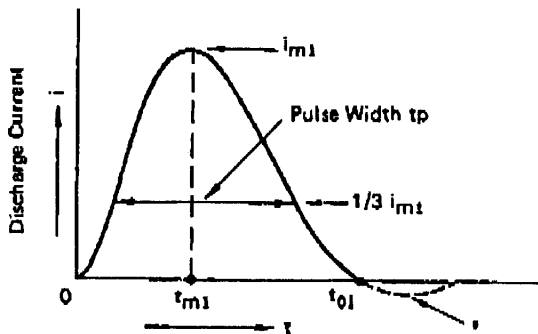


(6) RMS Current at Flash Interval T sec.

$$I_{rms} = \sqrt{\frac{1}{T} \int_0^T i^2 dt} = Va/k \sqrt{\frac{1 - e^{-(2\pi \cdot \beta/a)}}{a \cdot ((\beta/a)^2 + 1)}} \cdot \frac{1}{\sqrt{T}} \text{ Amp}$$

(7) $t \sim i$ Curve & Pulse Width

$$i = 2 Va/k \cdot e^{-at} \cdot \sin \beta t$$



Form of light output curve is nearly equivalent to that of discharge current.

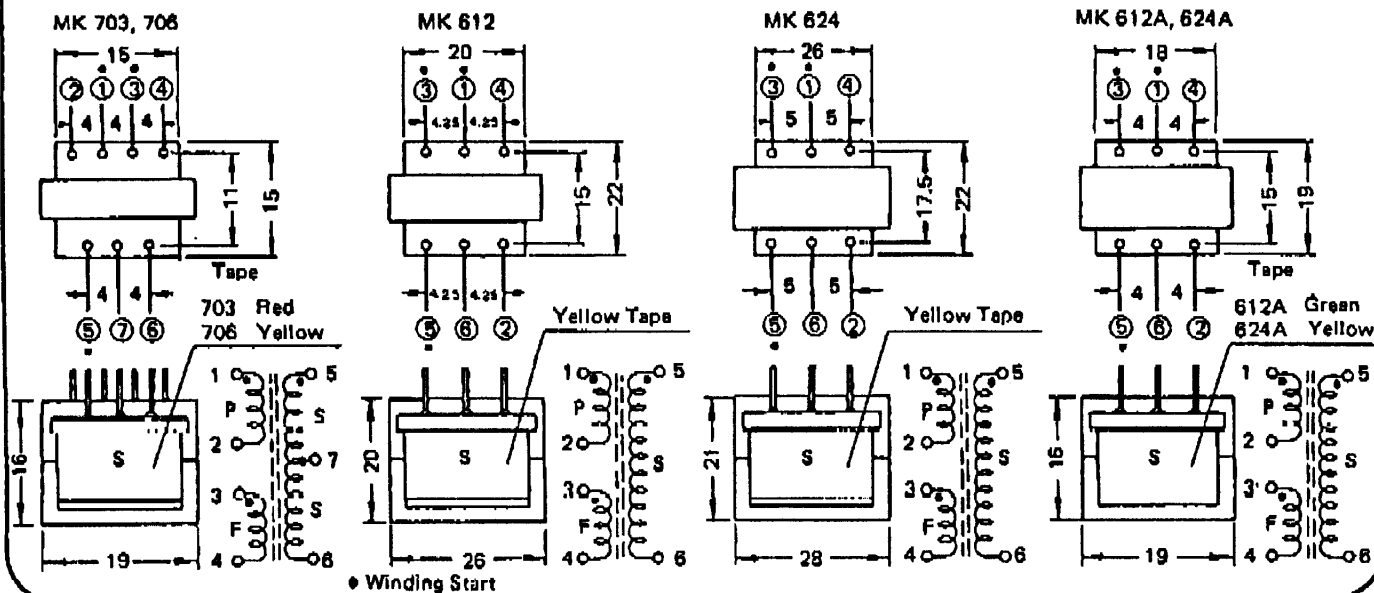
$$t_{m1} = a t_{m1} / a, t_{o1} = \pi / \beta$$

t_p : Obtained from $t \sim i$ curve = $2.7 \sqrt{LC}$

* : Reverse Current ≈ 0 (For $k \geq 1.4$)

