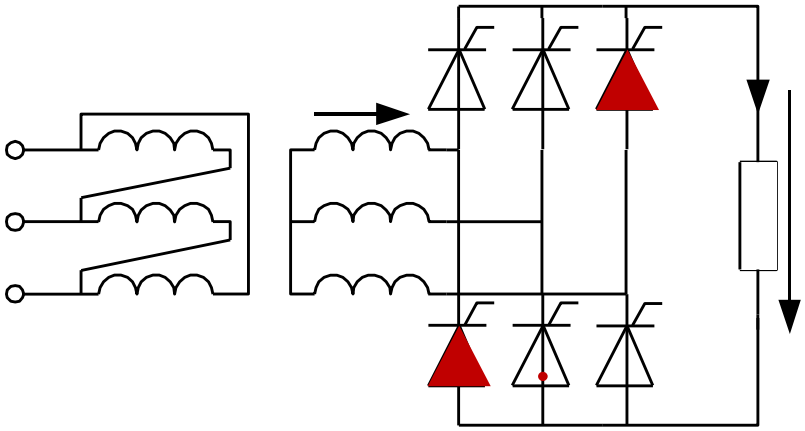
U_d连续

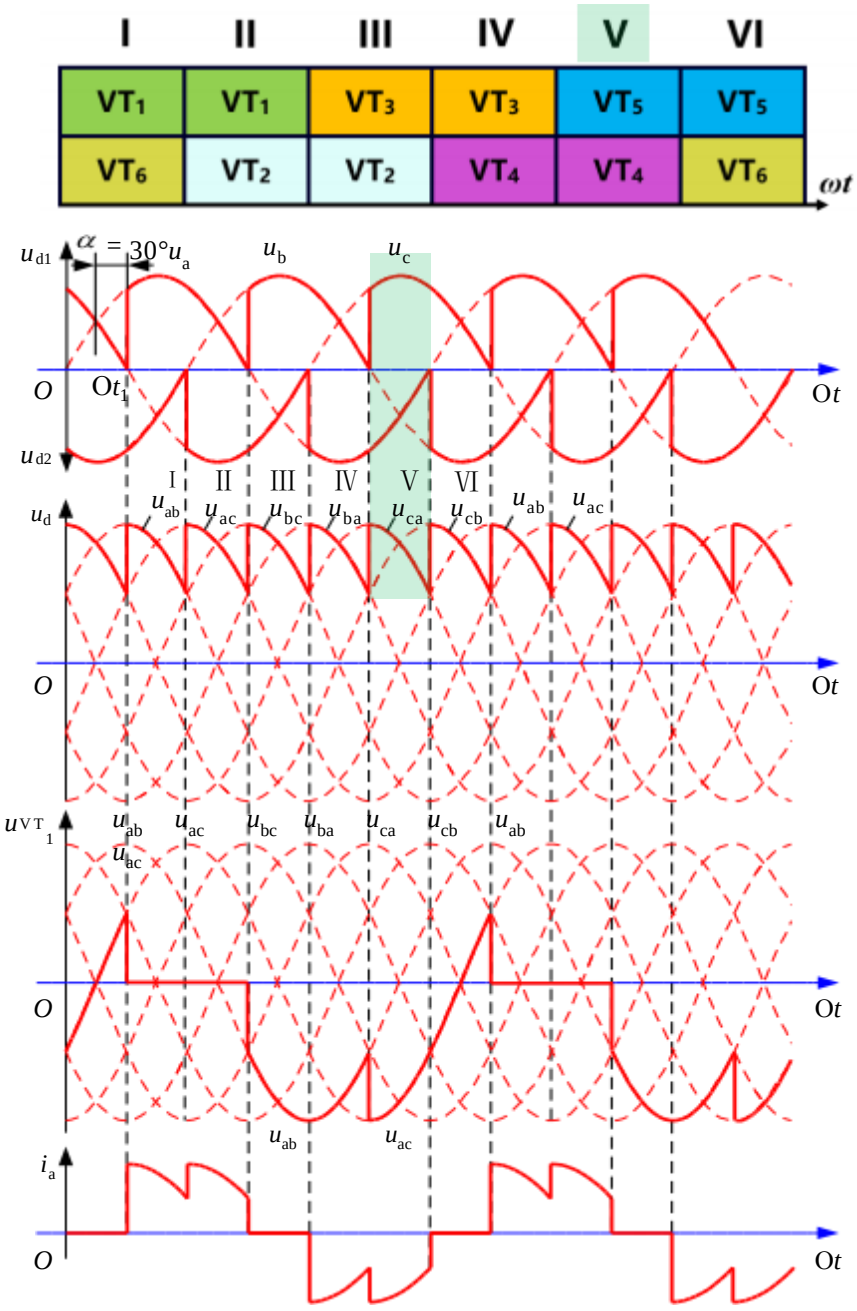




■ α=30°

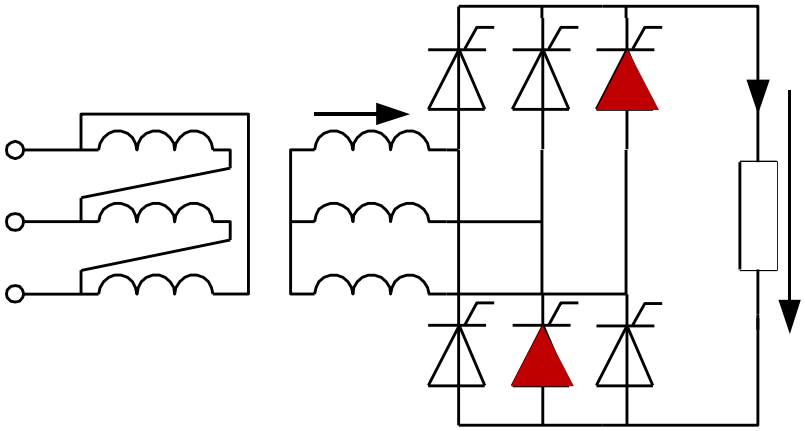
U_d连续

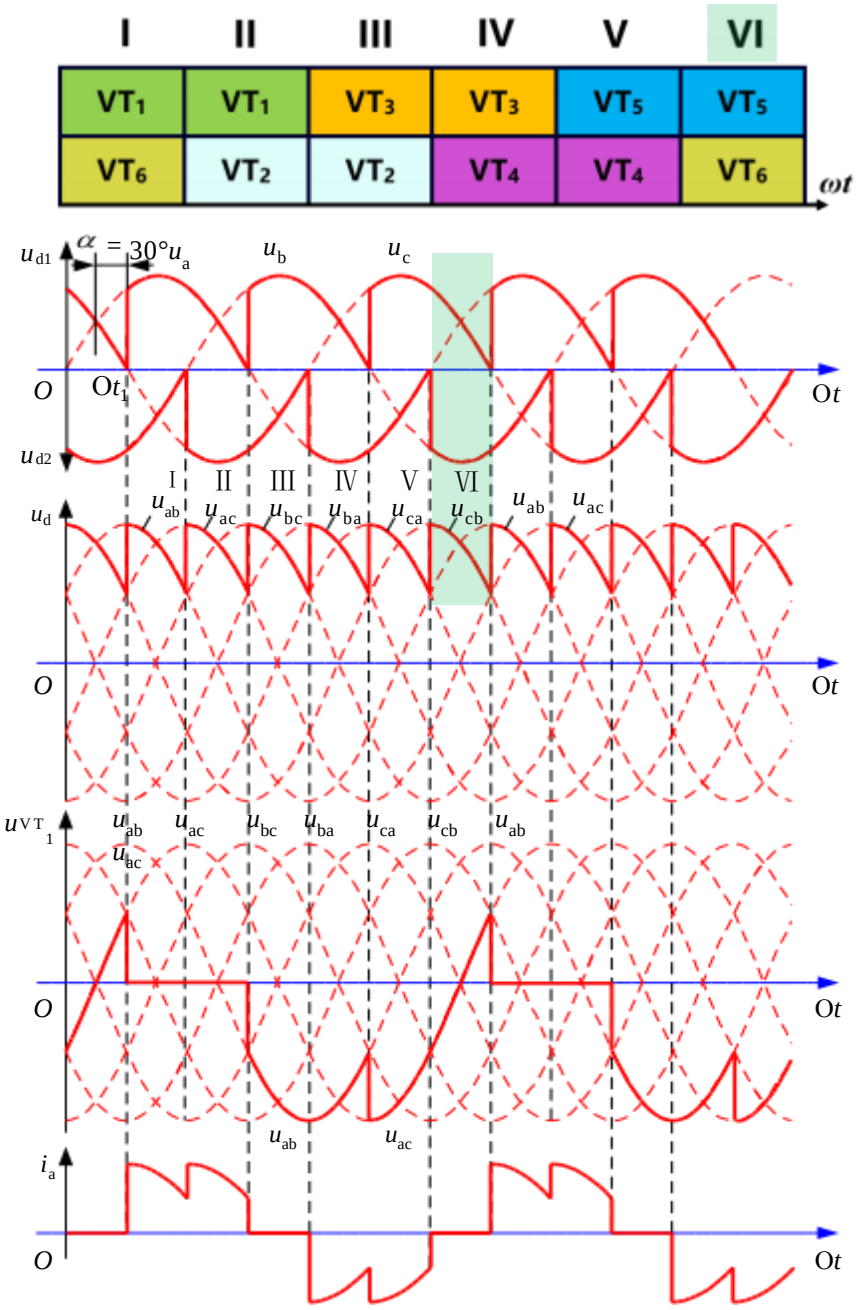




■ α=30°

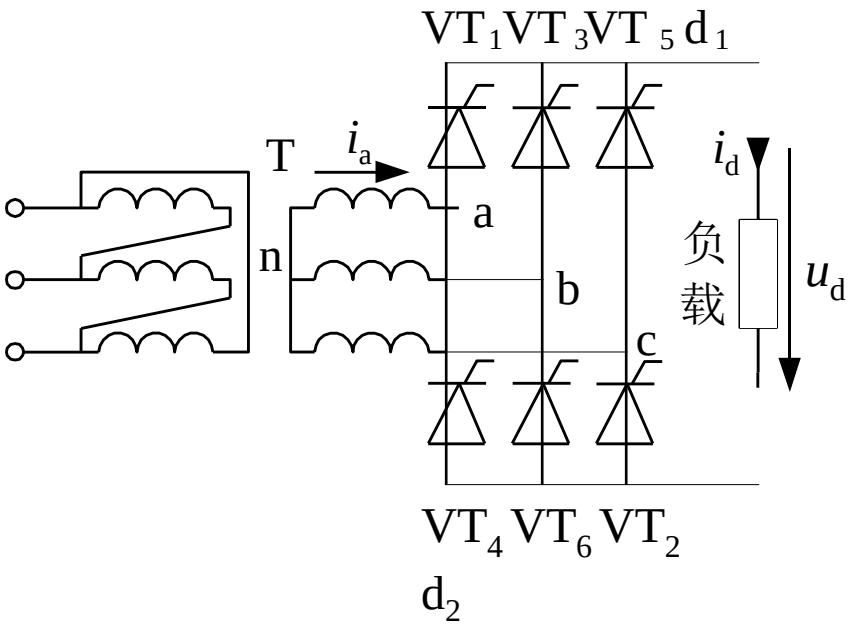
U_d连续

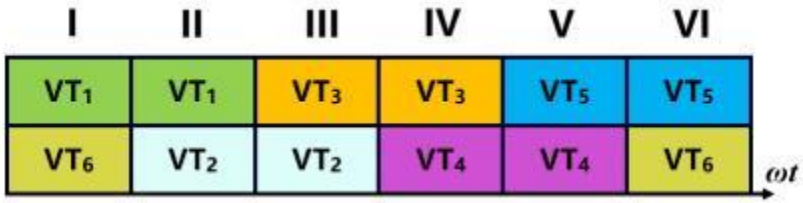


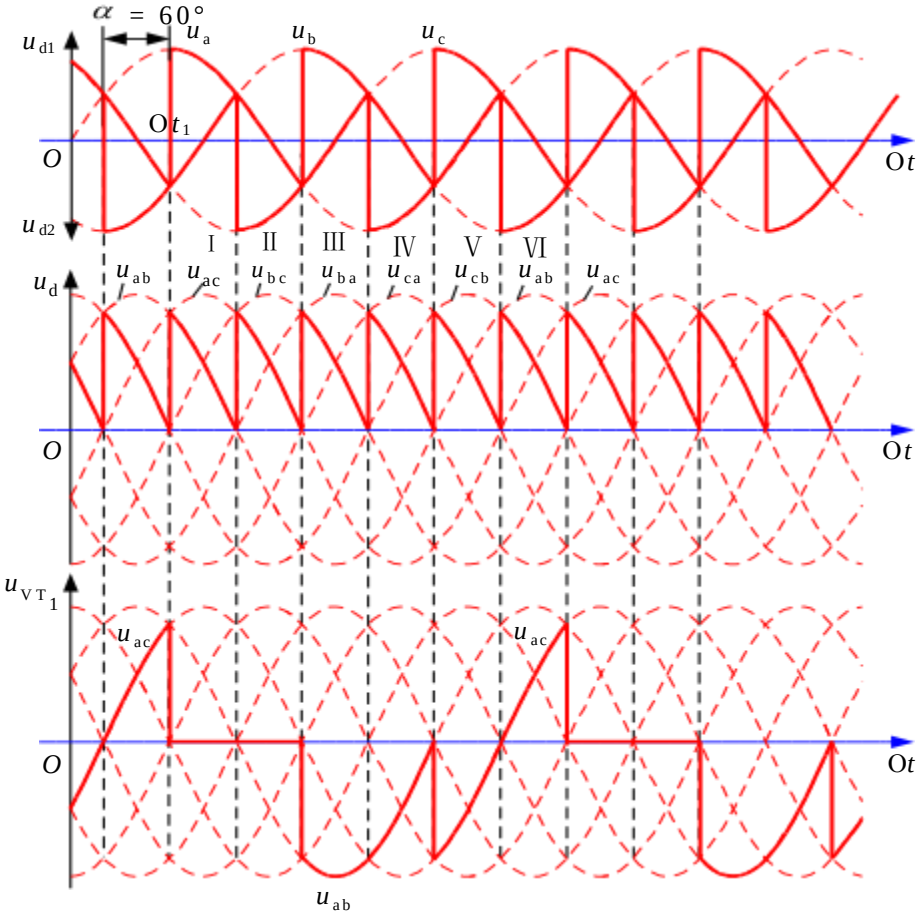


■ α =60°

U_d不连续(临界时刻)

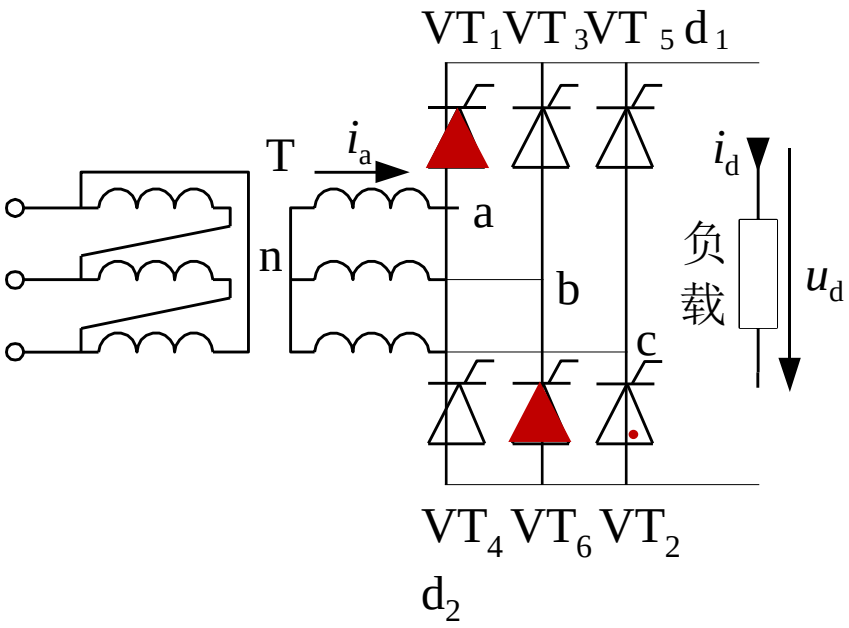


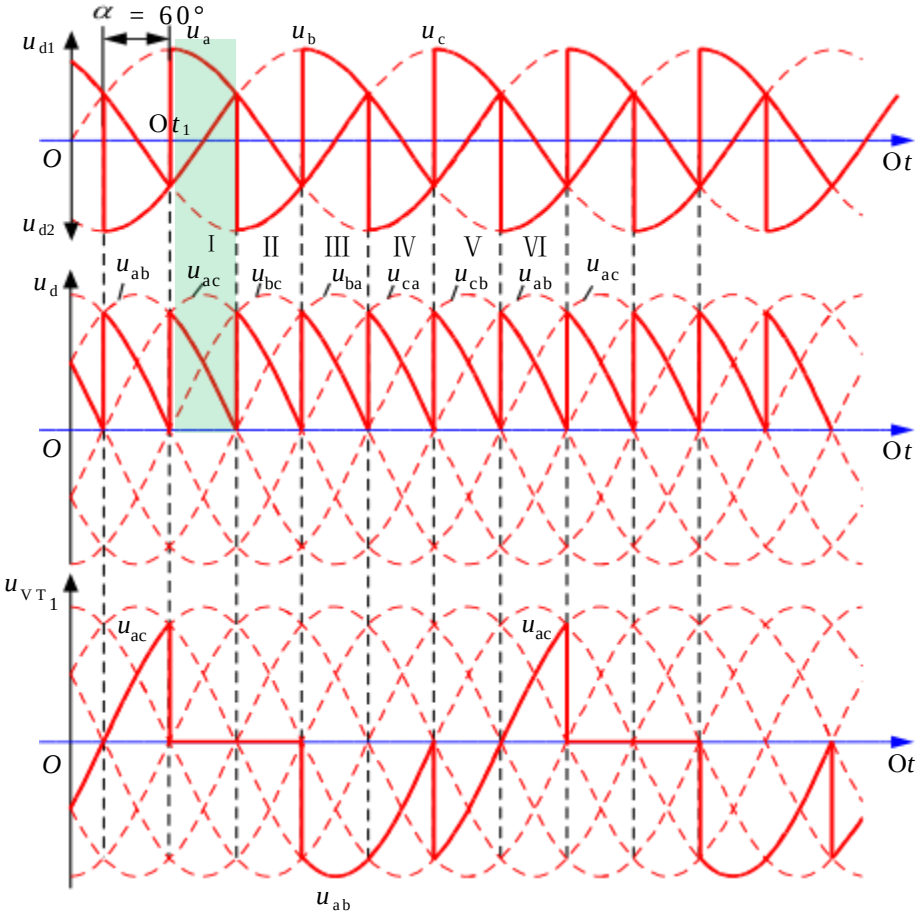




■ α =60°

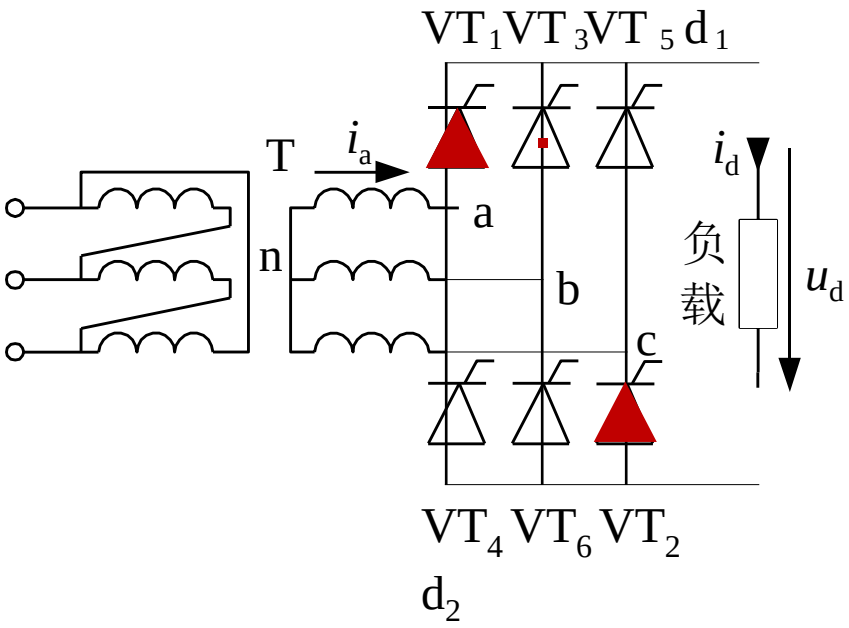
U_d不连续(临界时刻)

