BUCK ÇEVİRİCİSİ FORMÜL TABLOSU			
$L_{crit} = \frac{R(1-D)}{2\,f_s} \qquad R_{crit} = \frac{2\,L\,f_s}{(1-D)} \qquad D_{crit} = 1 - \frac{2\,L\,f_s}{R} \qquad K = \frac{2\,L\,f_s}{R} \qquad \langle i_L \rangle_{T_s} = I_o = \frac{V_o}{R}$			
	CCM $L > L_{crit} \quad , \quad R < R_{crit} \quad , \quad D > D_{crit}$	BCM $L = L_{crit} \quad , \quad R = R_{crit} \quad , \quad D = D_{crit}$	DCM $L < L_{crit} \quad , \quad R > R_{crit} \quad , \quad D < D_{crit}$
$\frac{V_o}{V_d}$	D	D	$\frac{2}{1+\sqrt{1+\frac{4K}{D^2}}}$
I_d	$I_o D = \frac{V_o D}{R}$	$I_o D = \frac{V_o D}{R}$	$\frac{2\,I_o}{1+\sqrt{1+\frac{4K}{D^2}}} = \frac{2\,V_o}{R\left(1+\sqrt{1+\frac{4K}{D^2}}\right)}$
D	V_o/V_d	V_o/V_d	$\sqrt{\frac{K}{\left(\frac{V_d}{V_o}\right)\left(\frac{V_d}{V_o}-1\right)}}$
Δ_1	$1-D$	$1-D$	$\frac{D}{2}\left(\sqrt{1+\frac{4K}{D^2}}-1\right)$
Δ_2	0	0	$1-D-\Delta_1$
Δi_L	$\frac{(V_d-V_o)\,D}{L\,f_s} = \frac{V_o\,(1-D)}{L\,f_s}$	$\frac{(V_d-V_o)\,D}{L\,f_s} = \frac{V_o\,(1-D)}{L\,f_s} = 2\,I_o = \frac{2\,V_o}{R}$	$\frac{(V_d-V_o)\,D}{L\,f_s} = \frac{V_o\,\Delta_1}{L\,f_s}$
$I_{L,max}$	$I_o + \frac{\Delta i_L}{2} = \frac{V_o}{R} + \frac{\Delta i_L}{2}$	$2\,I_o = \frac{2\,V_o}{R}$	$\frac{(V_d-V_o)\,D}{L\,f_s} = \frac{V_o\,\Delta_1}{L\,f_s}$
$I_{L,min}$	$I_o - \frac{\Delta i_L}{2} = \frac{V_o}{R} - \frac{\Delta i_L}{2}$	0	0
Δv_o	$\frac{(V_d-V_o)\,D}{8\,L\,C\,f_s^2} = \frac{V_o\,(1-D)}{8\,L\,C\,f_s^2}$	$\frac{(V_d-V_o)\,D}{8\,L\,C\,f_s^2} = \frac{V_o\,(1-D)}{8\,L\,C\,f_s^2}$	Dalga şekli üzerinden hesaplanması daha kolaydır.

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BOOST ÇEVİRİCİSİ FORMÜL TABLOSU

$$L_{crit} = \frac{R\,D\,(1-D)^2}{2\,f_s} \quad , \quad R_{crit} = \frac{2\,L\,f_s}{D\,(1-D)^2} \quad , \quad K = \frac{2\,L\,f_s}{R} \quad , \quad \langle i_L \rangle_{T_s} = I_d$$