Oscillation Transformers For DC-DC Converter

Specification	Type No.	MK 501 (S-11B)	MK 503 703	MK 506 706	MK 612	MK 612A	MK 624	MK 624A	MK 0612	MK 1224
Design Input Voltage	Vdc	1.5	3	6	12	12	24	24	6/12	12/24
Design Output Voltage	Vdc	330	330	330	350	350	400	360	350	350
Ferite Core Size	mm	EE13	EE19	EE19	EE26	EES19	EE28	EES19	EE19	EES19
Max. Power Output	W	2	7	7	15	13	20	13	7	13
Oscillation Frequency	KHz	15	15	15	15	15	15	15	15	15
Winding Ratio	Ns/Np	266	121.5	67.4	30	30	18	15	60/30	30/15

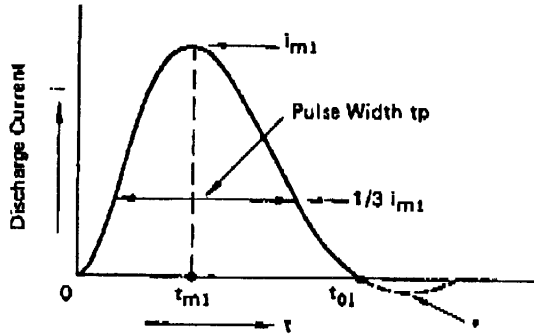


(6) RMS Current at Flash Interval T sec.

$$I_{rms} = \sqrt{\frac{1}{T} \int_0^T i^2 dt} = Va/k \sqrt{\frac{1 - e^{-(2\pi \cdot \beta/\alpha)}}{\alpha \cdot ((\beta/\alpha)^2 + 1)}} \cdot \frac{1}{\sqrt{T}} \text{ Amp}$$

(7) $t \sim i$ Curve & Pulse Width

$$i = 2 Va/k \cdot e^{-at} \cdot \sin \beta t$$



Form of light output curve is nearly equivalent to that of discharge current.

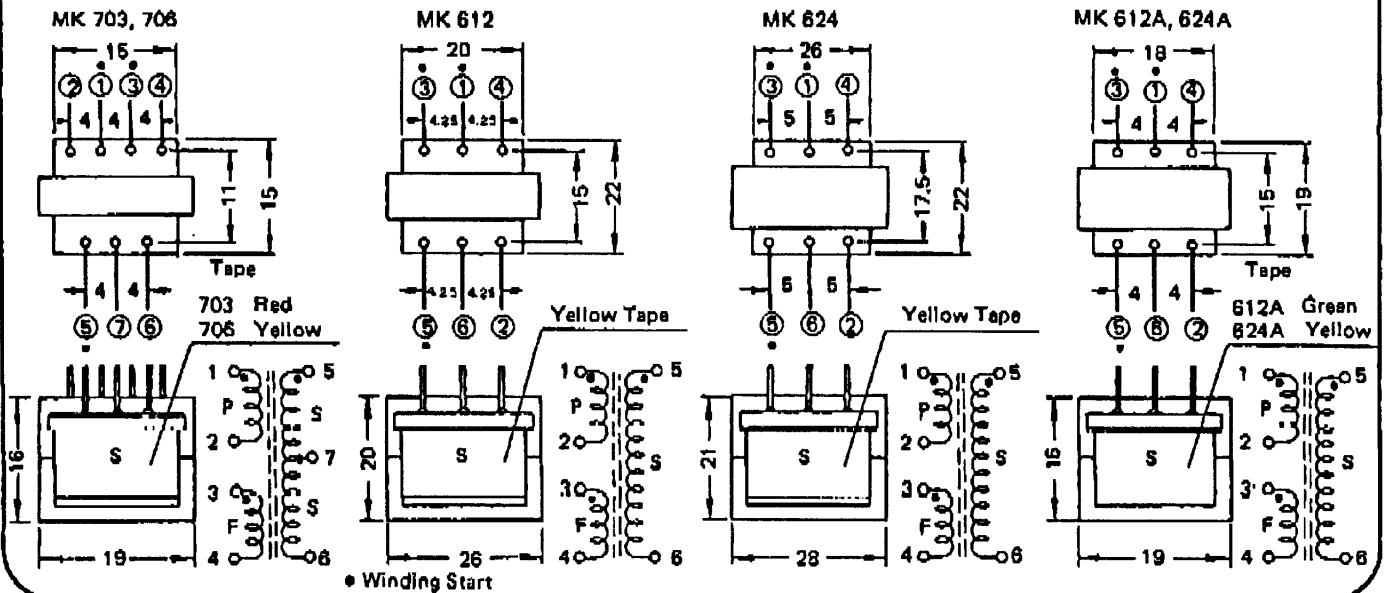
$$tm1 = a tm1 / a, \quad t01 = \pi / \beta$$