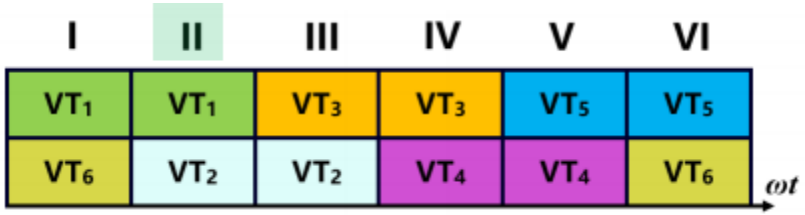


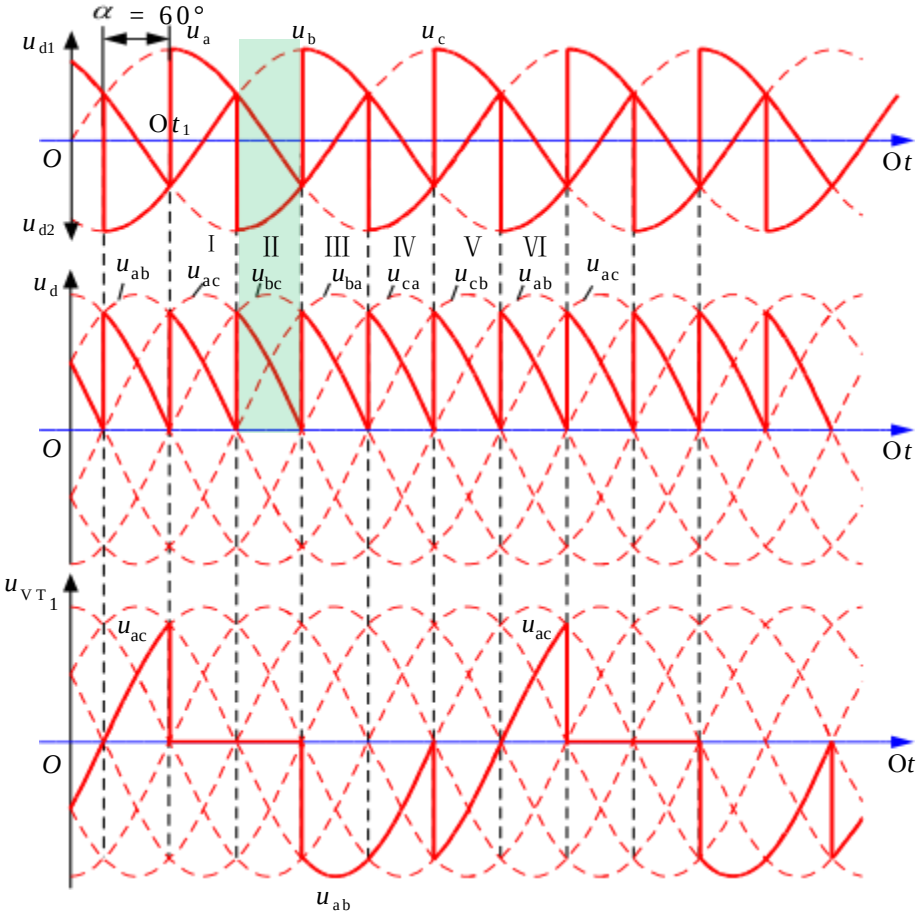


■ α =60°

U_d不连续(临界时刻)

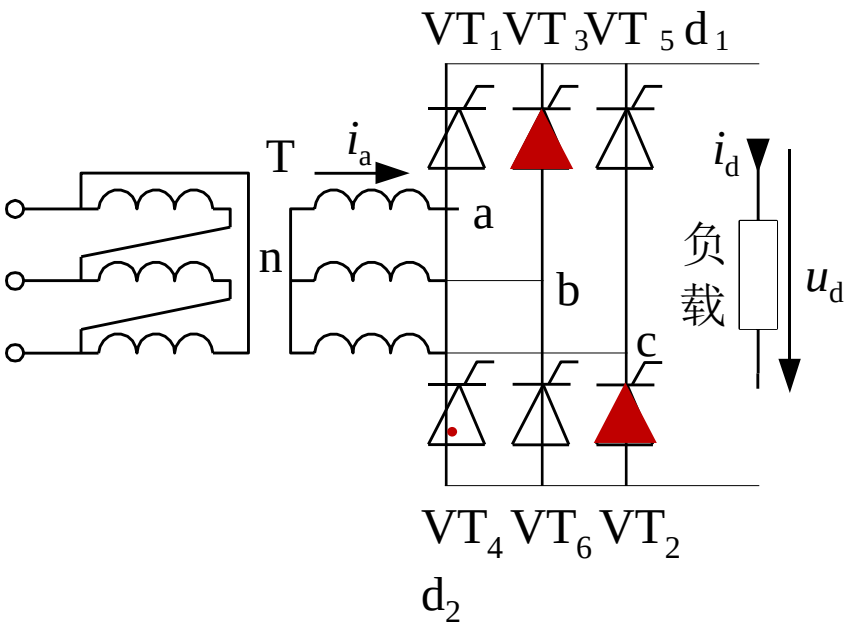


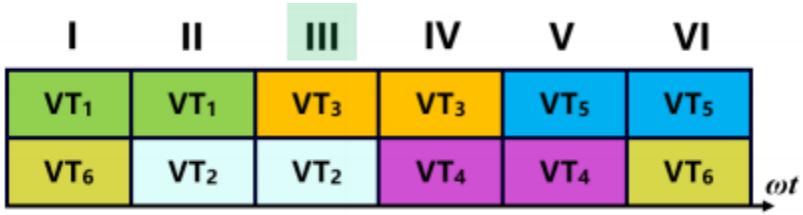


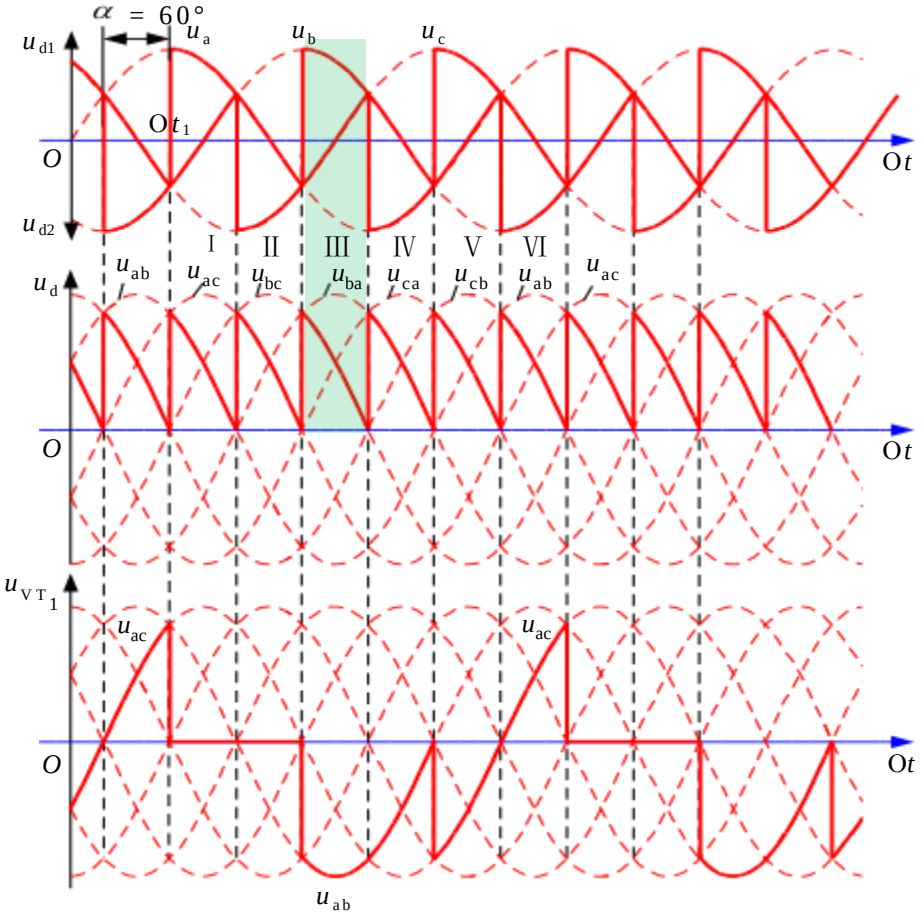


■ α =60°

U_d不连续(临界时刻)

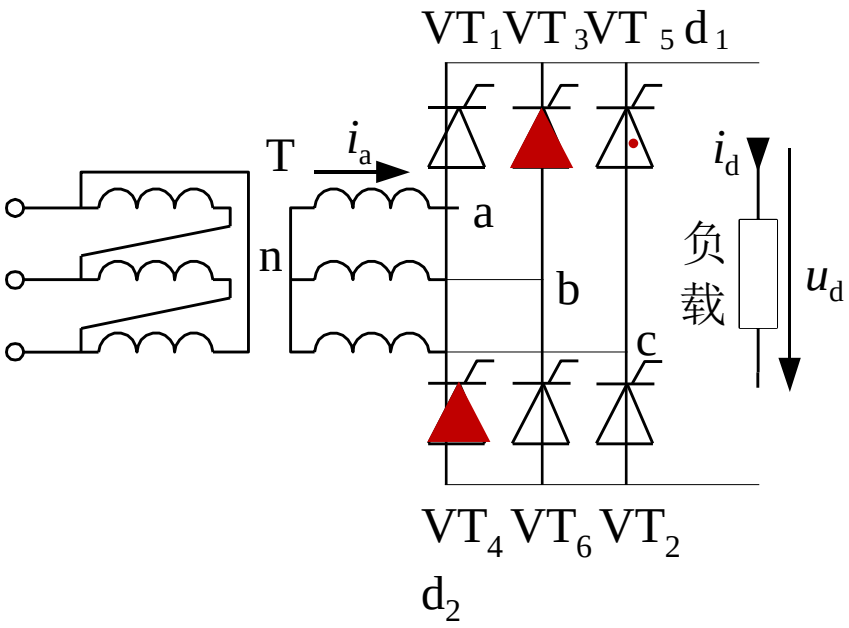


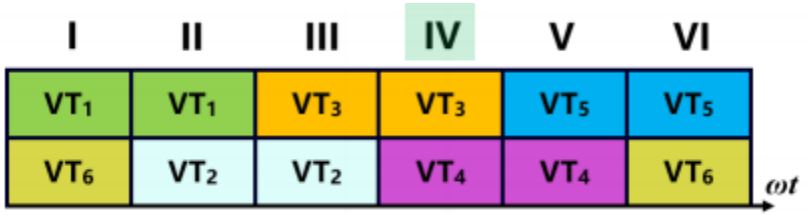


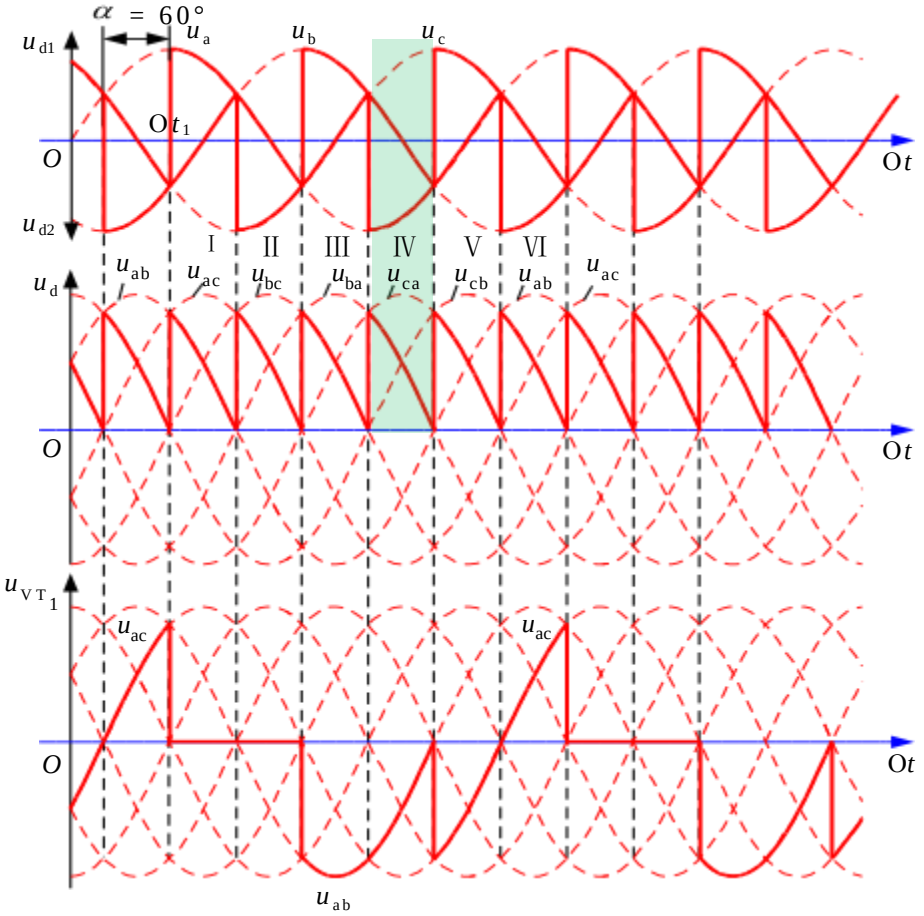


■ α =60°

U_d不连续(临界时刻)

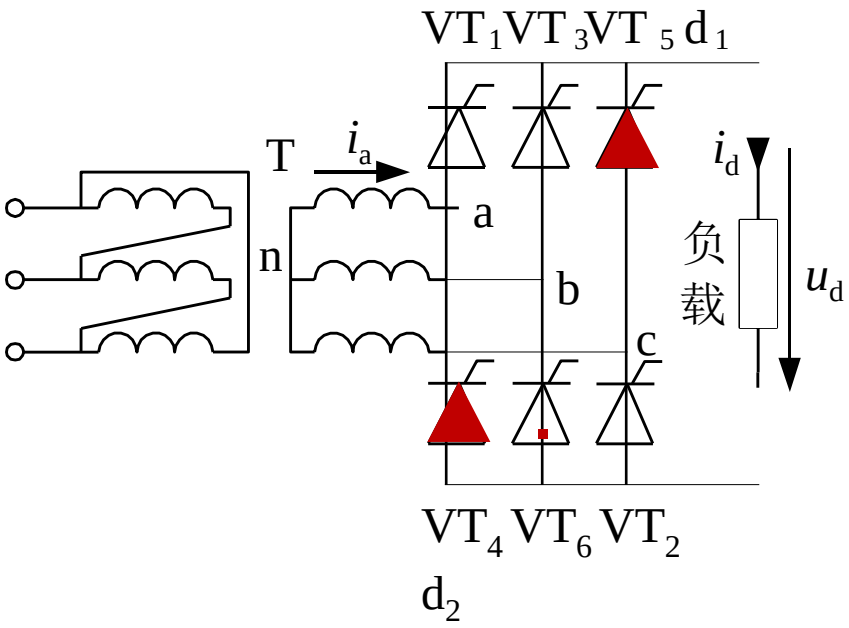


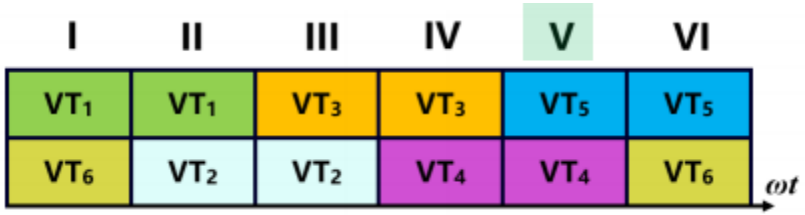


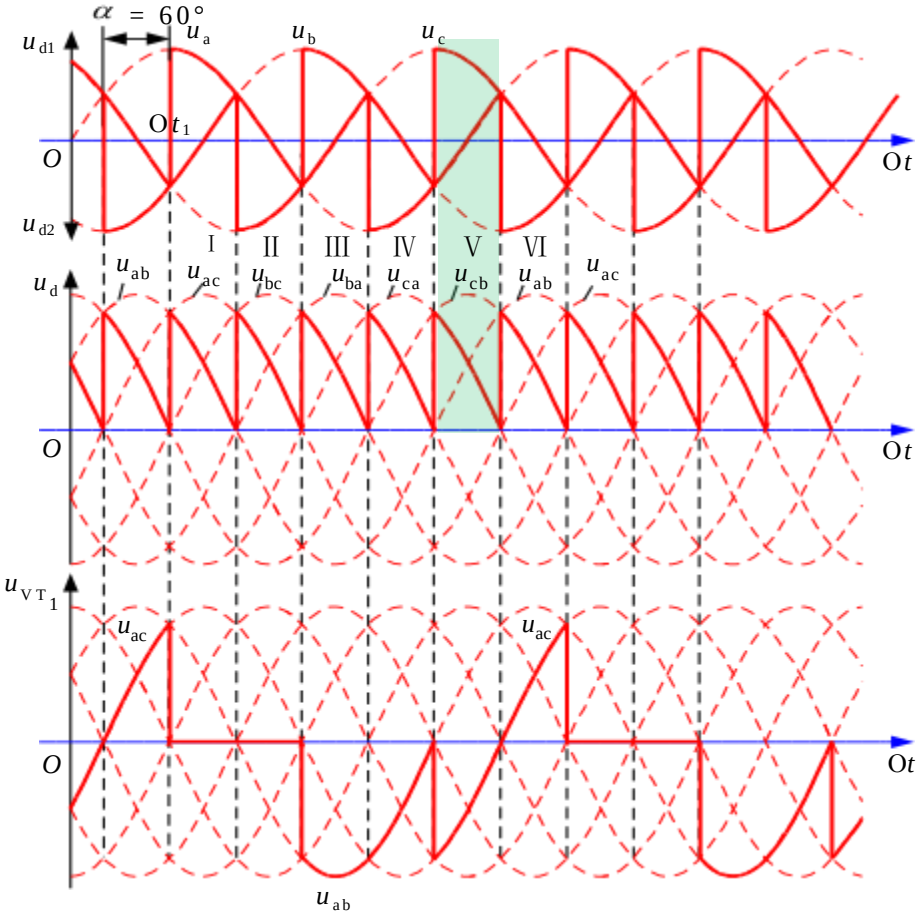


■ α =60°

U_d不连续(临界时刻)

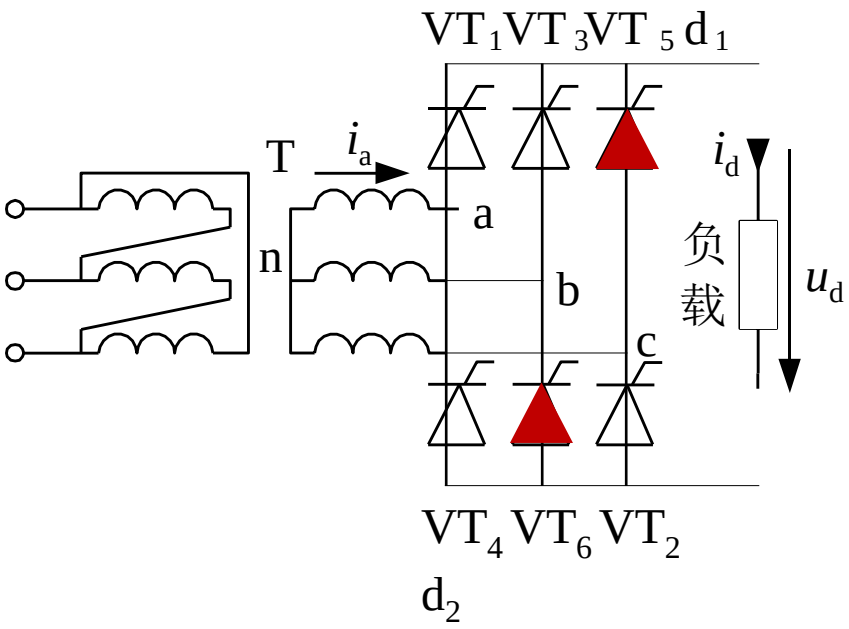


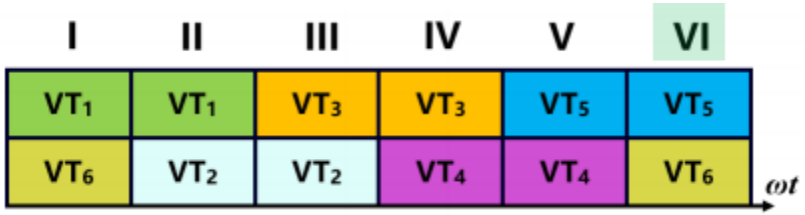


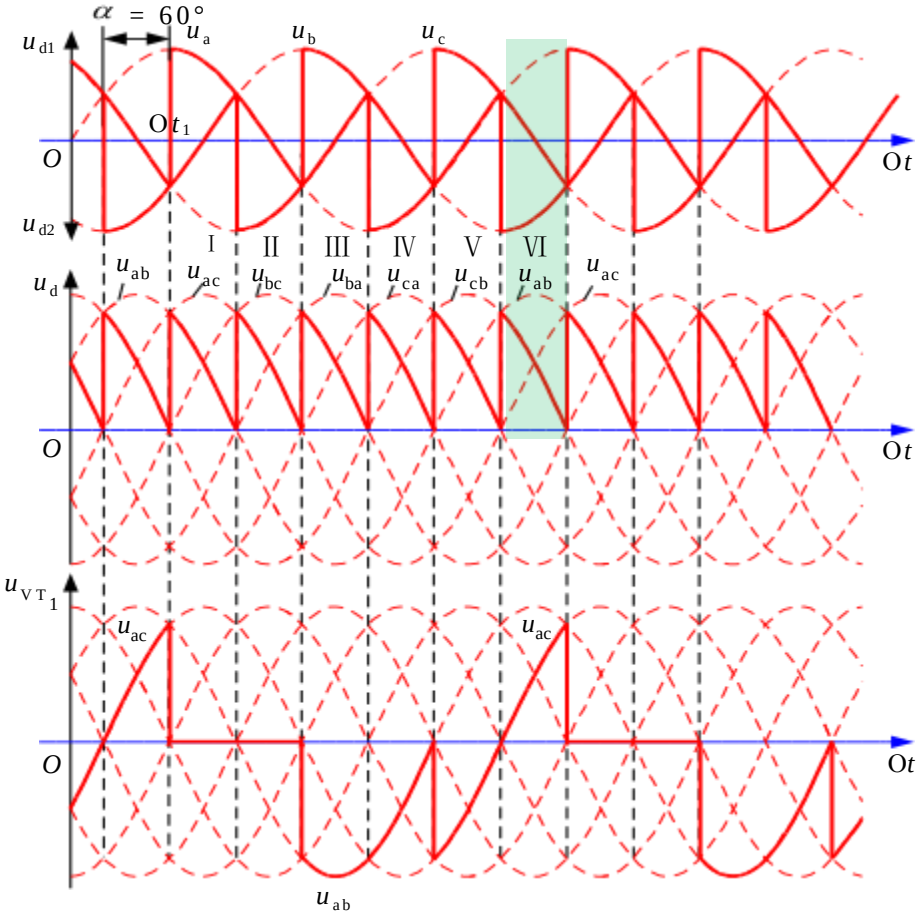


■ α =60°

U_d不连续(临界时刻)