	CCM $L > L_{crit}\ ,\ R < R_{crit}$	BCM $L = L_{crit}\ ,\ R = R_{crit}$	DCM $L < L_{crit}\ ,\ R > R_{crit}$
$\frac{V_o}{V_d}$	$\frac{1}{(1-D)}$	$\frac{1}{(1-D)}$	$\frac{1+\sqrt{1+\frac{4D^2}{K}}}{2}$
I_d	$\frac{I_o}{(1-D)} = \frac{V_o}{R\,(1-D)} = \frac{V_d}{R\,(1-D)^2}$	$\frac{I_o}{(1-D)} = \frac{V_o}{R\,(1-D)} = \frac{V_d}{R\,(1-D)^2}$	$\frac{V_o}{R} \cdot \left(\frac{1+\sqrt{1+\frac{4D^2}{K}}}{2} \right)$
D	$1 - \frac{V_d}{V_o}$	$1 - \frac{V_d}{V_o}$	$\sqrt{K\left(\frac{V_o}{V_d}\right)\left(\frac{V_o}{V_d} - 1\right)}$
Δ_1	$1 - D = \frac{V_d}{V_o}$	$1 - D = \frac{V_d}{V_o}$	$\sqrt{K\left(\frac{V_o}{V_o - V_d}\right)}$
Δ_2	0	0	$1 - D - \Delta_1$
Δi_L	$\frac{V_d\,D}{L\,f_s} = \frac{(V_o - V_d)(1-D)}{L\,f_s}$	$\frac{V_d\,D}{L\,f_s} = \frac{(V_o - V_d)(1-D)}{L\,f_s} = 2\,I_d = \frac{2\,V_o}{R\,(1-D)}$	$\frac{V_d\,D}{L\,f_s} = \frac{(V_o - V_d)\Delta_1}{L\,f_s}$
$I_{L,max}$	$I_d + \frac{\Delta i_L}{2} = \frac{V_o}{R\,(1-D)} + \frac{\Delta i_L}{2}$	$2\,I_d = \frac{2\,V_o}{R\,(1-D)}$	$\frac{V_d\,D}{L\,f_s} = \frac{(V_o - V_d)\Delta_1}{L\,f_s}$
$I_{L,min}$	$I_d - \frac{\Delta i_L}{2} = \frac{V_o}{R\,(1-D)} - \frac{\Delta i_L}{2}$	0	0
Δv_o	$\frac{V_o\,D}{R\,C\,f_s}$	$\frac{V_o\,D}{R\,C\,f_s}$	Dalga şekli üzerinden hesaplanması daha kolaydır.

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BUCK-BOOST ÇEVİRİCİSİ FORMÜL TABLOSU

$$L_{crit} = \frac{R(1-D)^2}{2\,f_s} \qquad R_{crit} = \frac{2\,L\,f_s}{(1-D)^2} \qquad D_{crit} = 1 - \sqrt{\frac{2\,L\,f_s}{R}} \qquad K = \frac{2\,L\,f_s}{R} \qquad \langle i_L \rangle_{T_s} = I_o + I_d \qquad (output\ voltage\ is\ always\ negative)$$

	CCM $L > L_{crit} \quad , \quad R < R_{crit} \quad , \quad D > D_{crit}$	BCM $L = L_{crit} \quad , \quad R = R_{crit} \quad , \quad D = D_{crit}$	DCM $L < L_{crit} \quad , \quad R > R_{crit} \quad , \quad D < D_{crit}$
$\frac{V_o}{V_d}$	$\frac{D}{1-D}$	$\frac{D}{1-D}$	$\frac{D}{\sqrt{K}}$
I_d	$\frac{I_o\,D}{1-D} = \frac{\lvert V_o \rvert\,D}{R\,(1-D)}$	$\frac{I_o\,D}{1-D} = \frac{\lvert V_o \rvert\,D}{R\,(1-D)}$	$\frac{I_o\,D}{\sqrt{K}} = \frac{\lvert V_o \rvert\,D}{R\,\sqrt{K}}$
D	$\frac{\lvert V_o \rvert}{\lvert V_o \rvert + V_d}$	$\frac{\lvert V_o \rvert}{\lvert V_o \rvert + V_d}$	$\frac{\lvert V_o \rvert\,\sqrt{K}}{V_d}$
Δ_1	$1-D$	$1-D$	$\sqrt{K}$
Δ_2	0	0	$1-D-\Delta_1$
Δi_L	$\frac{V_d\,D}{L\,f_s} = \frac{\lvert V_o \rvert\,(1-D)}{L\,f_s}$	$\frac{V_d\,D}{L\,f_s} = \frac{\lvert V_o \rvert\,(1-D)}{L\,f_s} = 2\,(I_o + I_d) = \frac{2\,I_o}{1-D}$	$\frac{V_d\,D}{L\,f_s} = \frac{\lvert V_o \rvert\,\Delta_1}{L\,f_s}$
$I_{L,max}$	$I_o + I_d + \frac{\Delta i_L}{2} = \frac{I_o}{1-D} + \frac{\Delta i_L}{2}$	$2\,(I_o + I_d) = \frac{2\,I_o}{(1-D)}$	$\frac{V_d\,D}{L\,f_s} = \frac{\lvert V_o \rvert\,\Delta_1}{L\,f_s}$
$I_{L,min}$	$I_o + I_d - \frac{\Delta i_L}{2} = \frac{I_o}{1-D} - \frac{\Delta i_L}{2}$	0	0
Δv_o	$\frac{V_o\,D}{R\,C\,f_s}$	$\frac{V_o\,D}{R\,C\,f_s}$	Dalga şekli üzerinden hesaplanması daha kolaydır.