tp: Obtained from $t \sim i$ curve $\approx 2.7 \sqrt{LC}$

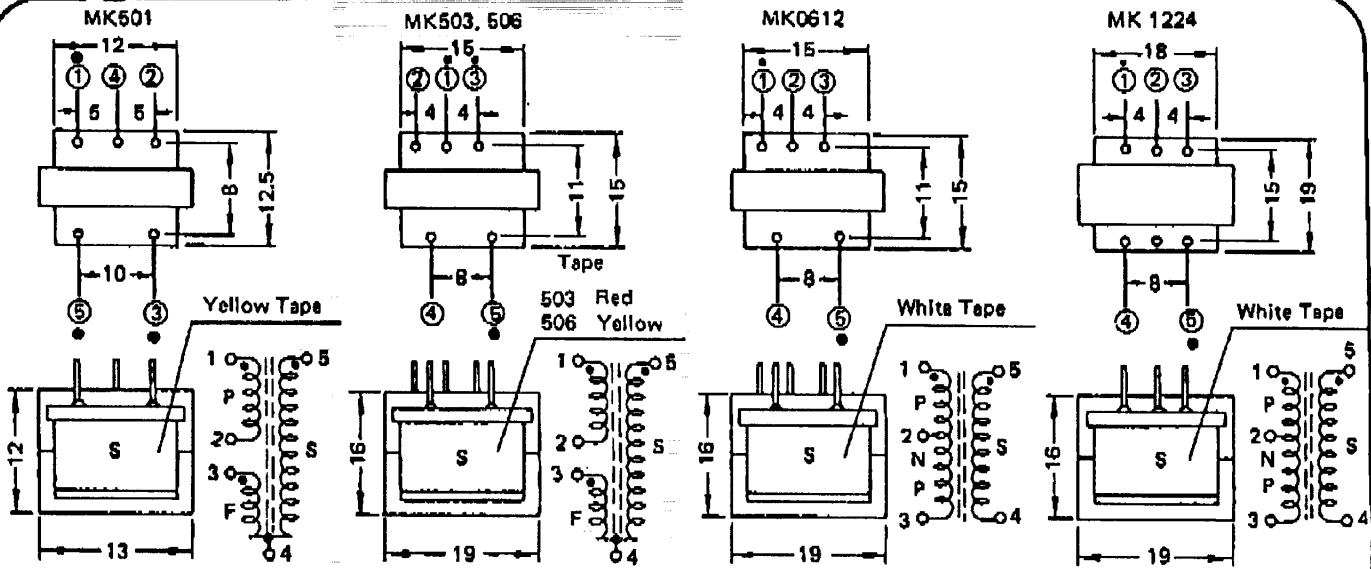
* : Reverse Current ≈ 0 (For $k \geq 1.4$)