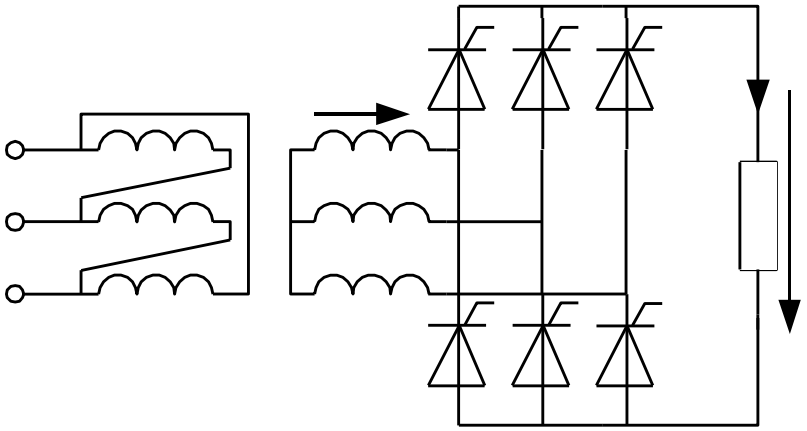


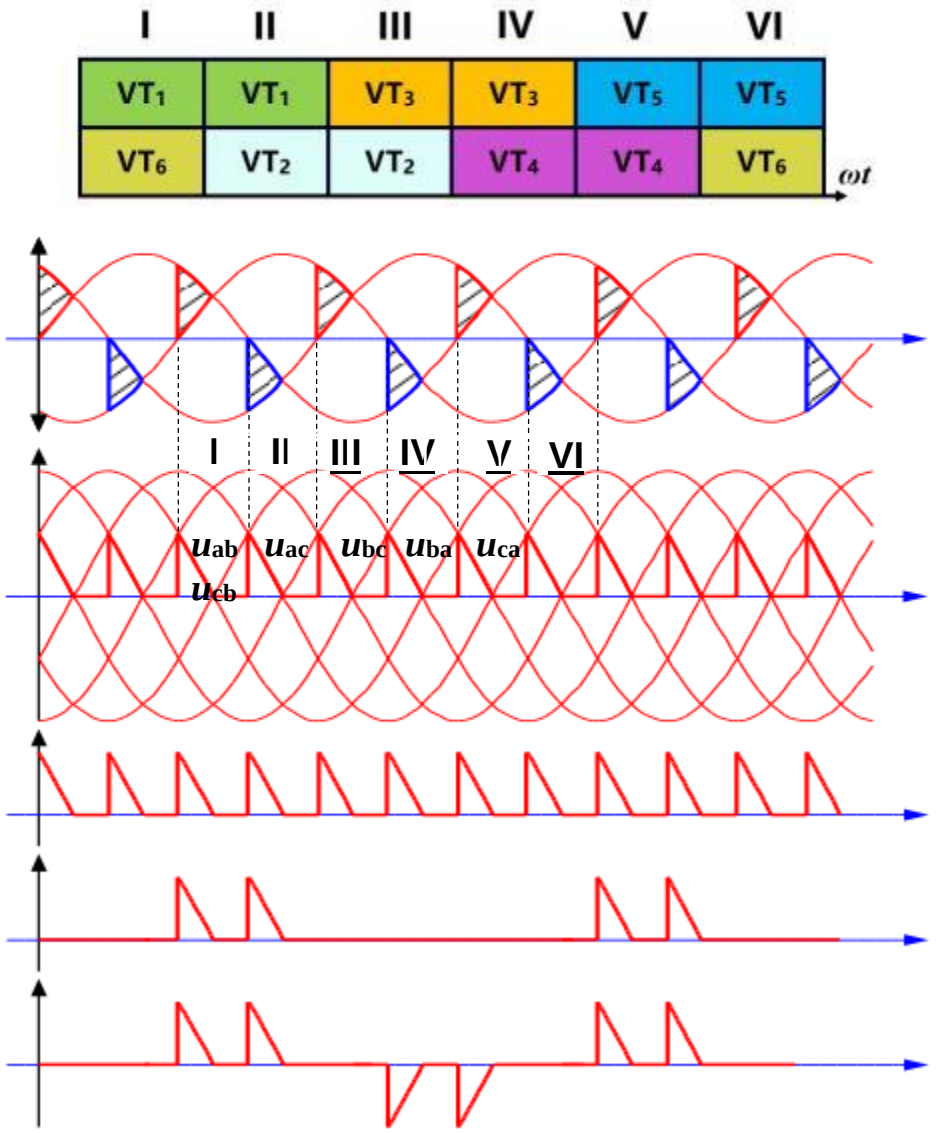




- α=90°

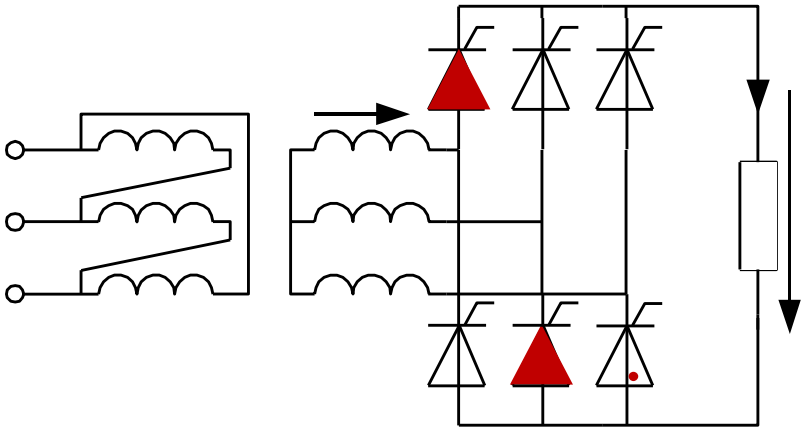
  U_d不连续

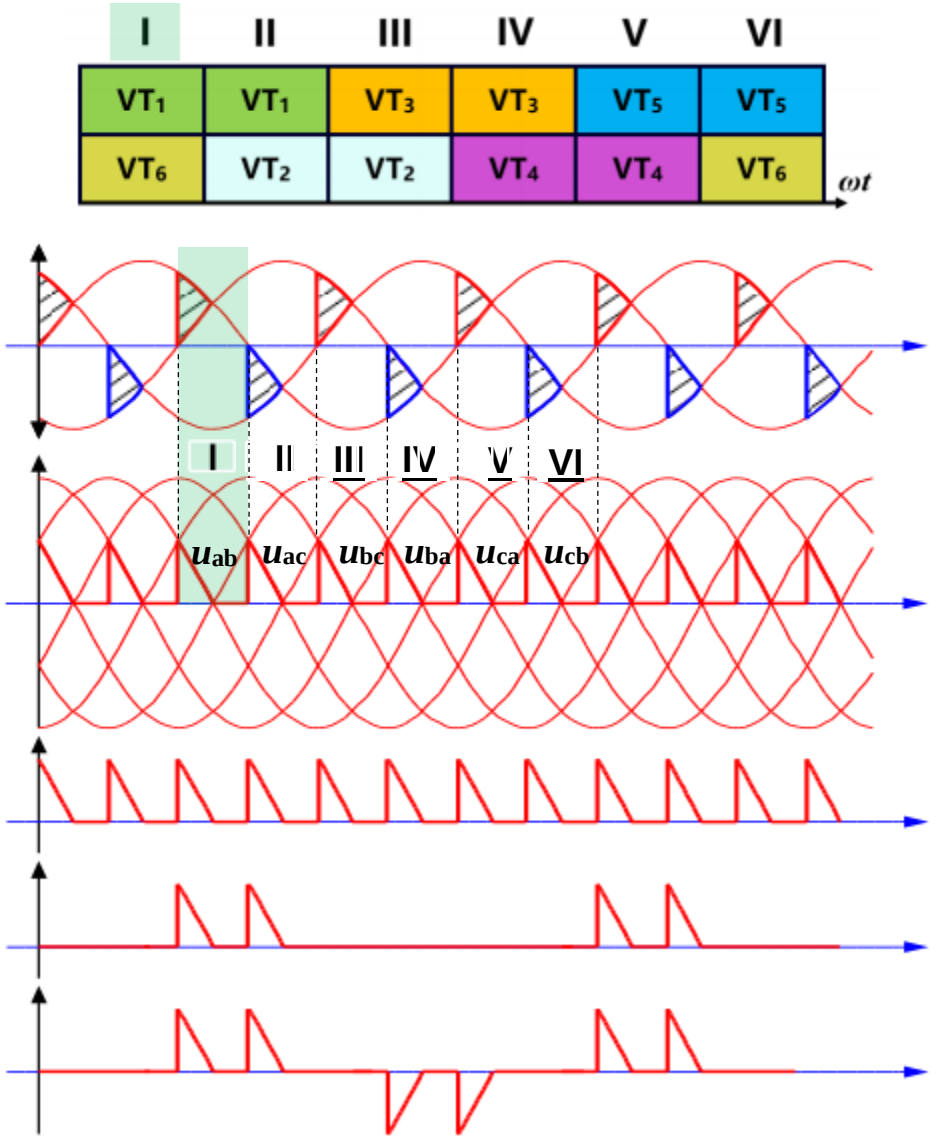




- α=90°

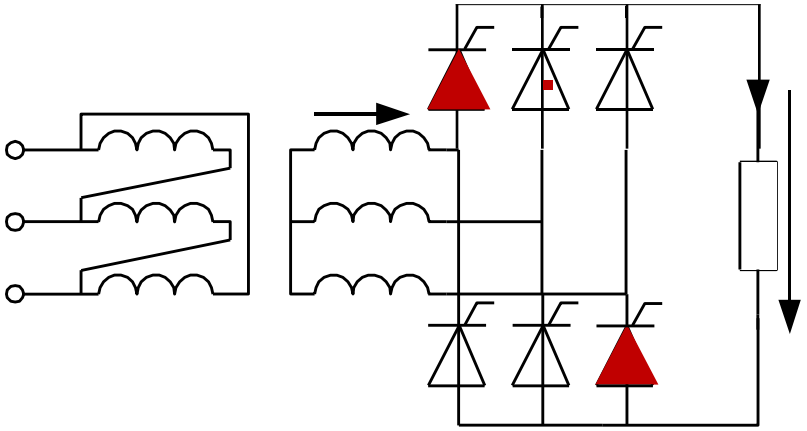
  U_d不连续

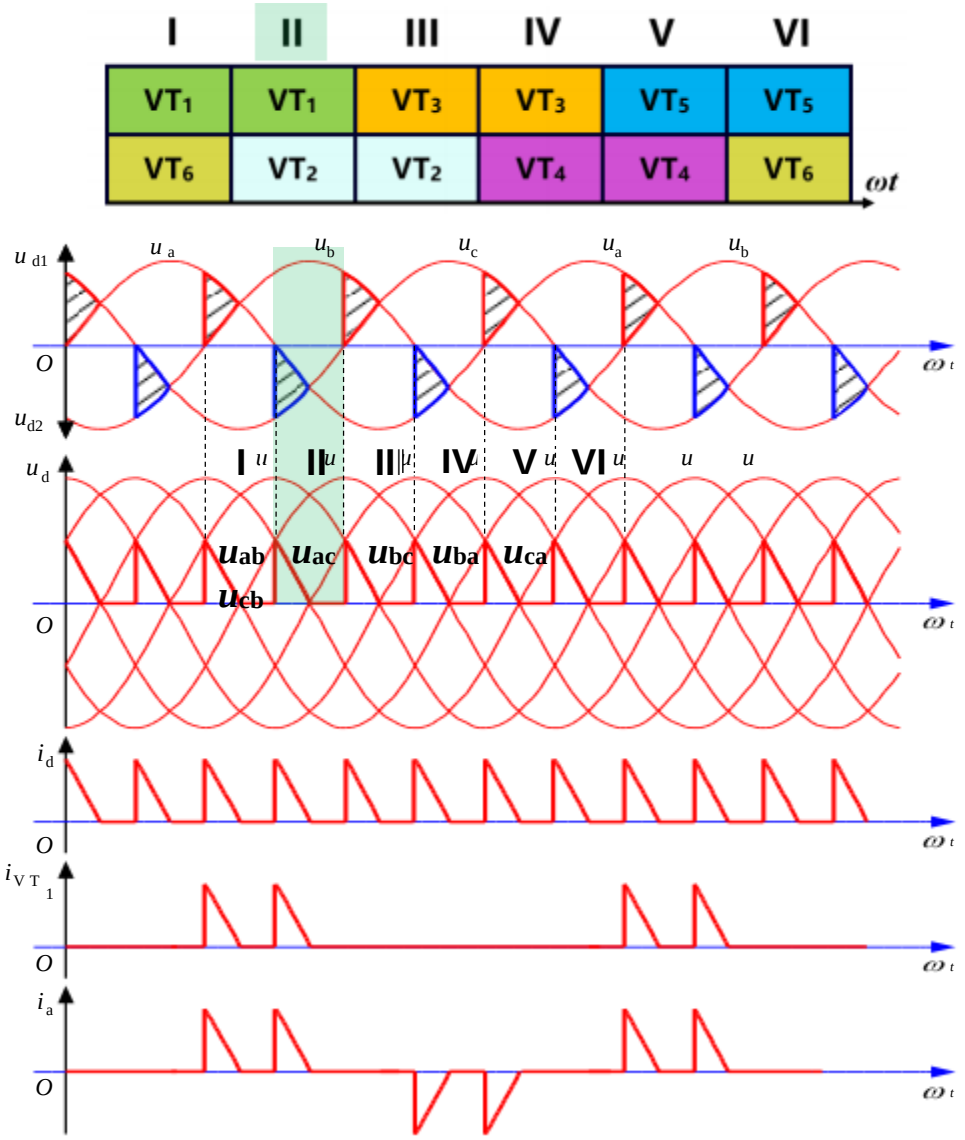




- α=90°

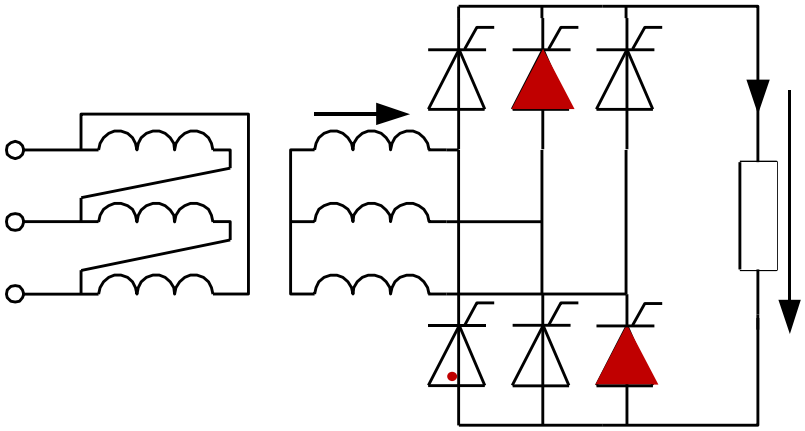
  U_d不连续

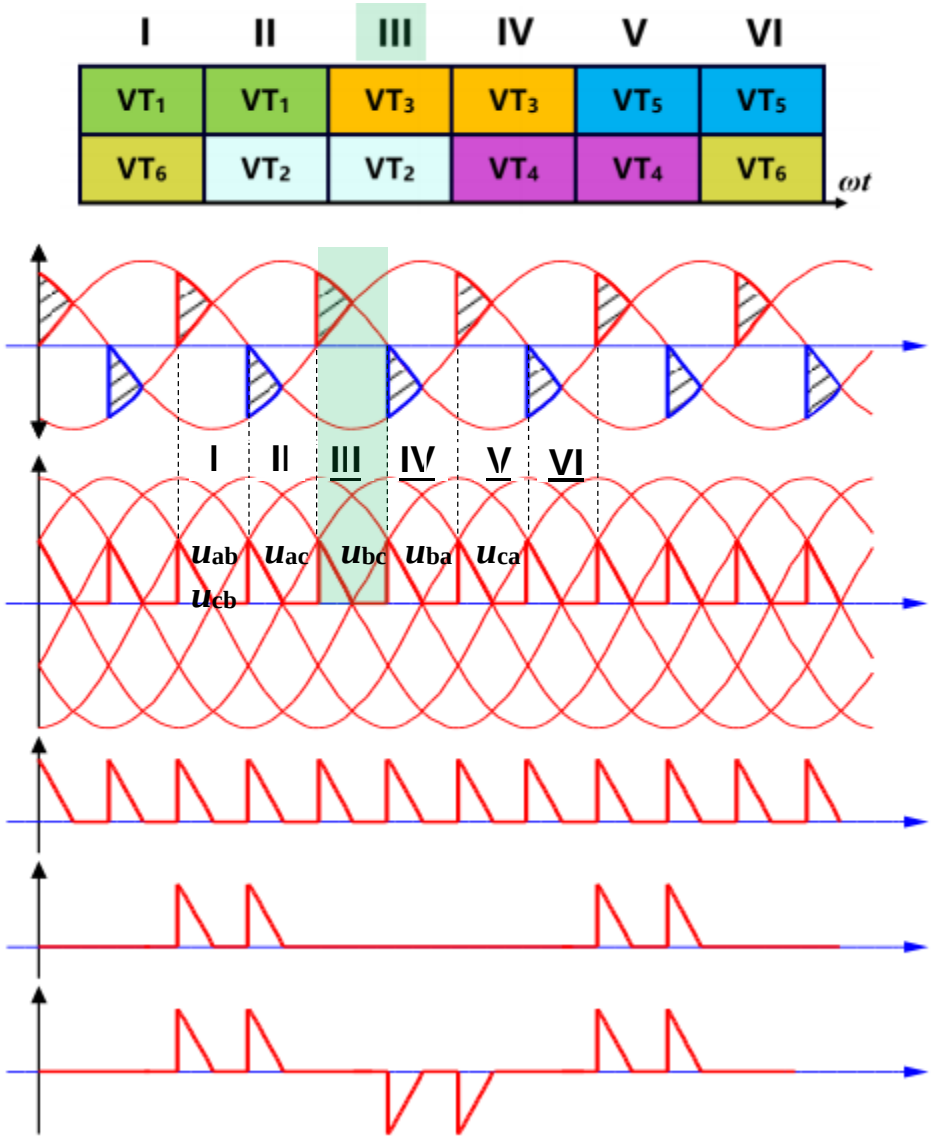




- α=90°

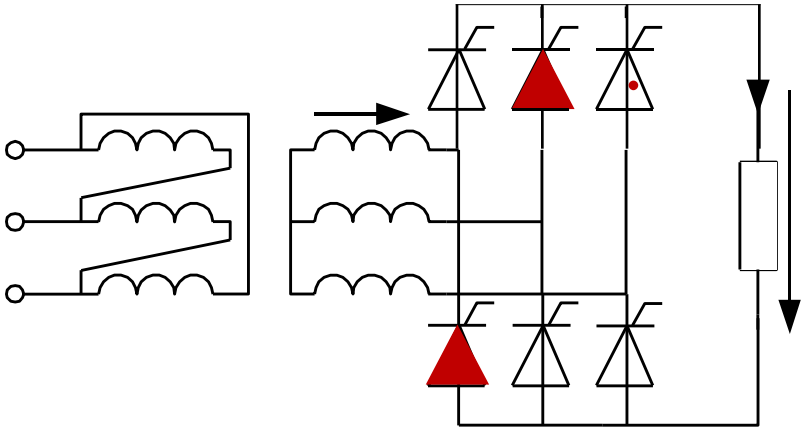
  U_d不连续

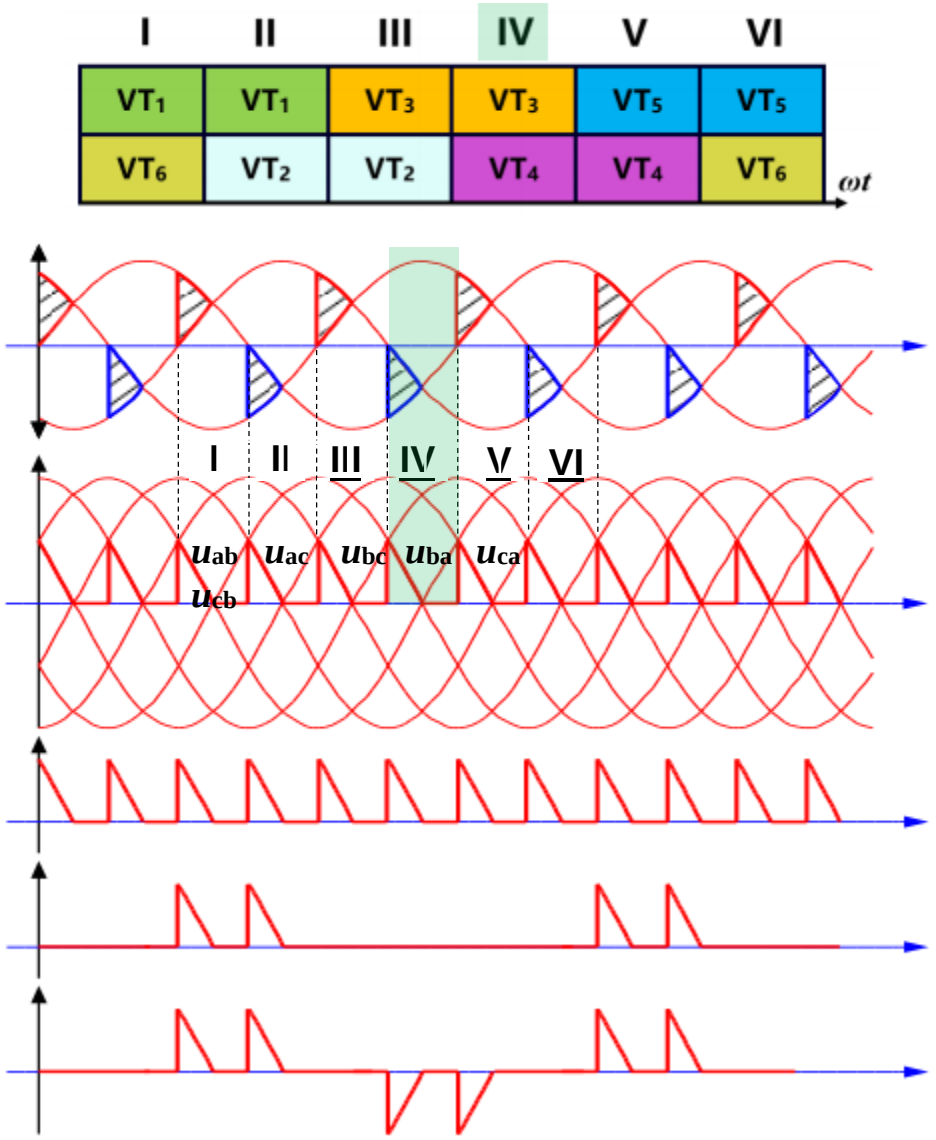




- α=90°

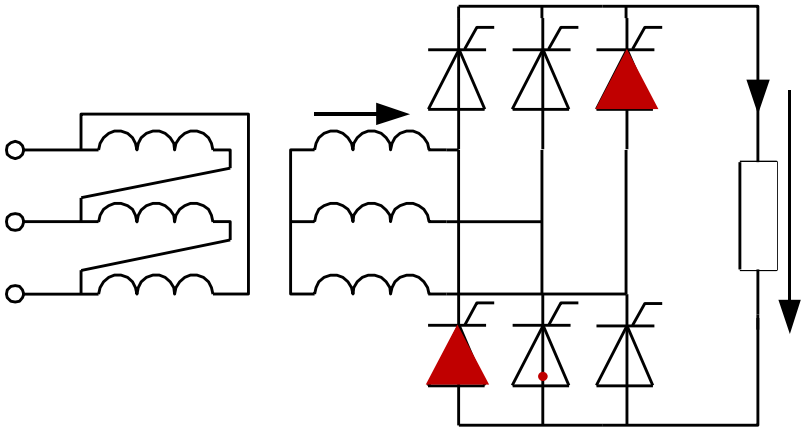
  U_d不连续

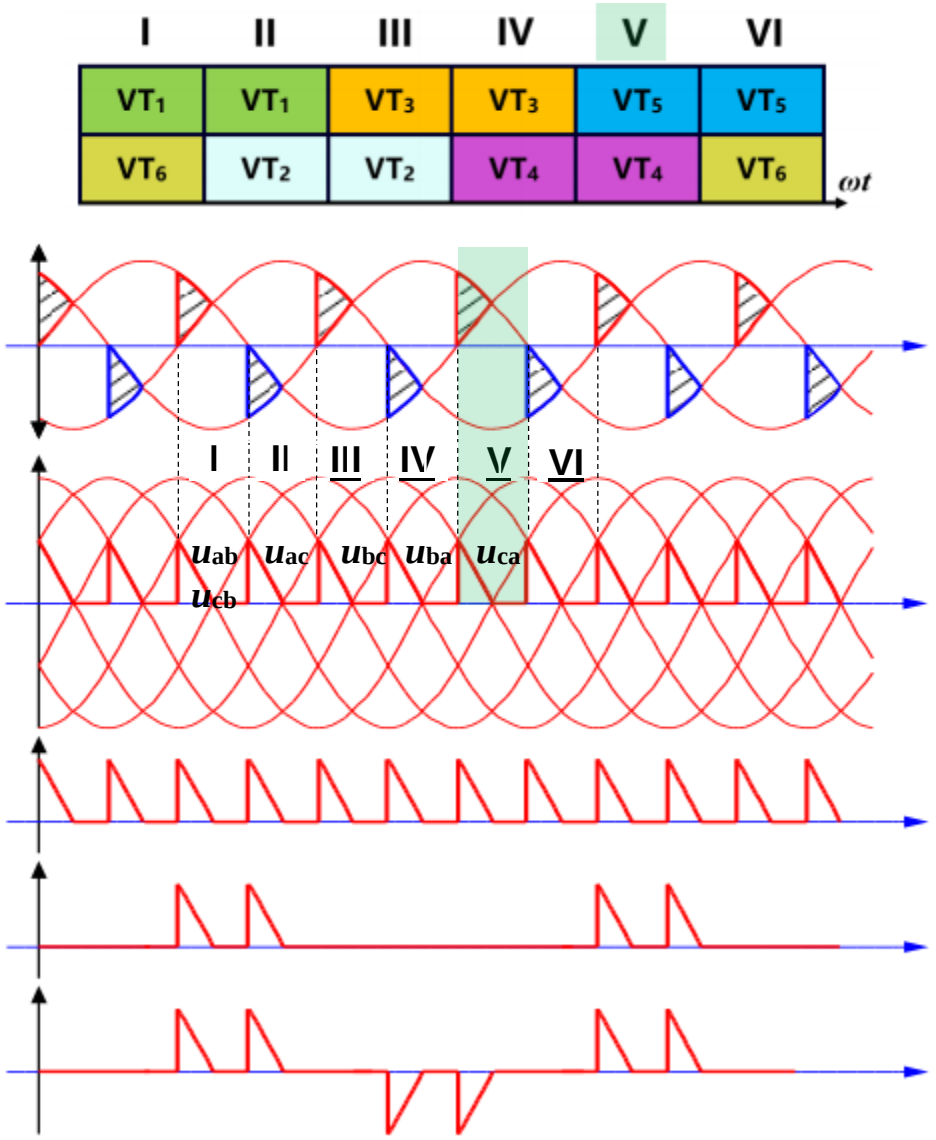




- α=90°

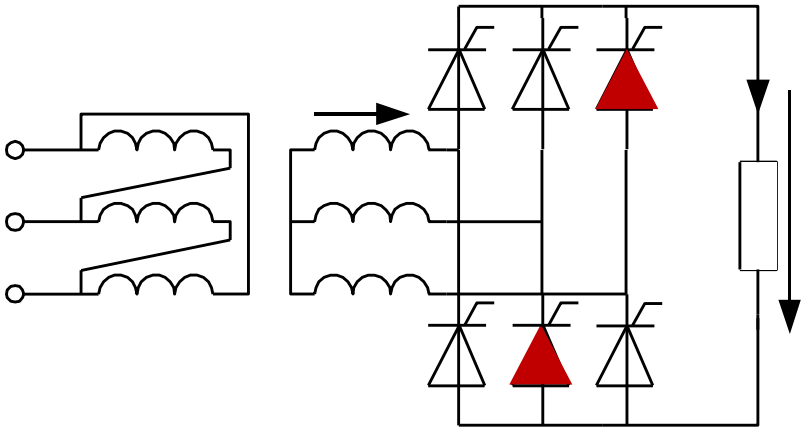
  U_d不连续

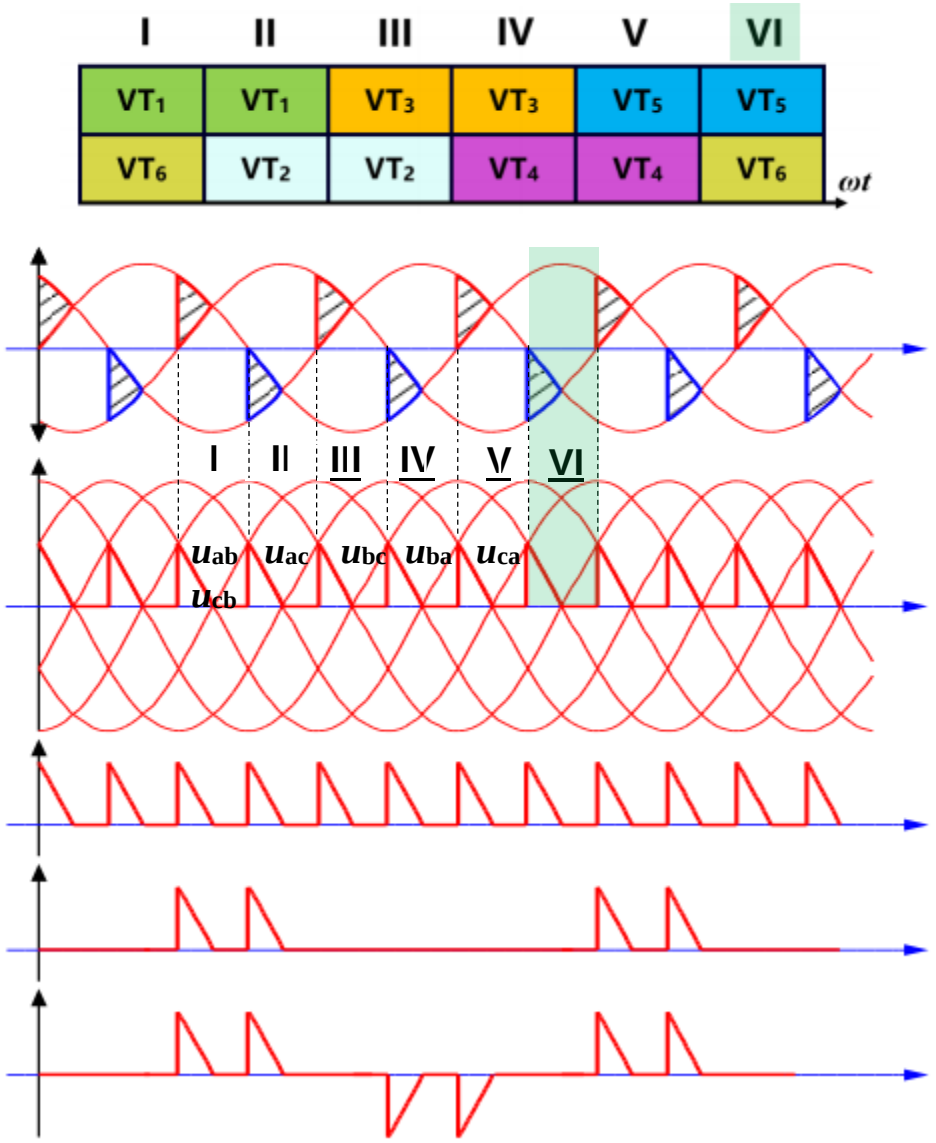