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TEK ANAHTARLI / ÜÇÜNCÜ SARGILI FORWARD ÇEVİRİCİSİ FORMÜL TABLOSU

$$L_{crit} = \frac{R(1-D)}{2\,f_s} \qquad R_{crit} = \frac{2\,L\,f_s}{(1-D)} \qquad D_{crit} = 1 - \frac{2\,L\,f_s}{R} \qquad K = \frac{2\,L\,f_s}{R} \qquad \langle i_L \rangle_{T_s} = I_o = \frac{V_o}{R} \qquad N_{primary} = N_1 \qquad N_{secondary} = N_2 \qquad N_{tertiary} = N_3$$

	CCM $L > L_{crit} \quad , \quad R < R_{crit} \quad , \quad D > D_{crit}$	BCM $L = L_{crit} \quad , \quad R = R_{crit} \quad , \quad D = D_{crit}$	DCM $L < L_{crit} \quad , \quad R > R_{crit} \quad , \quad D < D_{crit}$
$\frac{V_o}{V_d}$	$\frac{N_2}{N_1} D$	$\frac{N_2}{N_1} D$	$\frac{2}{1+\sqrt{1+4K/D^2}} \cdot \frac{N_2}{N_1}$
I_d	$I_o \frac{N_2}{N_1} D = \frac{V_o}{R} \cdot \frac{N_2}{N_1} D$	$I_o \frac{N_2}{N_1} D = \frac{V_o}{R} \cdot \frac{N_2}{N_1} D$	$\frac{2\,I_o}{1+\sqrt{1+4K/D^2}} \cdot \frac{N_2}{N_1} = \frac{2\,V_o}{R\left(1+\sqrt{1+4K/D^2}\right)} \cdot \frac{N_2}{N_1}$
D	$\frac{V_o}{V_d} \cdot \frac{N_1}{N_2}$	$\frac{V_o}{V_d} \cdot \frac{N_1}{N_2}$	$\sqrt{\frac{K}{\left(\frac{V_d}{V_o} \cdot \frac{N_2}{N_1}\right)\left(\frac{V_d}{V_o} \cdot \frac{N_2}{N_1} - 1\right)}}$
D_{max}	$\frac{N_1}{N_1 + N_3}$	$\frac{N_1}{N_1 + N_3}$	$\frac{N_1}{N_1 + N_3}$
Δ_1	$1 - D$	$1 - D$	$\frac{D}{2}\left(\sqrt{1+4K/D^2} - 1\right)$
Δ_2	0	0	$1 - D - \Delta_1$
Δi_L	$\frac{\left(V_d \frac{N_2}{N_1} - V_o\right) D}{L\,f_s} = \frac{V_o\,(1-D)}{L\,f_s}$	$\frac{\left(V_d \frac{N_2}{N_1} - V_o\right) D}{L\,f_s} = \frac{V_o\,(1-D)}{L\,f_s} = 2\,I_o = \frac{2\,V_o}{R}$	$\frac{\left(V_d \frac{N_2}{N_1} - V_o\right) D}{L\,f_s} = \frac{V_o\,\Delta_1}{L\,f_s}$
$I_{L,max}$	$I_o + \frac{\Delta i_L}{2} = \frac{V_o}{R} + \frac{\Delta i_L}{2}$	$2\,I_o = \frac{2\,V_o}{R}$	$\frac{\left(V_d \frac{N_2}{N_1} - V_o\right) D}{L\,f_s} = \frac{V_o\,\Delta_1}{L\,f_s}$
$I_{L,min}$	$I_o - \frac{\Delta i_L}{2} = \frac{V_o}{R} - \frac{\Delta i_L}{2}$	0	0
Δv_o	$\frac{\left(V_d \frac{N_2}{N_1} - V_o\right) D}{8\,L\,C\,f_s^2} = \frac{V_o\,(1-D)}{8\,L\,C\,f_s^2}$	$\frac{\left(V_d \frac{N_2}{N_1} - V_o\right) D}{8\,L\,C\,f_s^2} = \frac{V_o\,(1-D)}{8\,L\,C\,f_s^2}$	Dalga şekli üzerinden hesaplanması daha kolaydır.