Oscillation Transformers For DC-DC Converter

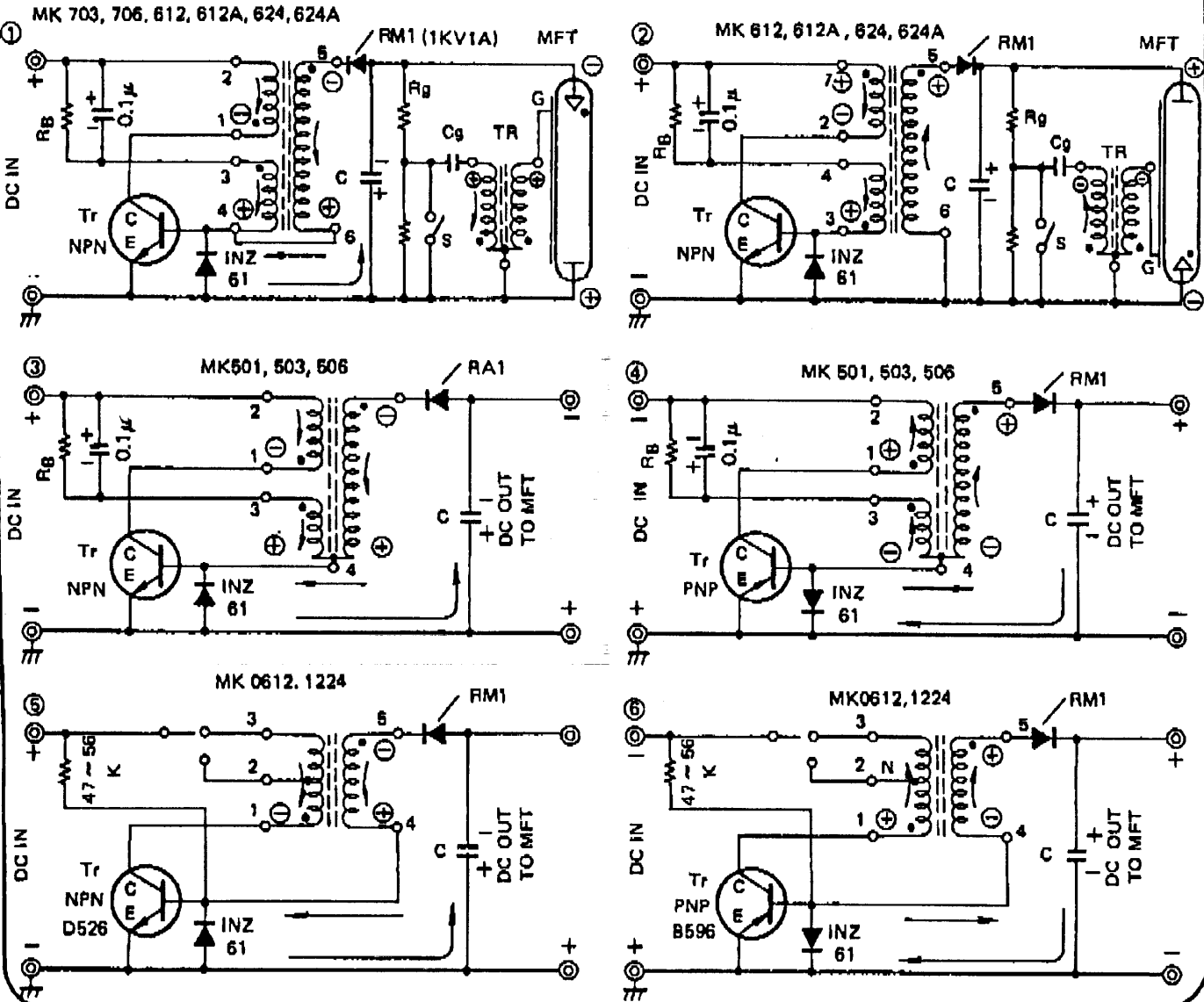
Specification	Type No.	MK 501 (S-11B)	MK 503 703	MK 506 706	MK 612	MK 612A	MK 624	MK 624A	MK 6612	MK 1224
Design Input Voltage	Vdc	1.5	3	6	12	12	24	24	6/12	12/24
Design Output Voltage	Vdc	330	330	330	350	350	400	350	350	350
Ferite Core Size	mm	EE13	EE19	EE19	EE26	EES19	EE28	EES19	EE19	EES19
Max. Power Output	W	2	7	7	15	13	20	13	7	13
Oscillation Frequency	KHz	15	15	15	15	15	15	15	15	15
Winding Ratio	Ns/Np	266	121.5	57.4	30	30	18	15	60/30	30/15