- α=90°

  U_d不连续





小结

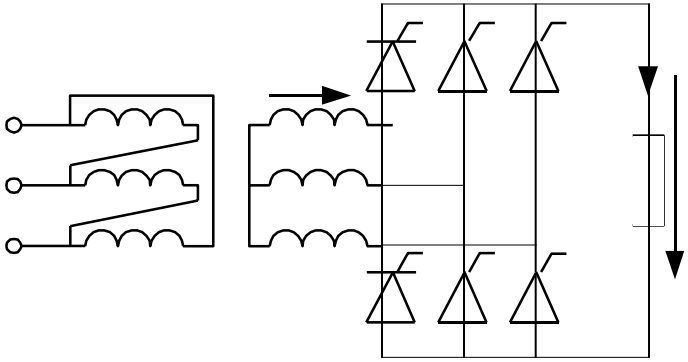
- $\alpha \leq 60°$： u_d波形连续。
- $\alpha > 60°$： u_d波形不连续， u_d波形每60。中有一段为零。

晶闸管的移相范围 a： 0~120。

2. 电感性负载

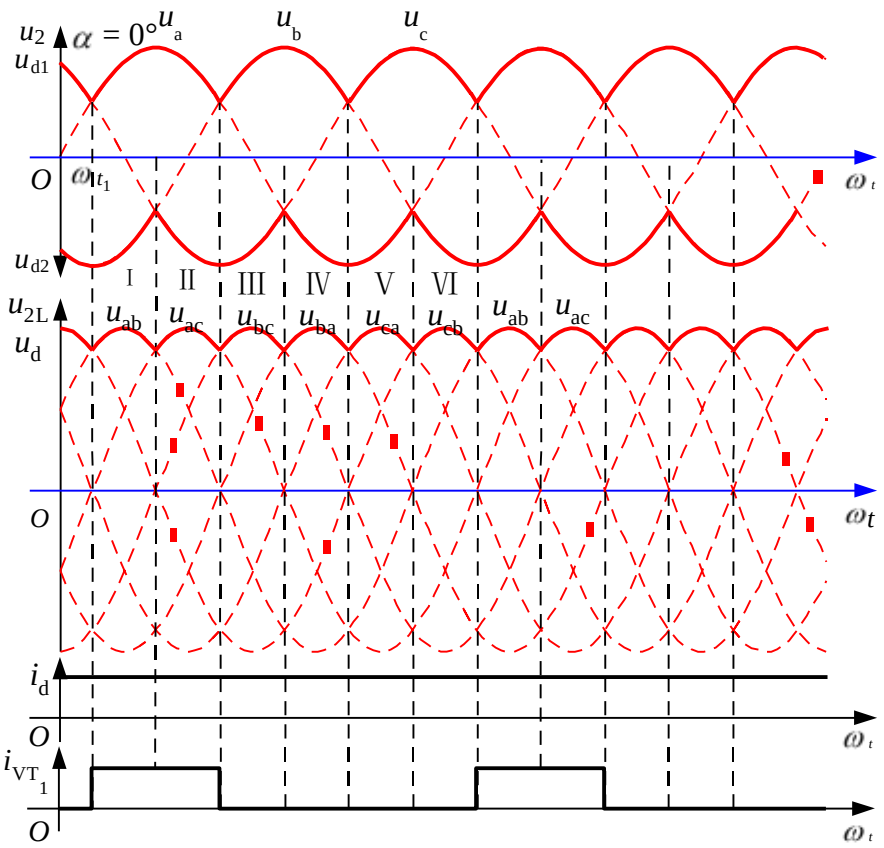
■ $\alpha = 0°$

(假设$\omega L >> R$)



I	II	III	IV	V	VI
VT_1	VT_1	VT_3	VT_3	VT_5	VT_5
VT_6	VT_2	VT_2	VT_4	VT_4	VT_6

ωt

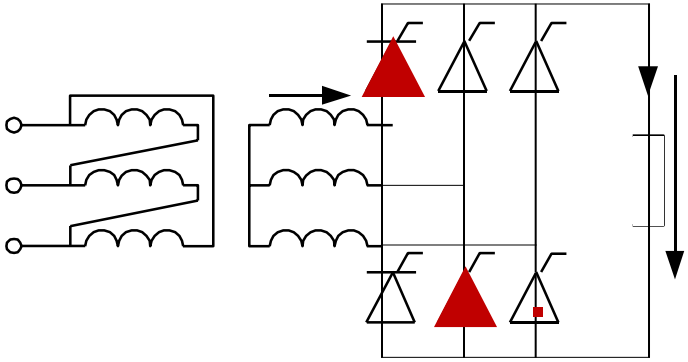


α 角移相范围： 0~90。

2. 电感性负载

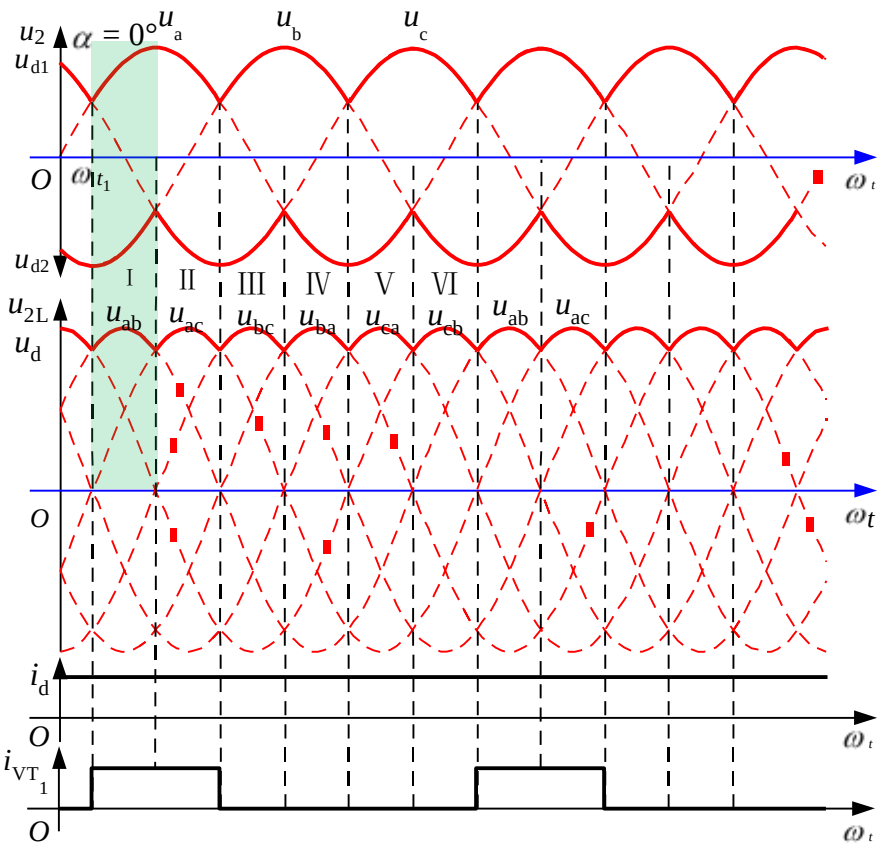
■ $\alpha = 0°$

(假设$\omega L >> R$)



I	II	III	IV	V	VI
VT_1	VT_1	VT_3	VT_3	VT_5	VT_5
VT_6	VT_2	VT_2	VT_4	VT_4	VT_6

ωt

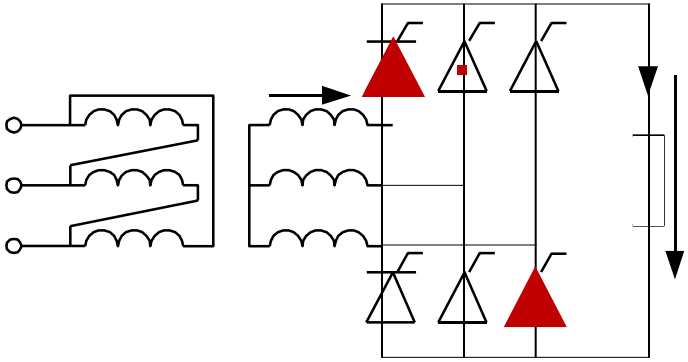


α 角移相范围： 0~90。

2. 电感性负载

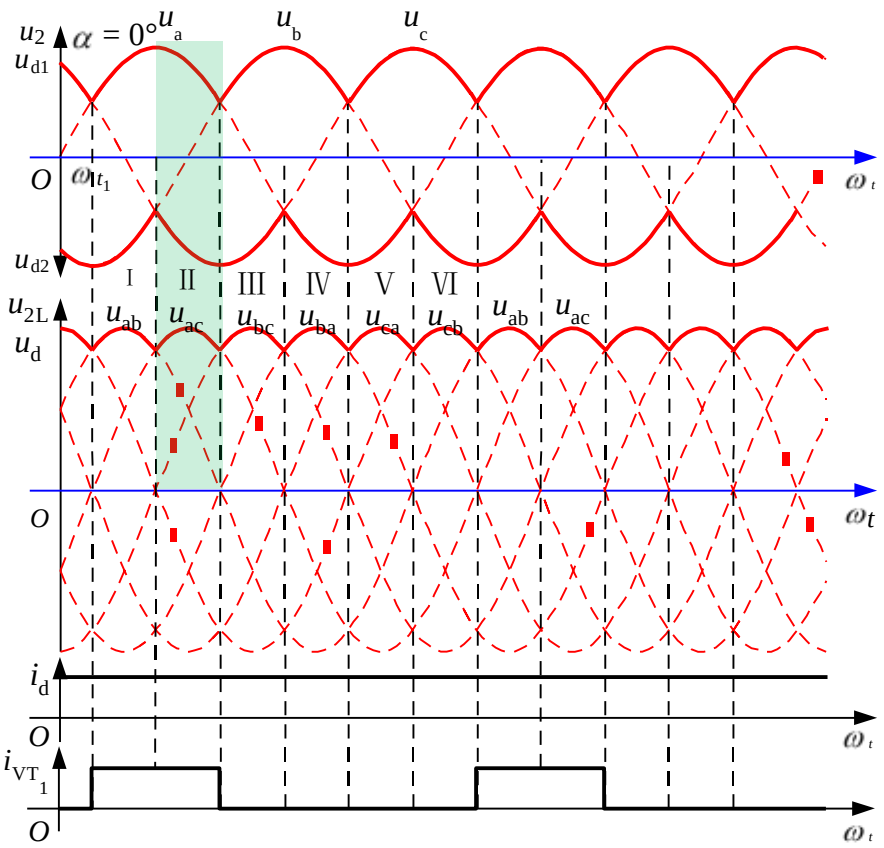
■ $\alpha = 0°$

(假设$\omega L >> R$)