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FLYBACK ÇEVİRİCİSİ FORMÜL TABLOSU

$L_{crit} = \frac{R(1-D)^2}{2\,f_s} \cdot \left(\frac{N_1}{N_2}\right)^2$ $\quad R_{crit} = \frac{2\,L_m\,f_s}{(1-D)^2} \cdot \left(\frac{N_2}{N_1}\right)^2$ $\quad D_{crit} = 1 - \sqrt{\frac{2\,L_m\,f_s}{R} \cdot \left(\frac{N_2}{N_1}\right)^2}$ $\quad K = \frac{2\,L_m\,f_s}{R} \cdot \left(\frac{N_2}{N_1}\right)^2$ $\quad \langle i_L \rangle_{T_s} = I_o \cdot \frac{N_2}{N_1} + I_d$ $\quad N_{primary} = N_1$ $\quad N_{secondary} = N_2$

	CCM $L_m > L_{crit} \quad , \quad R < R_{crit} \quad , \quad D > D_{crit}$	BCM $L_m = L_{crit} \quad , \quad R = R_{crit} \quad , \quad D = D_{crit}$	DCM $L_m < L_{crit} \quad , \quad R > R_{crit} \quad , \quad D < D_{crit}$
$\frac{V_o}{V_d}$	$\frac{D}{1-D} \cdot \frac{N_2}{N_1}$	$\frac{D}{1-D} \cdot \frac{N_2}{N_1}$	$\frac{N_2}{N_1} \cdot \frac{D}{\sqrt{K}}$
I_d	$\frac{I_o\,D}{1-D} \cdot \frac{N_2}{N_1} = \frac{V_o\,D}{R\,(1-D)} \cdot \frac{N_2}{N_1}$	$\frac{I_o\,D}{1-D} \cdot \frac{N_2}{N_1} = \frac{V_o\,D}{R\,(1-D)} \cdot \frac{N_2}{N_1}$	$\frac{I_o\,D}{\sqrt{K}} \cdot \frac{N_2}{N_1} = \frac{V_o\,D}{R\,\sqrt{K}} \cdot \frac{N_2}{N_1}$
D	$\frac{V_o\,N_1}{V_o\,N_1 + V_d N_2}$	$\frac{V_o\,N_1}{V_o\,N_1 + V_d N_2}$	$\frac{V_o\,\sqrt{K}}{V_d} \cdot \frac{N_1}{N_2}$
Δ_1	$1-D$	$1-D$	$\sqrt{K}$
Δ_2	0	0	$1-D-\Delta_1$
Δi_{L_m}	$\frac{V_d\,D}{L_m\,f_s} = \frac{V_o\,(1-D)}{L_m\,f_s} \cdot \frac{N_1}{N_2}$	$\frac{V_d\,D}{L_m\,f_s} = \frac{V_o\,(1-D)}{L_m\,f_s} \cdot \frac{N_1}{N_2} = \frac{2\,I_o}{1-D} \cdot \frac{N_2}{N_1}$	$\frac{V_d\,D}{L\,f_s} = \frac{V_o\,\Delta_1}{L\,f_s} \cdot \frac{N_1}{N_2}$
$I_{L,max}$	$I_o + I_d + \frac{\Delta i_L}{2} = \frac{I_o}{1-D} \cdot \frac{N_2}{N_1} + \frac{\Delta i_L}{2}$	$2\left(I_o \cdot \frac{N_2}{N_1} + I_d\right) = \frac{2\,I_o}{1-D} \cdot \frac{N_2}{N_1}$	$\frac{V_d\,D}{L\,f_s} = \frac{V_o\,\Delta_1}{L\,f_s} \cdot \frac{N_1}{N_2}$
$I_{L,min}$	$I_o + I_d - \frac{\Delta i_L}{2} = \frac{I_o}{1-D} \cdot \frac{N_2}{N_1} - \frac{\Delta i_L}{2}$	0	0
Δv_o	$\frac{V_o\,D}{R\,C\,f_s}$	$\frac{V_o\,D}{R\,C\,f_s}$	Dalga şekli üzerinden hesaplanması daha kolaydır.

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