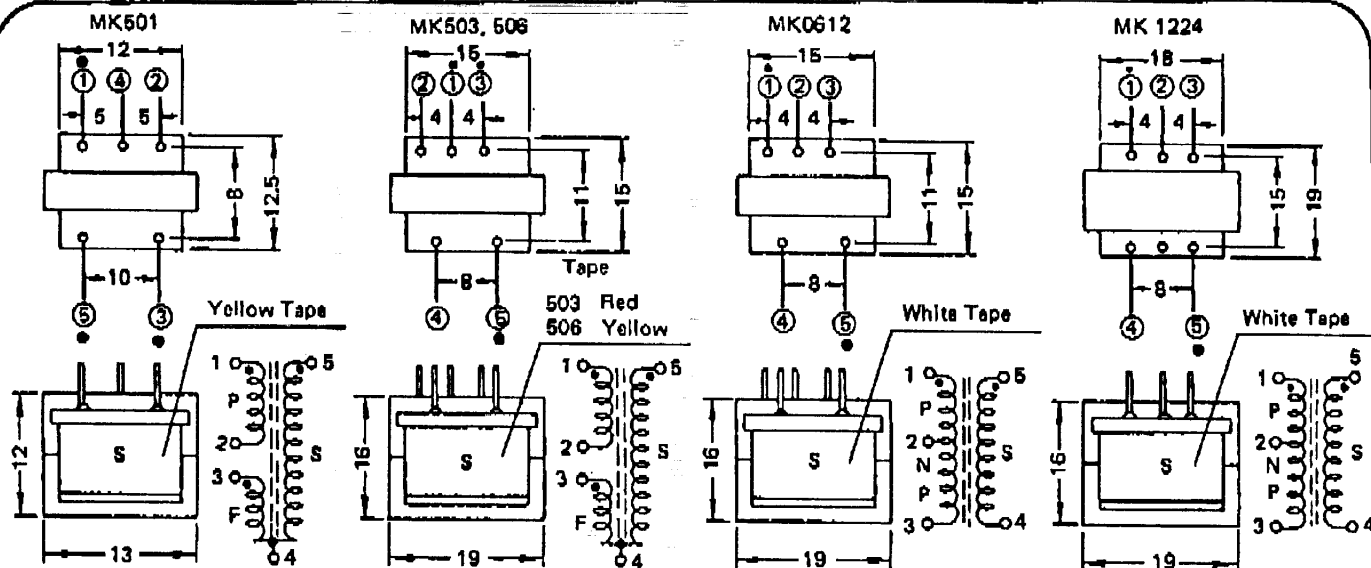
Oscillation Transformers—Continued



Typical Oscillation Circuits

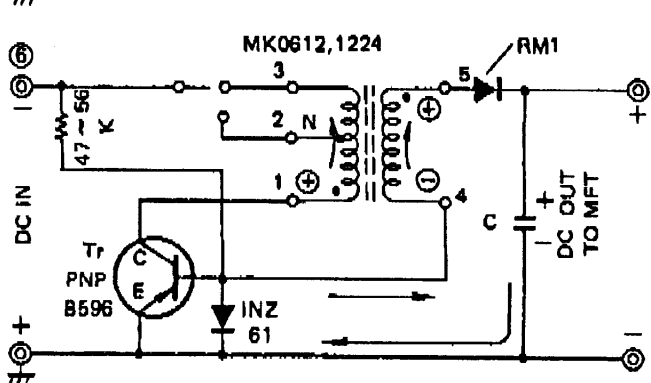
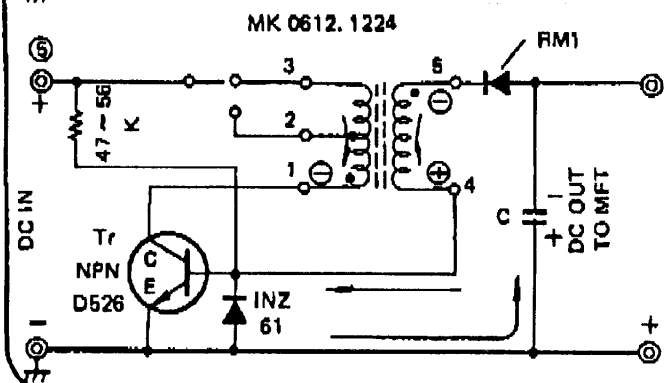
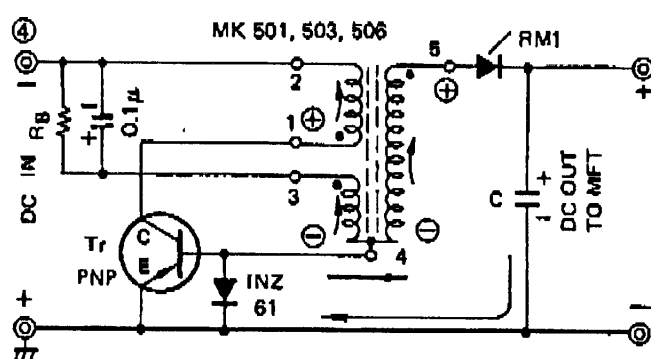