I	II	III	IV	V	VI
VT_1	VT_1	VT_3	VT_3	VT_5	VT_5
VT_6	VT_2	VT_2	VT_4	VT_4	VT_6

ωt

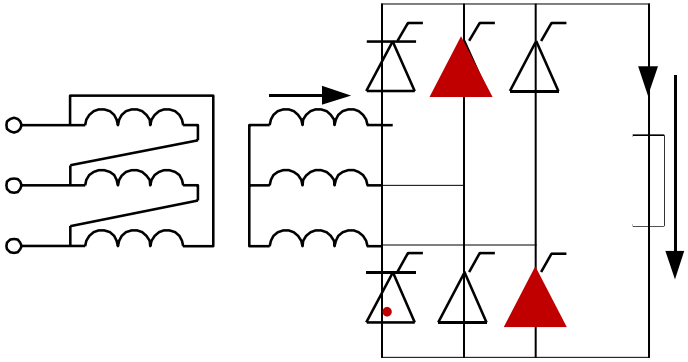


α 角移相范围： 0~90。

2. 电感性负载

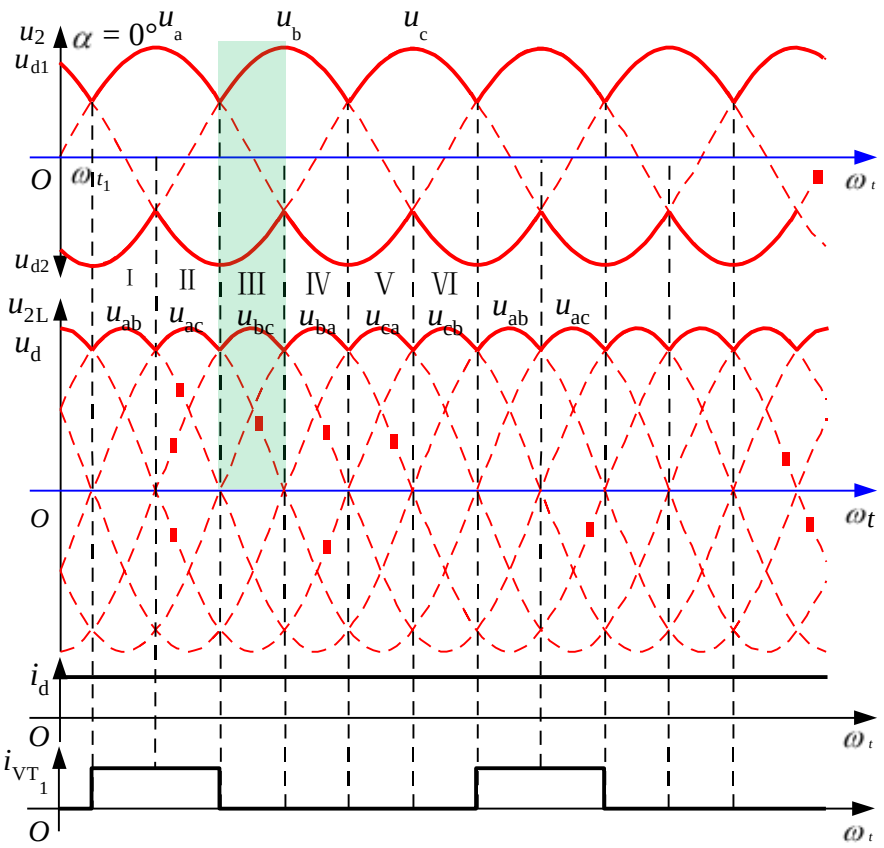
■ $\alpha = 0°$

(假设$\omega L >> R$)



I	II	III	IV	V	VI
VT_1	VT_1	VT_3	VT_3	VT_5	VT_5
VT_6	VT_2	VT_2	VT_4	VT_4	VT_6

ωt

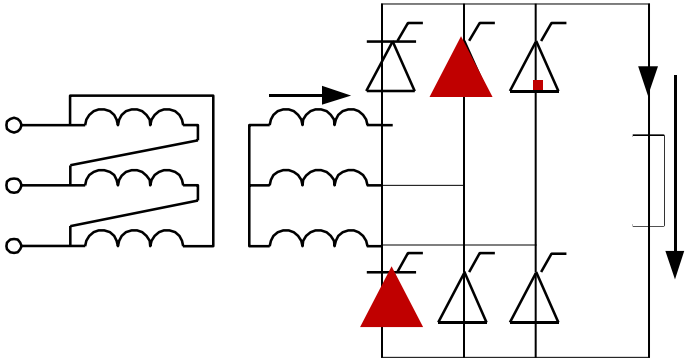


α 角移相范围： 0~90。

2. 电感性负载

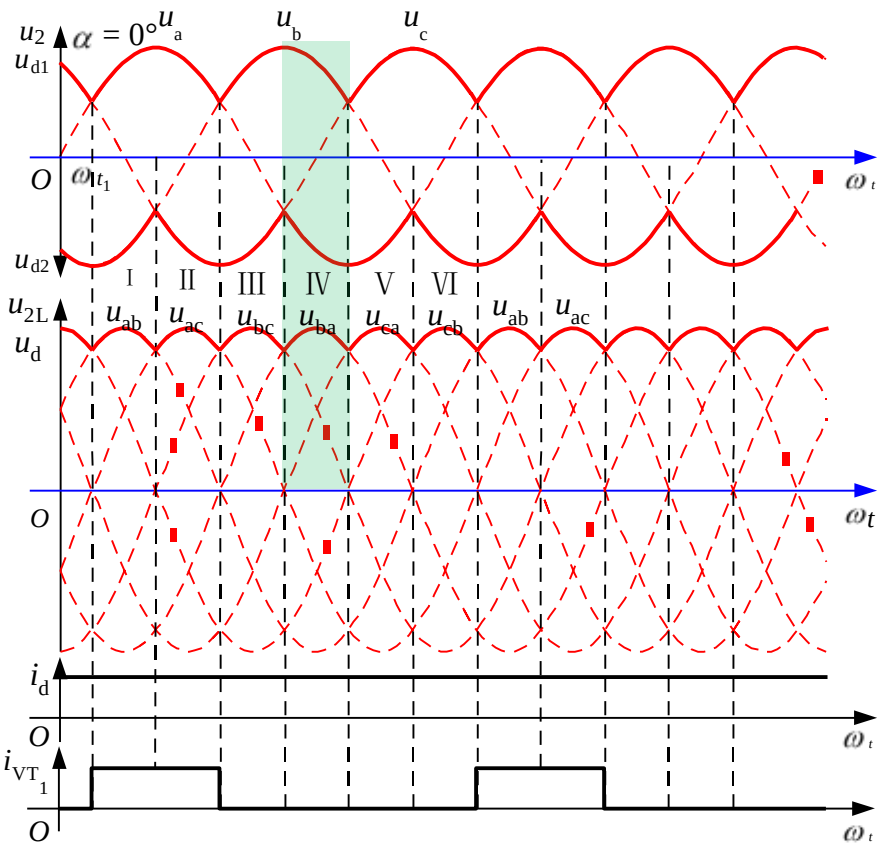
■ $\alpha = 0°$

(假设$\omega L >> R$)



I	II	III	IV	V	VI
VT_1	VT_1	VT_3	VT_3	VT_5	VT_5
VT_6	VT_2	VT_2	VT_4	VT_4	VT_6

ωt

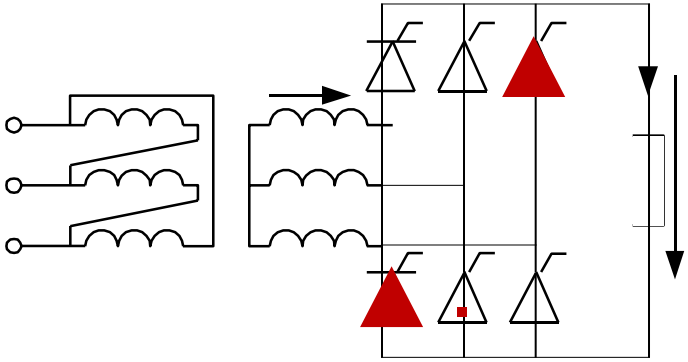


α 角移相范围： 0~90。

2. 电感性负载

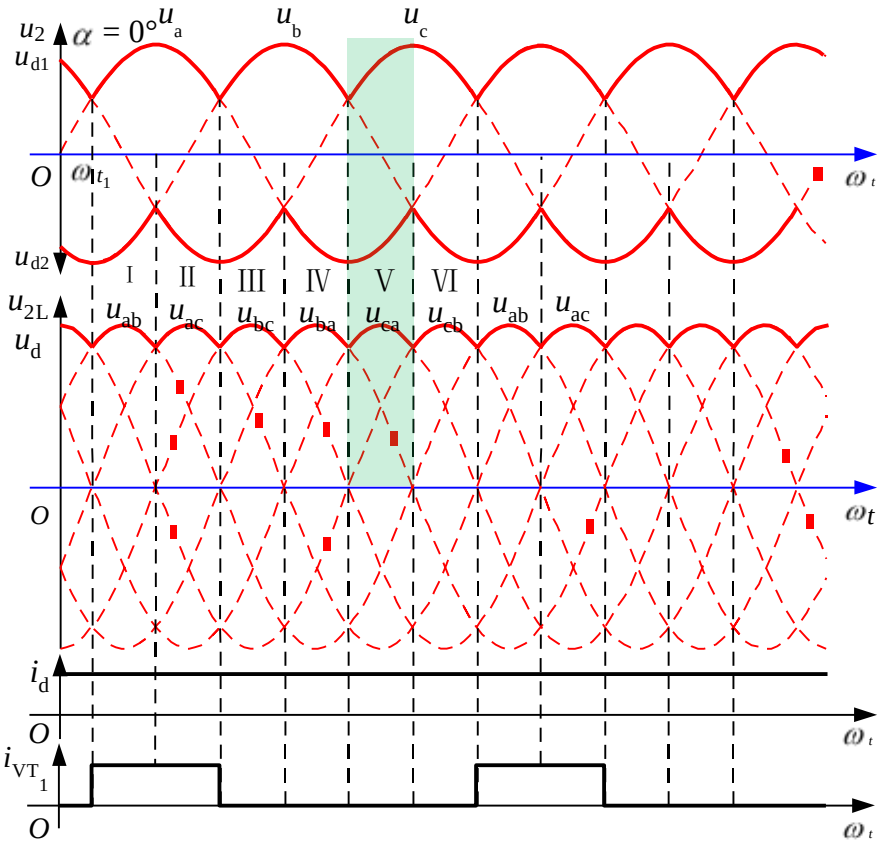
■ $\alpha = 0°$

(假设$\omega L >> R$)



I	II	III	IV	V	VI
VT_1	VT_1	VT_3	VT_3	VT_5	VT_5
VT_6	VT_2	VT_2	VT_4	VT_4	VT_6

ωt

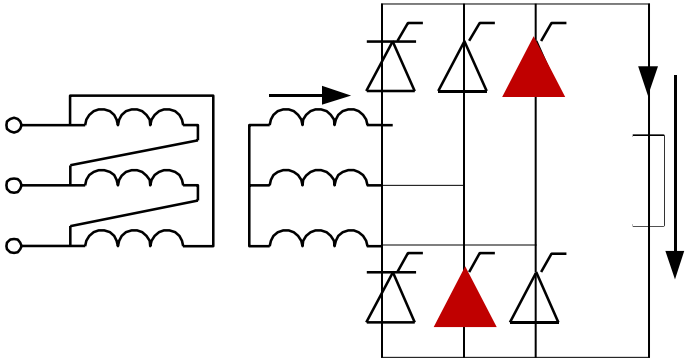


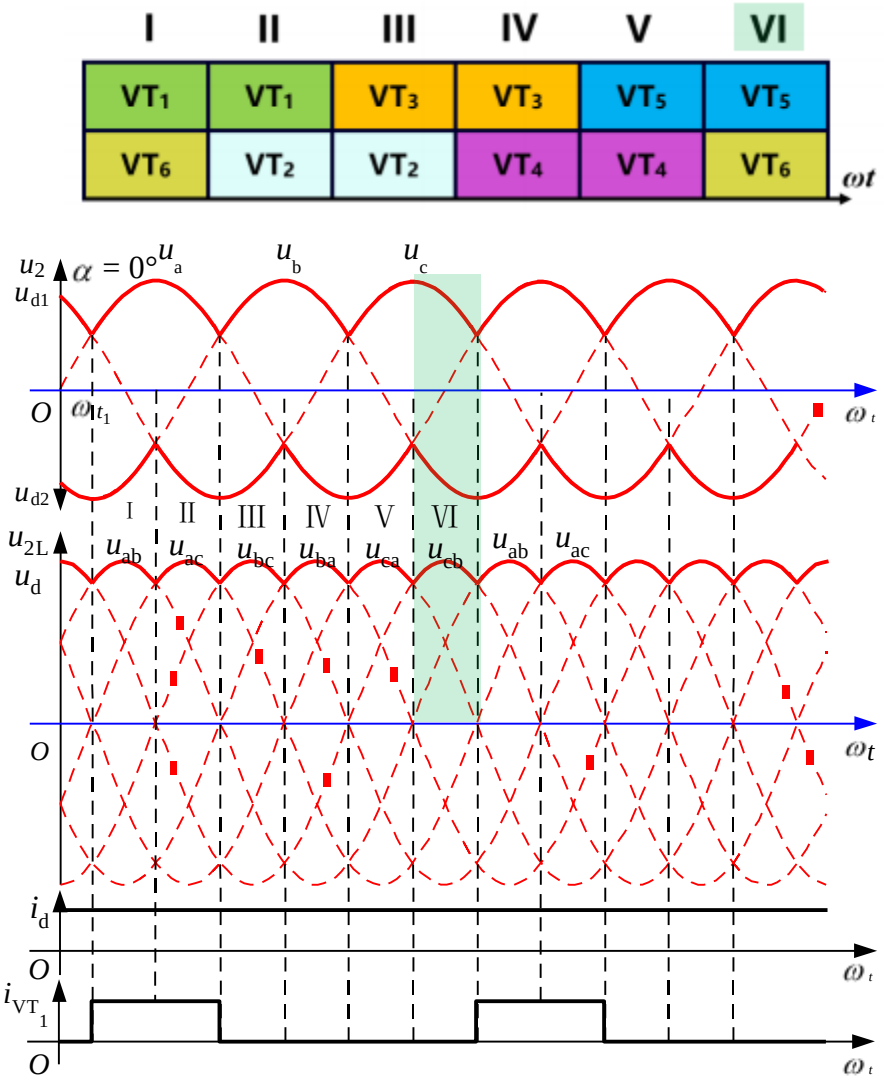
α 角移相范围： 0~90。

2. 电感性负载

■ $\alpha = 0°$

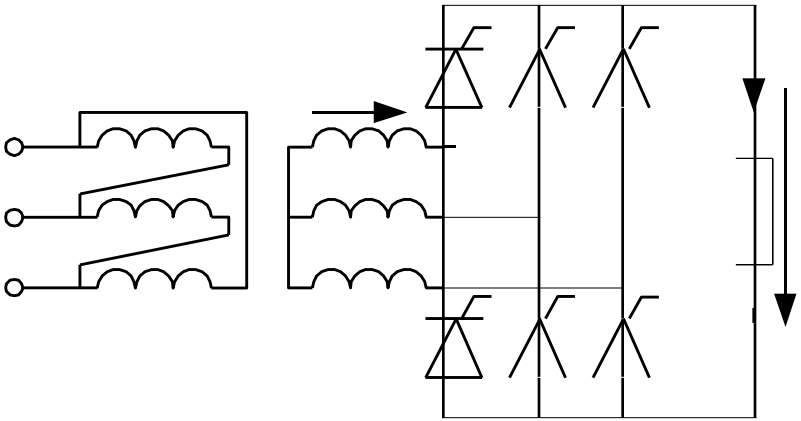
(假设$\omega L >> R$)

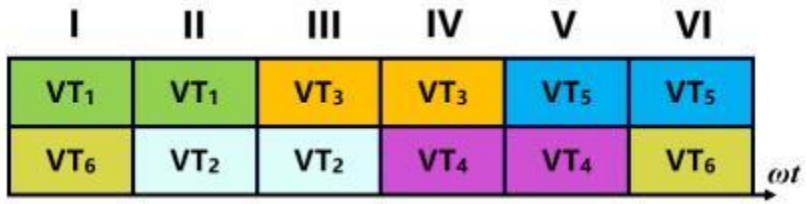


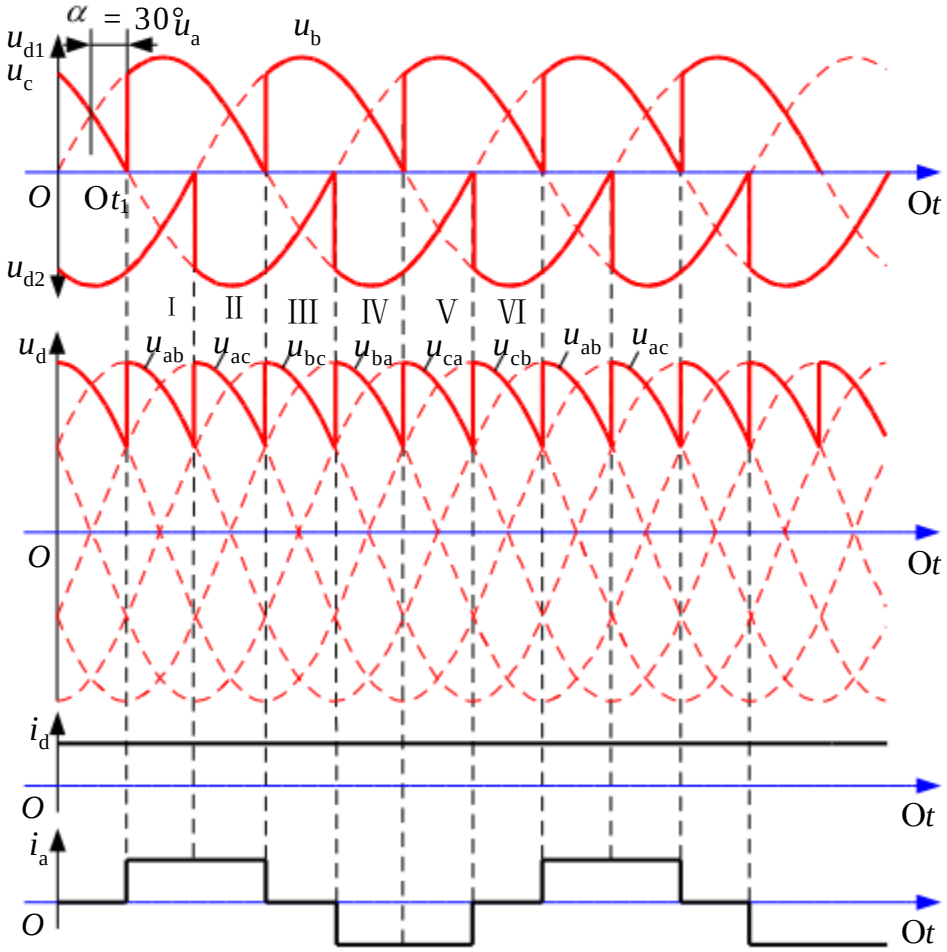


α 角移相范围： 0~90。

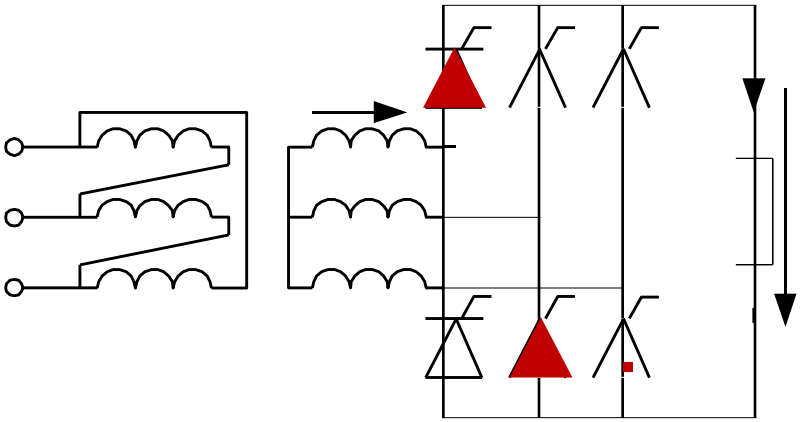
■ α =30°

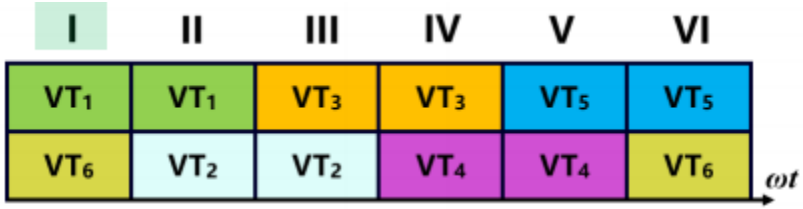


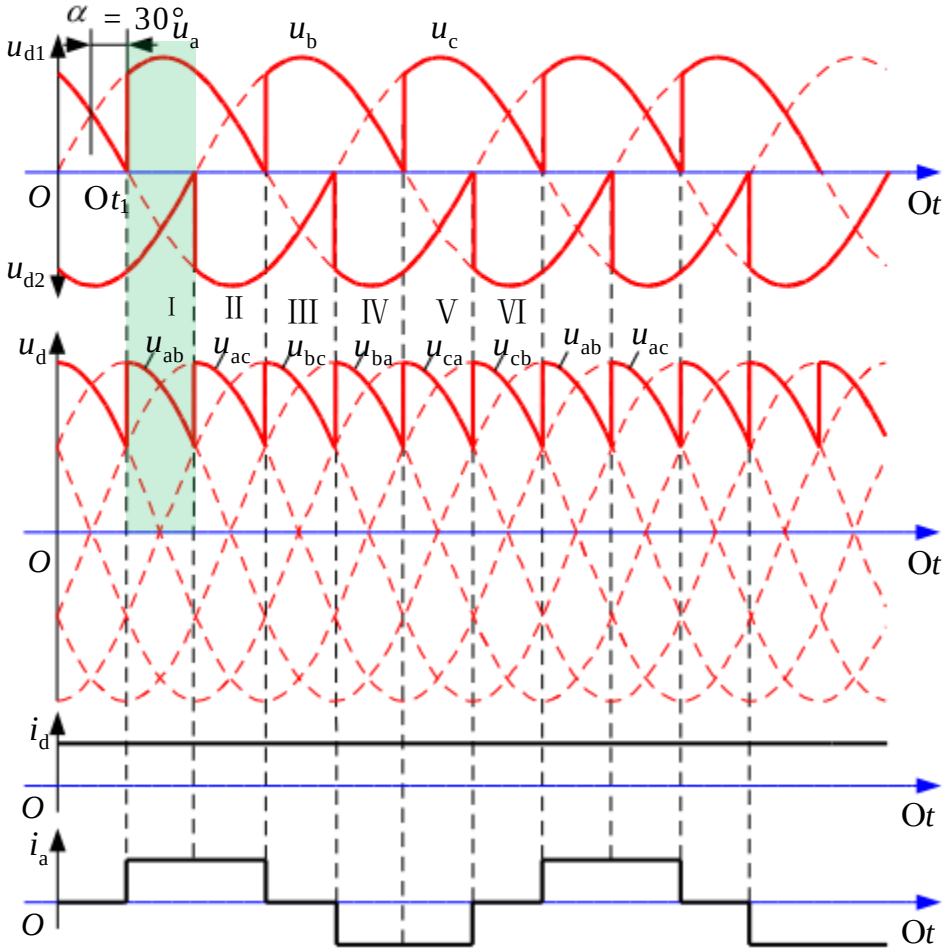

I
II
III
IV
V
VI
VT1
VT1
VT3
VT3
VT5
VT5
VT6
VT2
VT2
VT4
VT4
VT6
ωt


α = 30°
ua
ub
ud1
uc
O
Ot1
Ot
ud2
I
II
III
IV
V
VI
uab
uac
ubc
uba
uca
ucb
uab
uac
ud
O
Ot
id
O
Ot
ia
O
Ot

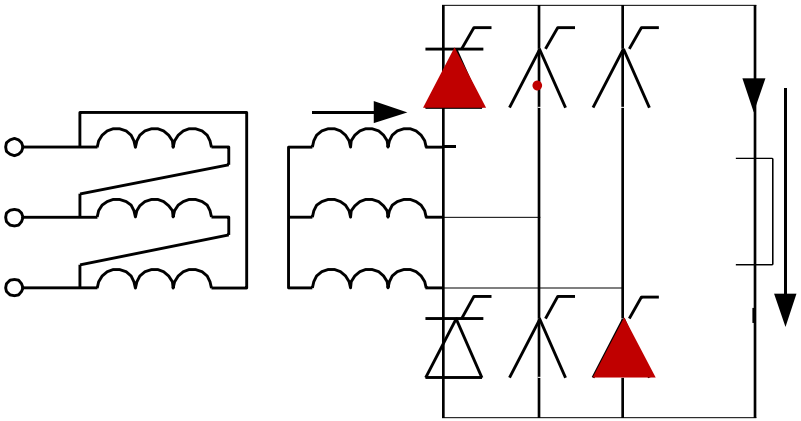
■ α =30°

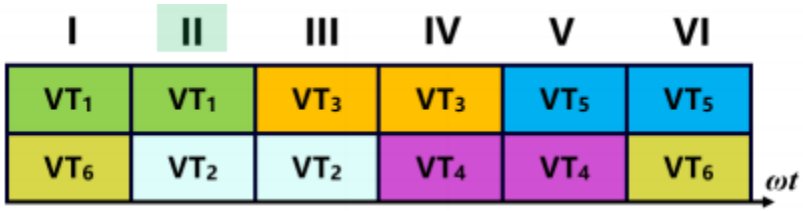


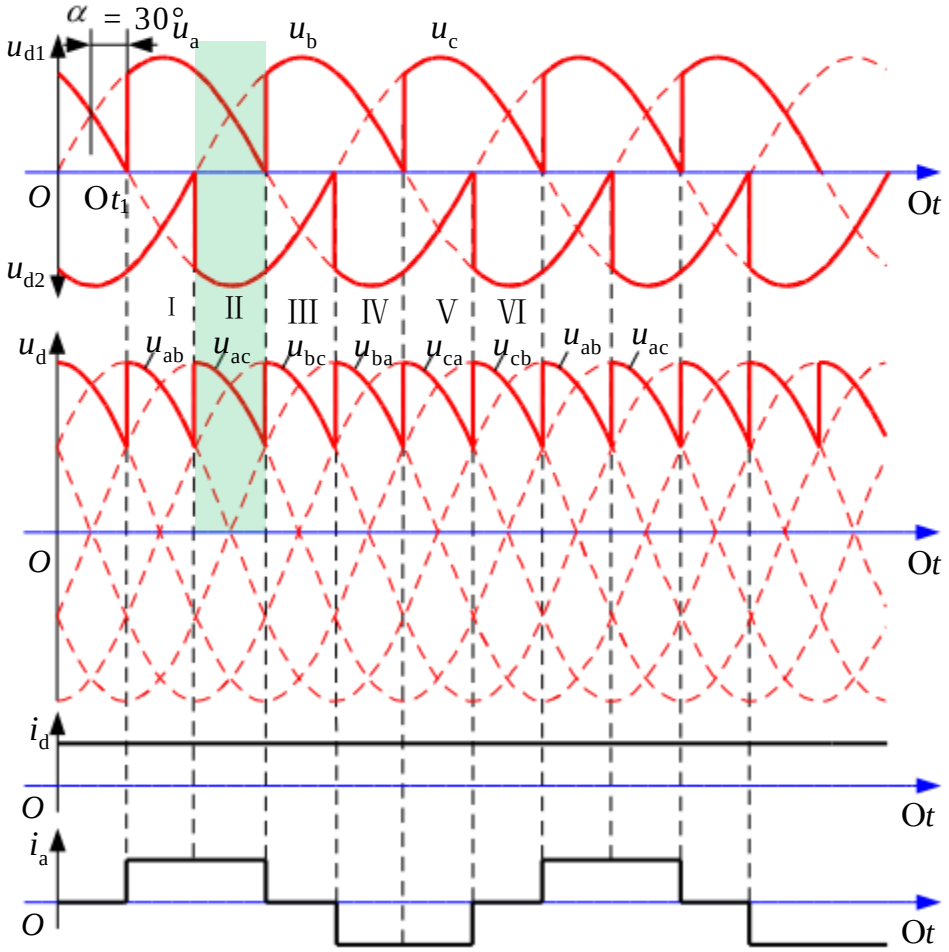

I
II
III
IV
V
VI
VT1
VT1
VT3
VT3
VT5
VT5
VT6
VT2
VT2
VT4
VT4
VT6
ωt


α = 30°
ua
ub
uc
ud1
O
Ot1
Ot
ud2
I
II
III
IV
V
VI
ud
uab
uac
ubc
uba
uca
ucb
uab
uac
O
Ot
id
O
Ot
ia
O
Ot

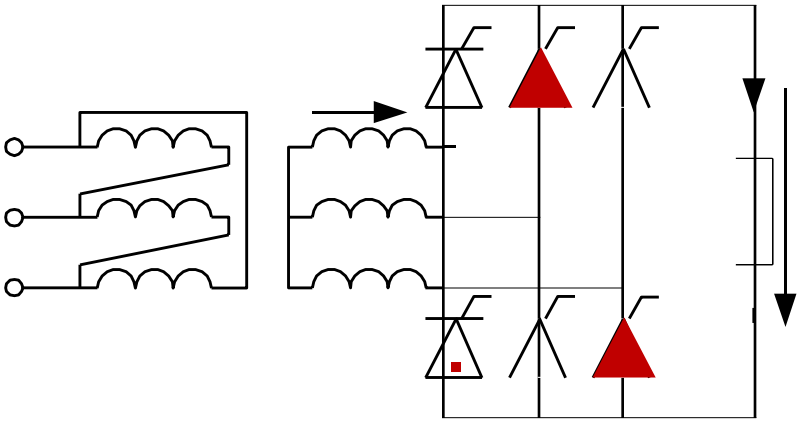
■ α =30°

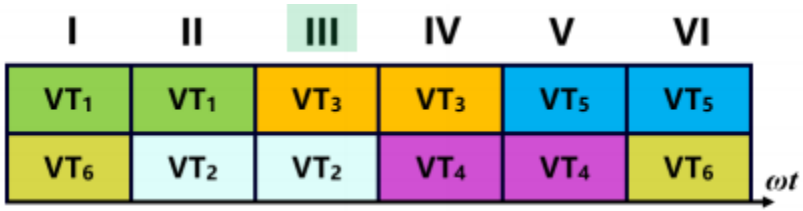


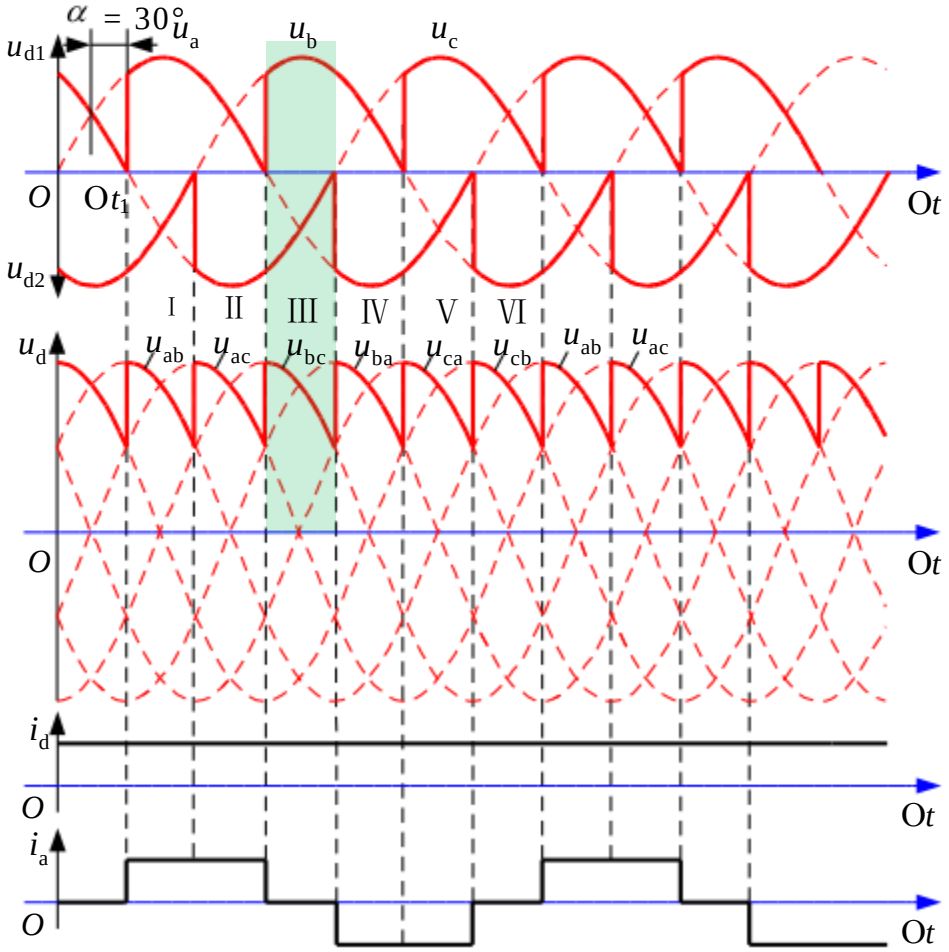

I
II
III
IV
V
VI
VT1
VT1
VT3
VT3
VT5
VT5
VT6
VT2
VT2
VT4
VT4
VT6
ωt


α = 30°
ua
ub
uc
ud1
O
Ot1
Ot
ud2
I
II
III
IV
V
VI
uab
uac
ubc
uba
uca
ucb
uab
uac
ud
O
Ot
id
O
Ot
ia
O
Ot

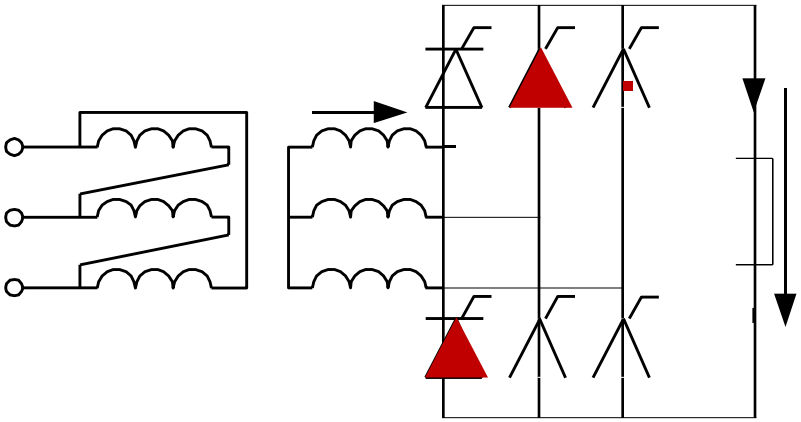
■ α =30°

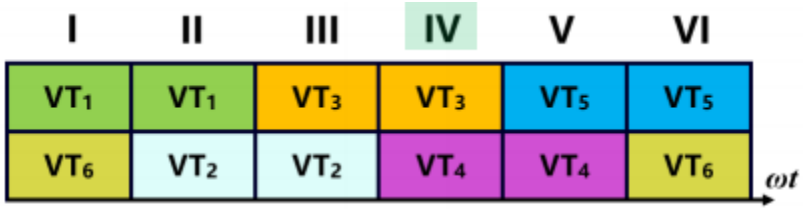


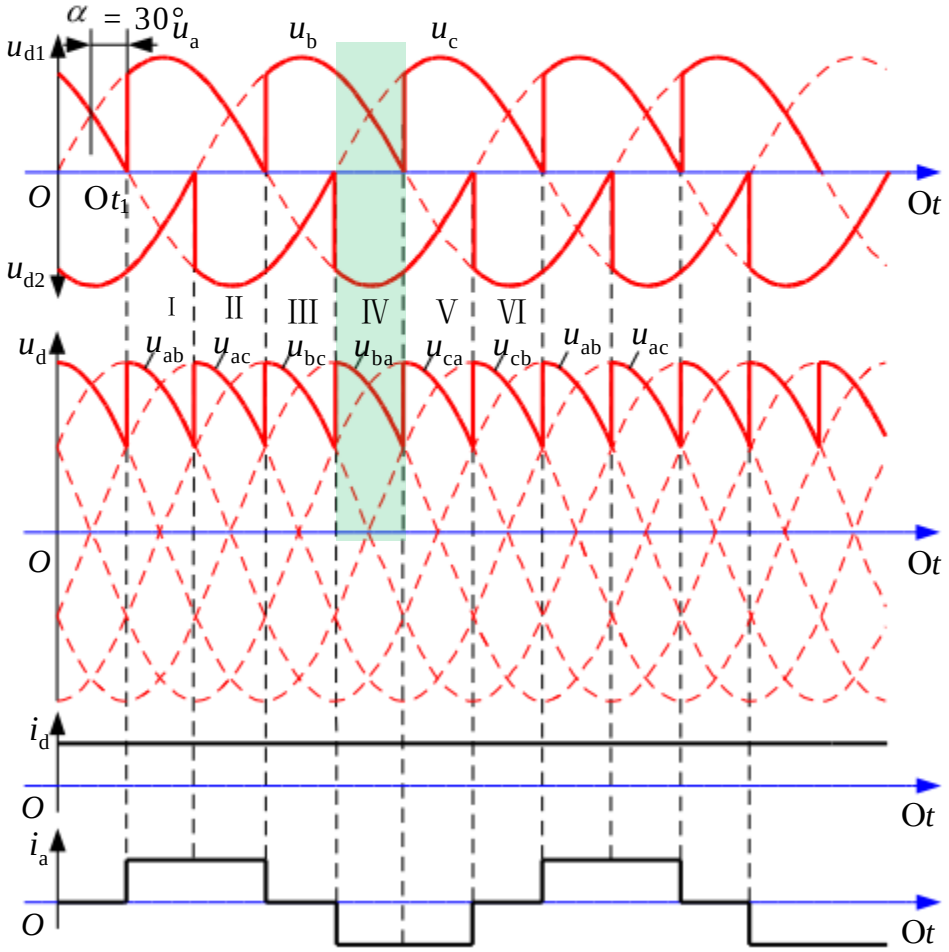

I
II
III
IV
V
VI
VT1
VT1
VT3
VT3
VT5
VT5
VT6
VT2
VT2
VT4
VT4
VT6
ωt


α = 30°
ud1
ua
ub
uc
O
Ot1
Ot
ud2
ud
I
II
III
IV
V
VI
uab
uac
ubc
uba
uca
ucb
uab
uac
O
Ot
id
O
Ot
ia
O
Ot

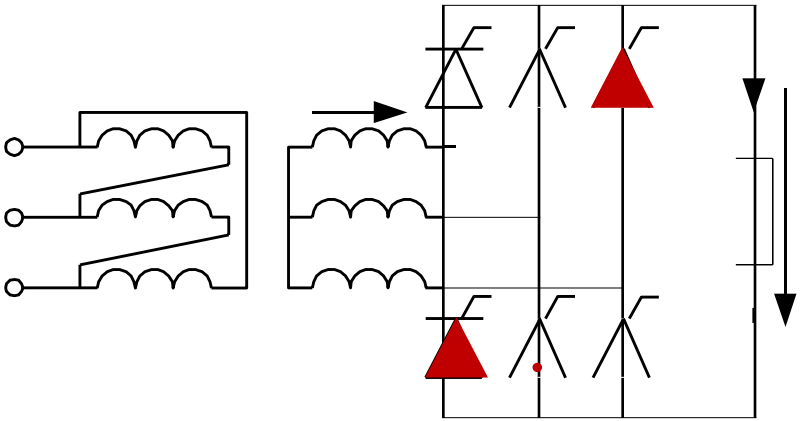
■ α =30°

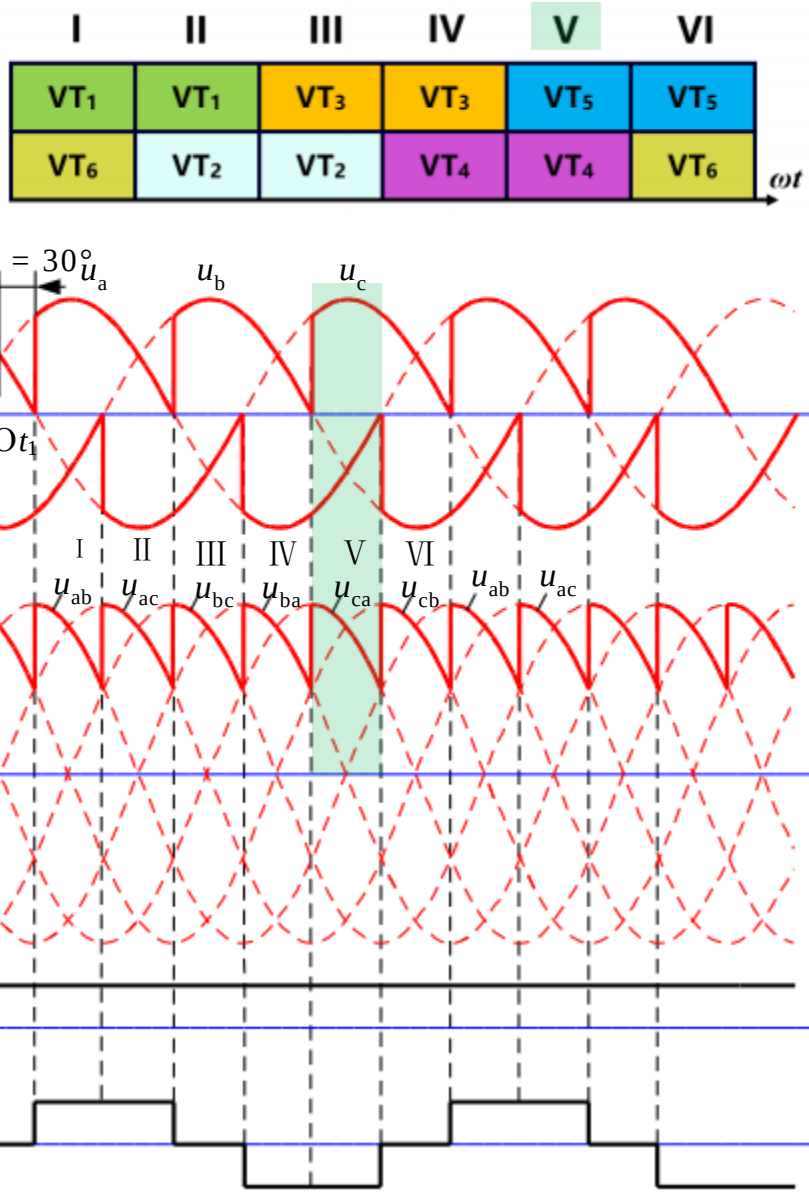



I
II
III
IV
V
VI
VT1
VT1
VT3
VT3
VT5
VT5
VT6
VT2
VT2
VT4
VT4
VT6
ωt

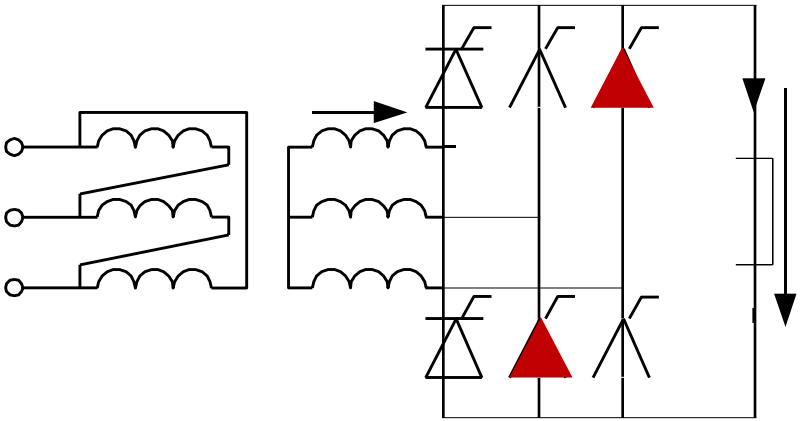

α = 30°
ua
ub
uc
ud1
O
Ot1
Ot
ud2
I
II
III
IV
V
VI
uab
uac
ubc
uba
uca
ucb
uab
uac
ud
O
Ot
id
O
Ot
ia
O
Ot

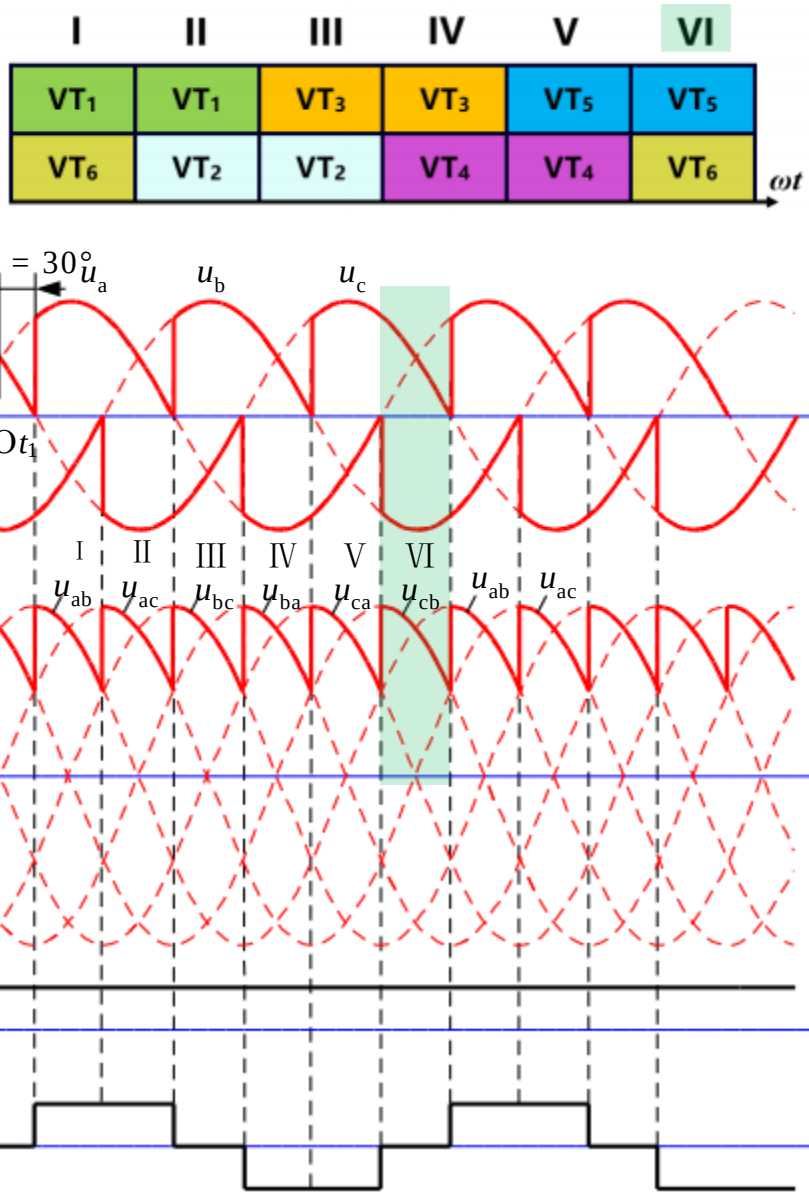
■ α =30°




I II III IV V VI
VT1 VT1 VT3 VT3 VT5 VT5
VT6 VT2 VT2 VT4 VT4 VT6
ωt
α = 30°
ud1
ua
ub
uc
O
Ot1
Ot
ud2
ud
uab uac ubc uba uca ucb uab uac
id
ia

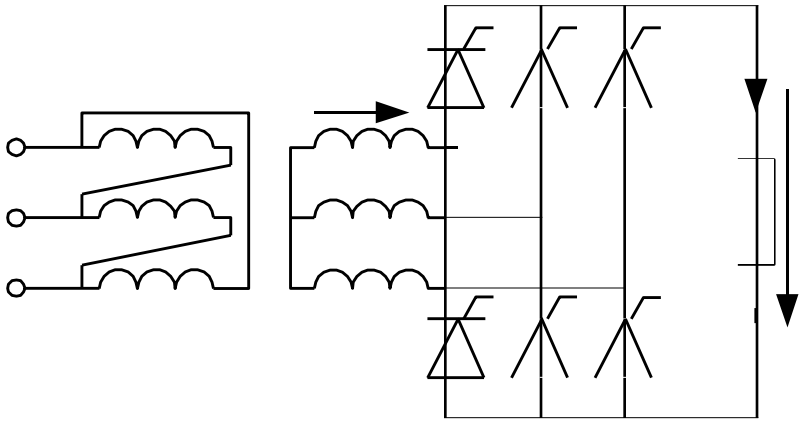
■ α =30°




I
II
III
IV
V
VI
VT1
VT1
VT3
VT3
VT5
VT5
VT6
VT2
VT2
VT4
VT4
VT6
ωt
α = 30°
ua
ub
uc
ud1
ud2
O
Ot1
Ot
ud
uab
uac
ubc
uba
uca
ucb
id
ia

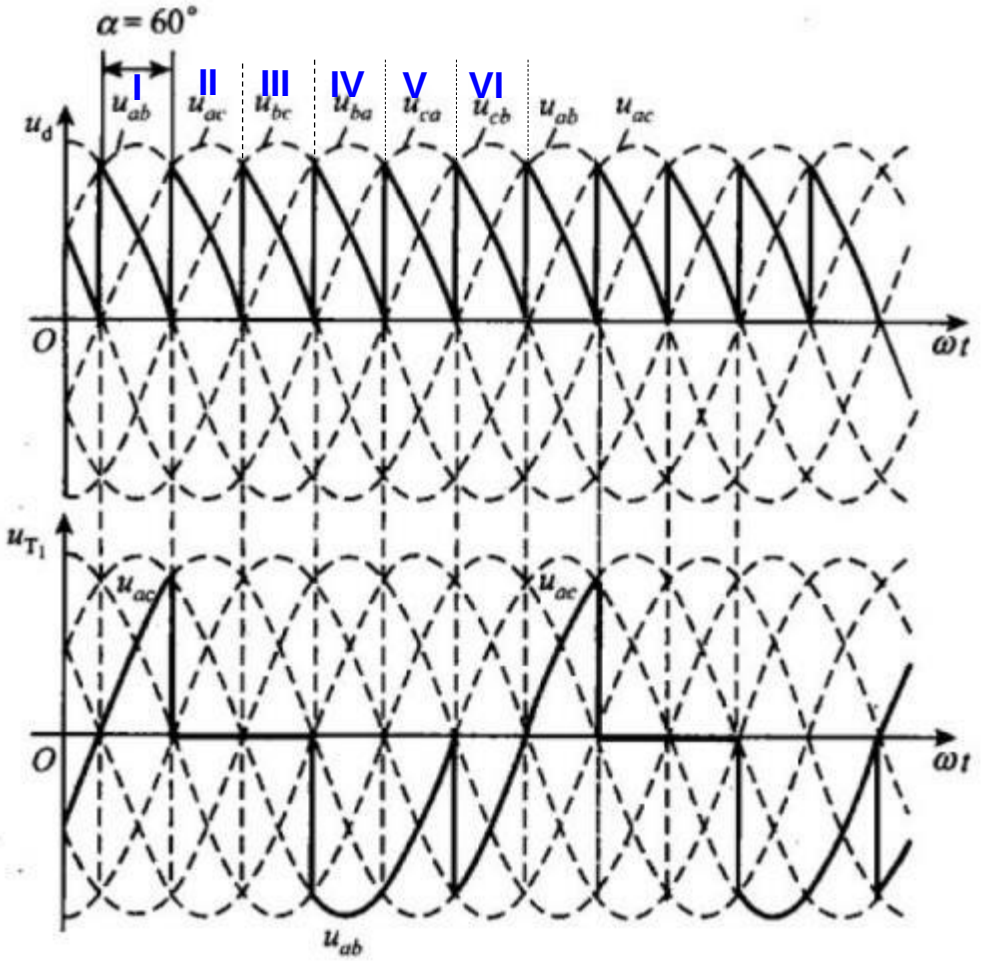
- α =60°

  u_d 临界状态

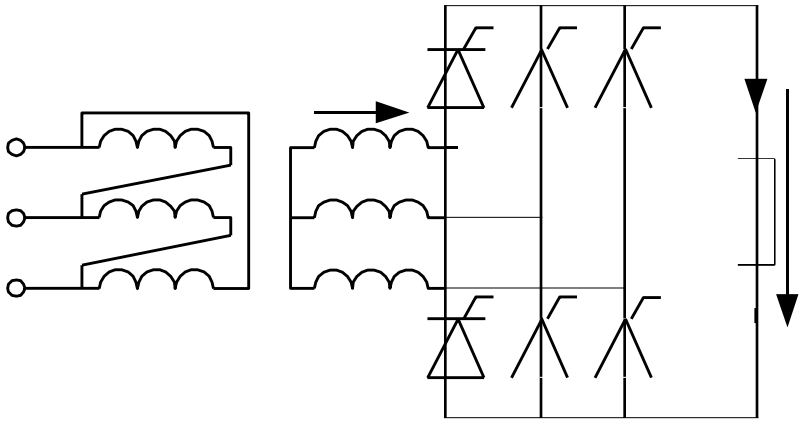


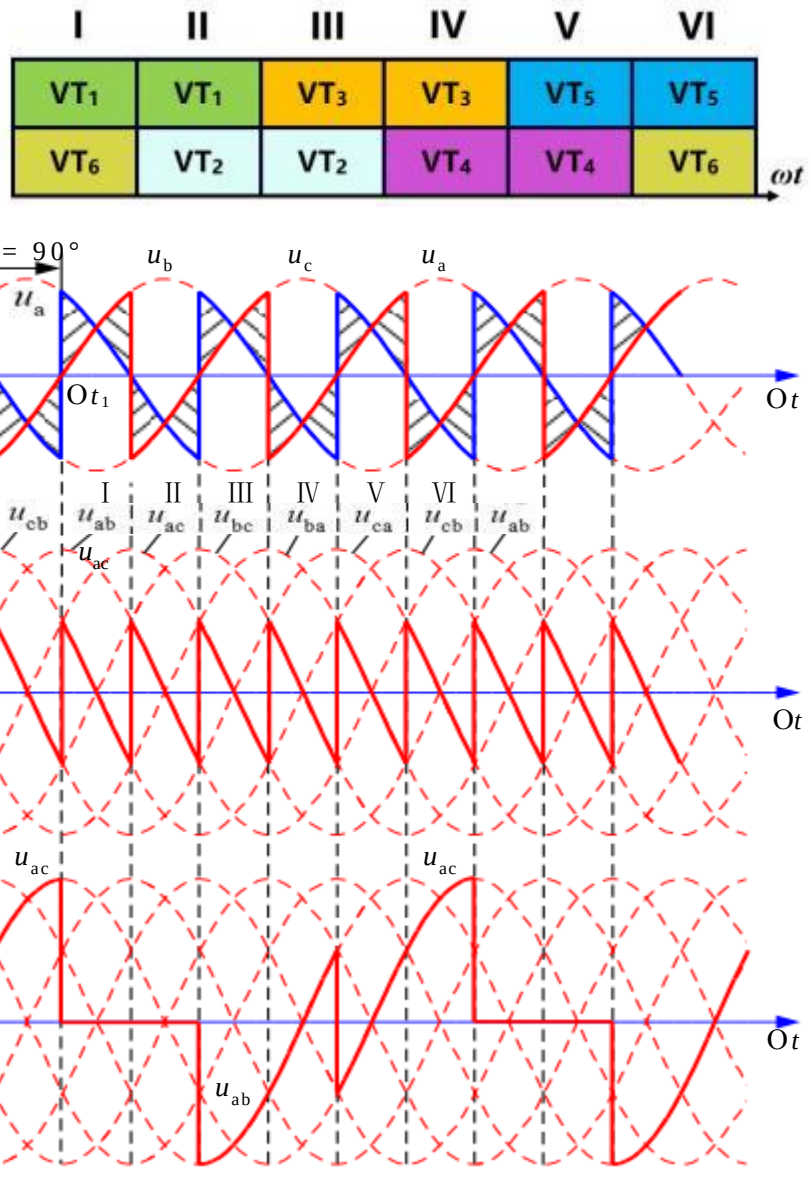
I	II	III	IV	V	VI
VT_1	VT_1	VT_3	VT_3	VT_5	VT_5
VT_6	VT_2	VT_2	VT_4	VT_4	VT_6

ωt

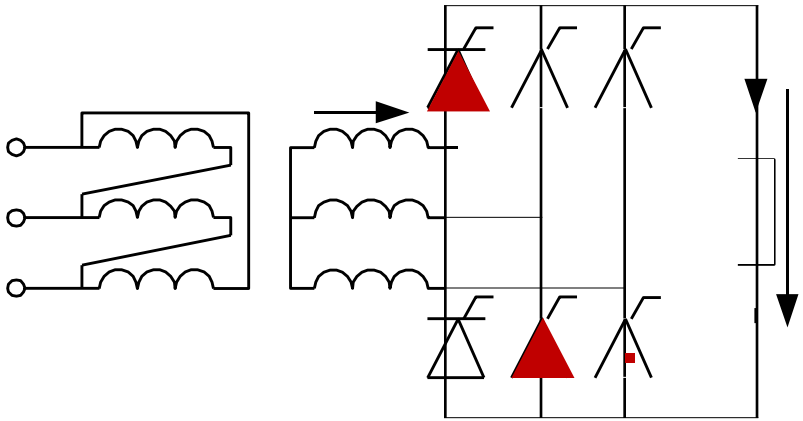


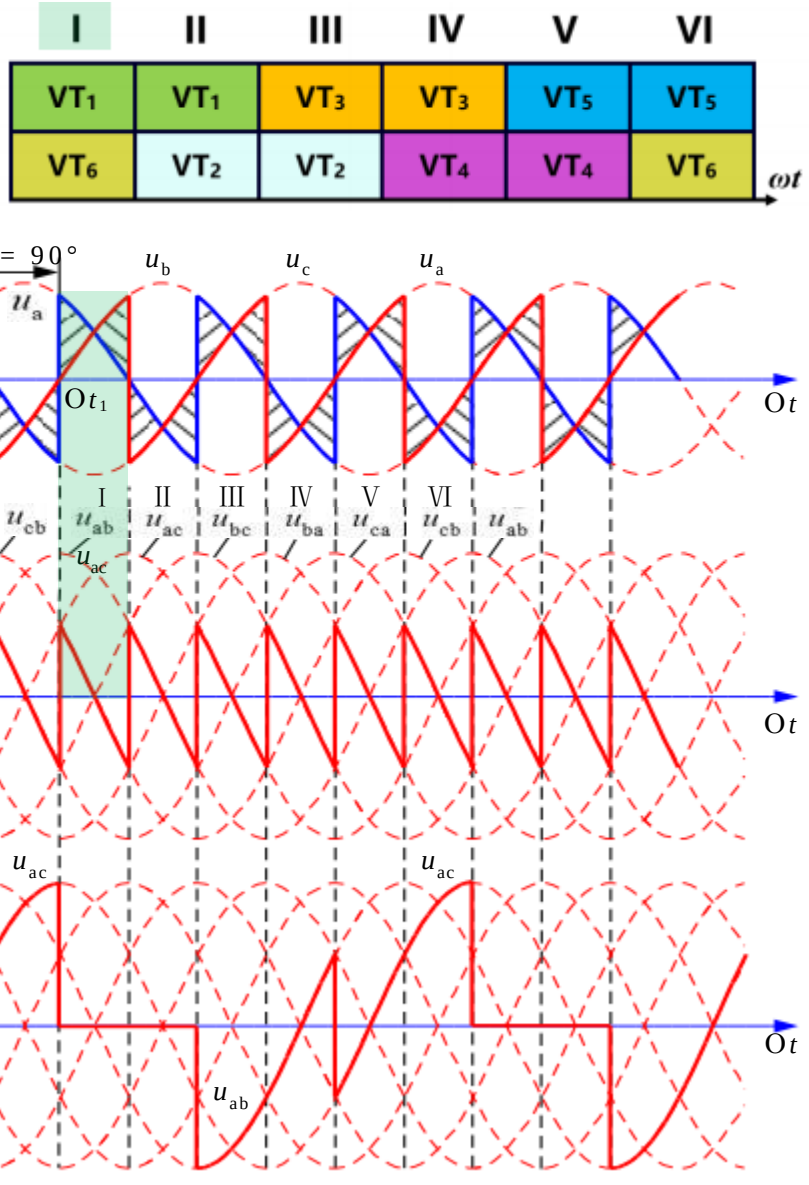
■ α =90°



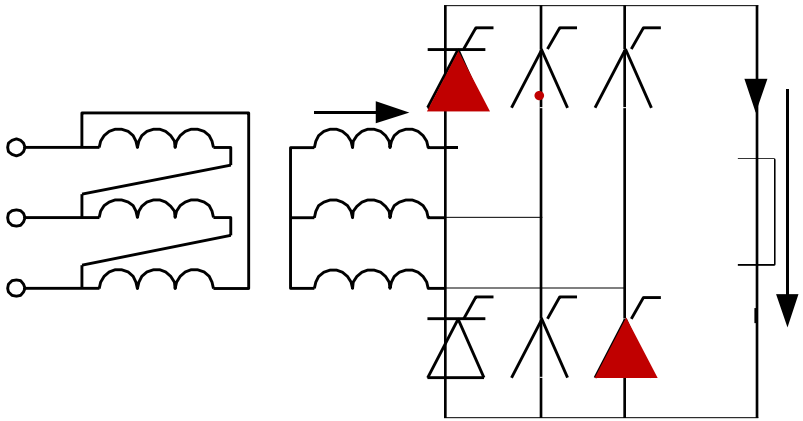

I II III IV V VI
VT1 VT1 VT3 VT3 VT5 VT5
VT6 VT2 VT2 VT4 VT4 VT6
ωt
α = 90°
ud1
ua ub uc ua
O Ot1 Ot
ud2
ud
ucb uab uac ubc uba uca ucb uab
uac
O Ot
uVT1
uac uac
uab
O Ot

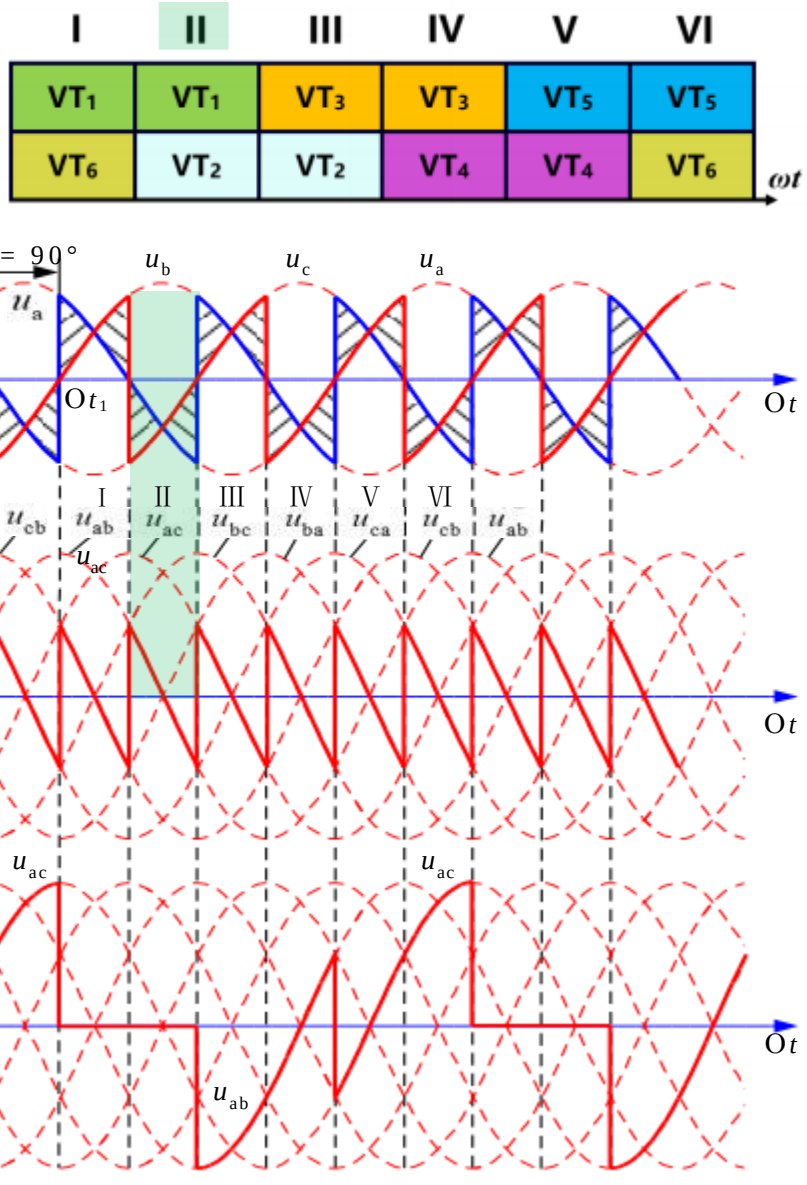
■ α =90°




I
II
III
IV
V
VI
VT1
VT1
VT3
VT3
VT5
VT5
VT6
VT2
VT2
VT4
VT4
VT6
ωt
α = 90°
ud1
ud2
ud
uVT1
ua
ub
uc
uab
uac
ubc
uba
uca
ucb
O
Ot
Ot1

■ α =90°

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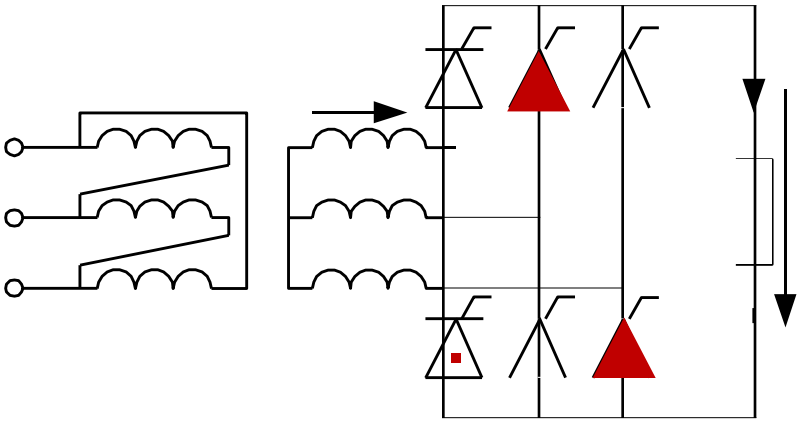
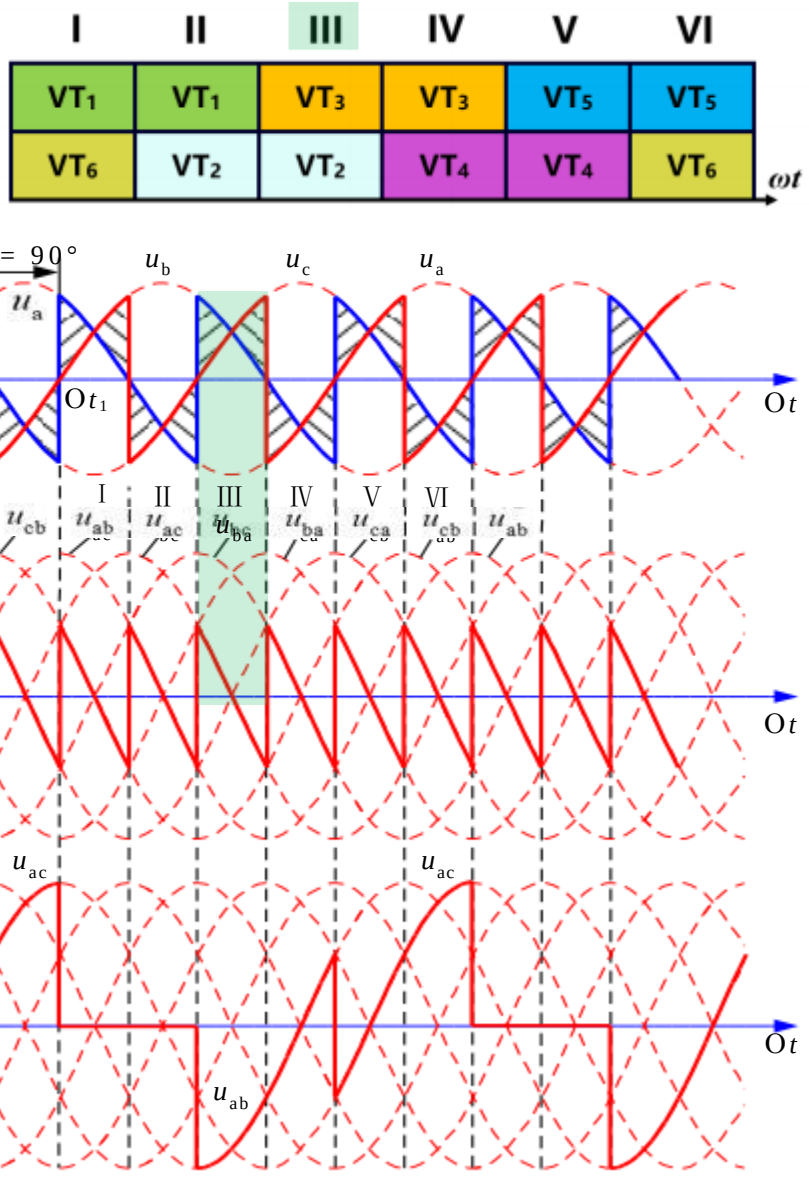
uca
ucb

■ α =90°

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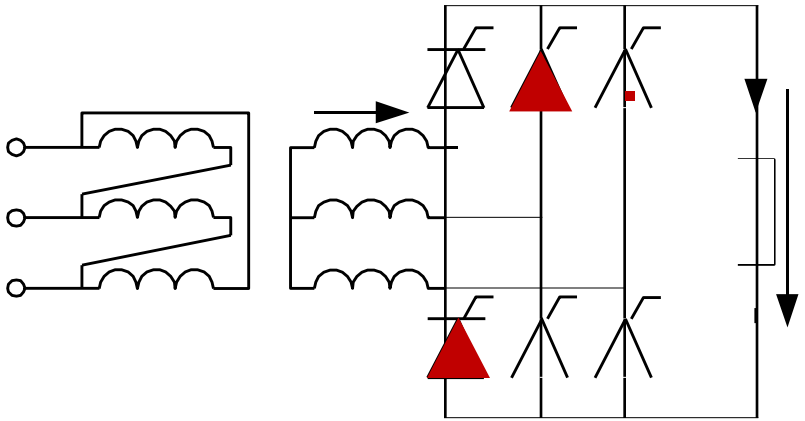
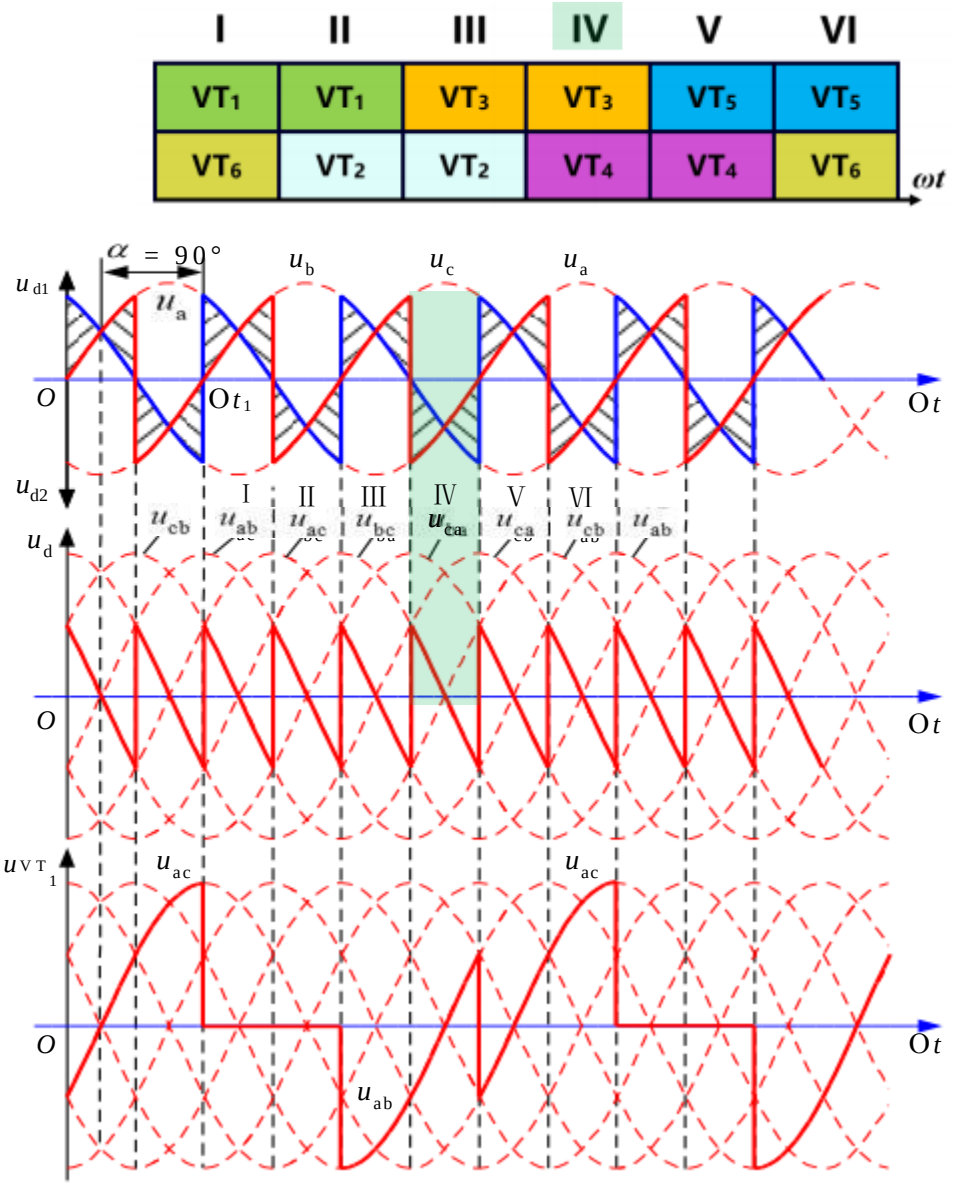
■ α =90°

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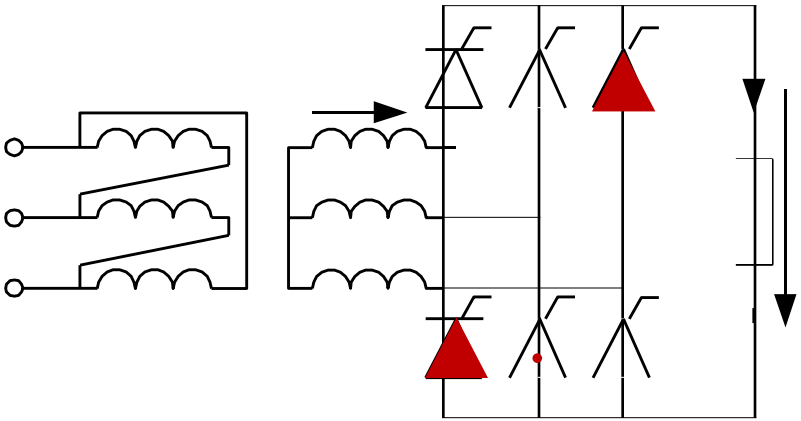
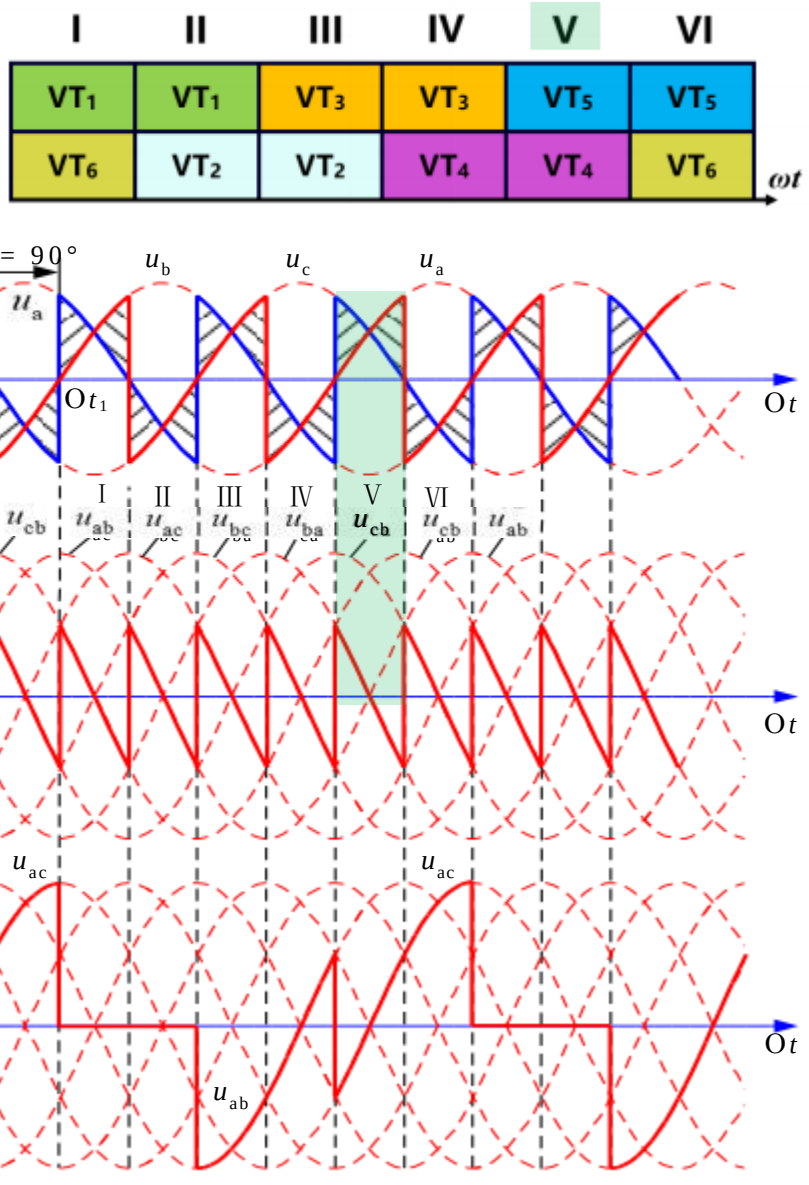
■ α =90°

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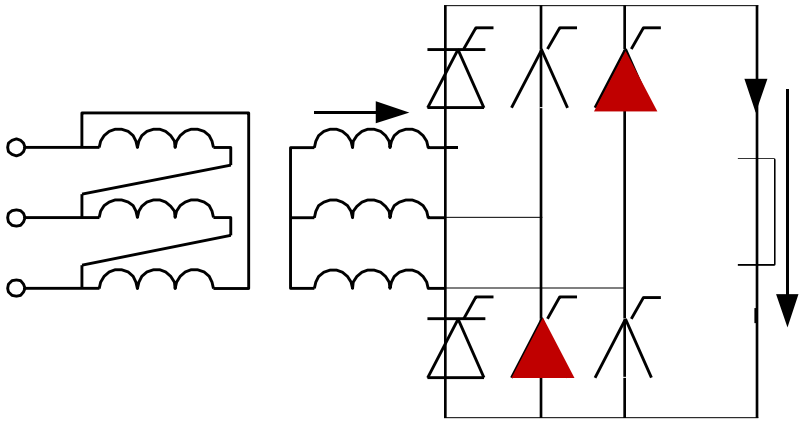
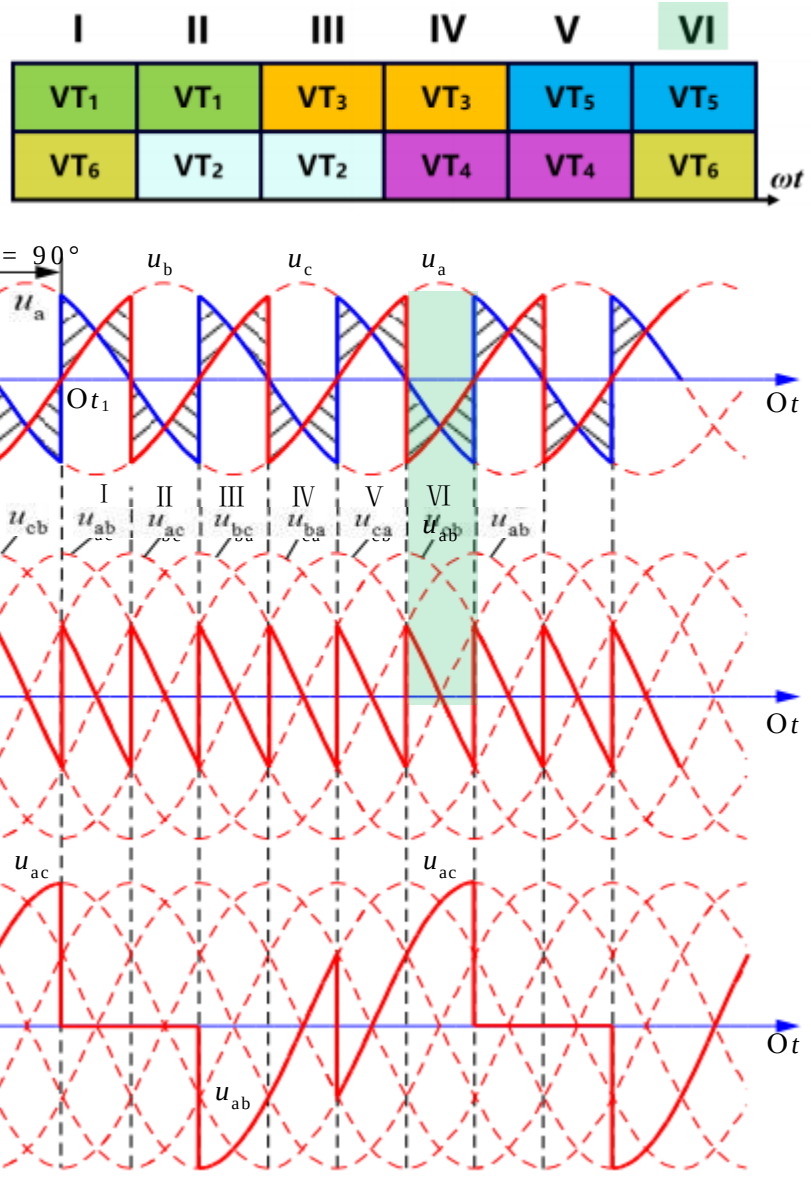
■ α =90°

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