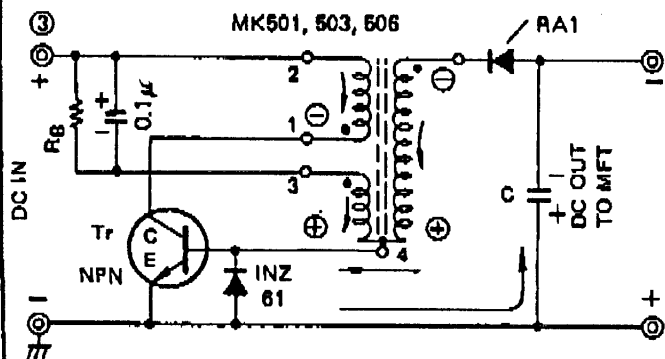
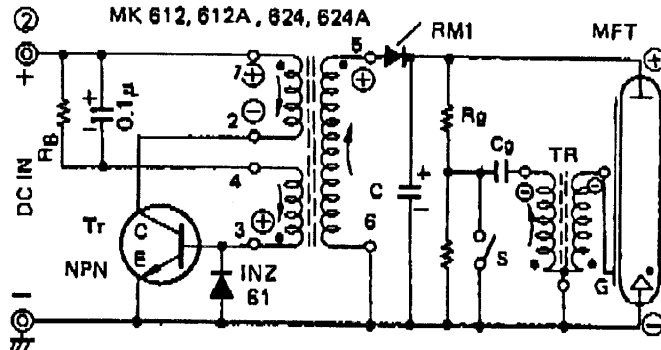
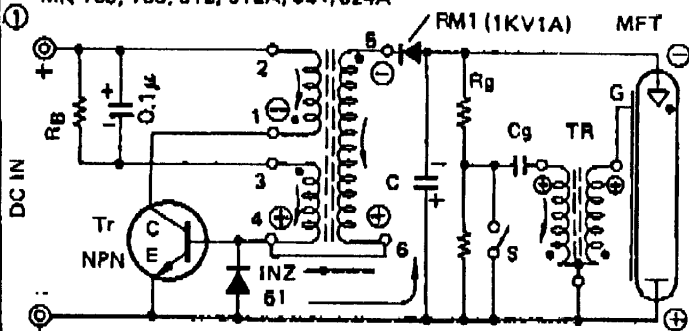


Oscillation Transformers—Continued



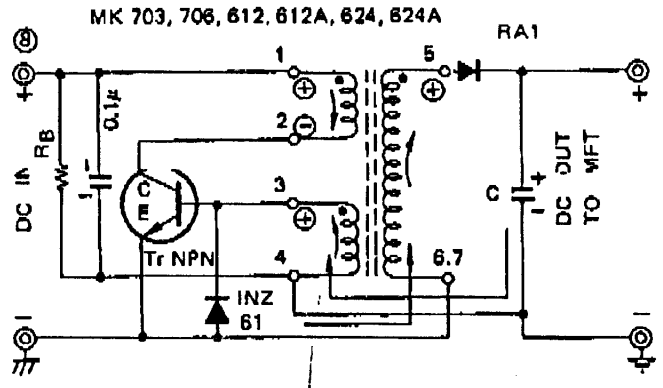
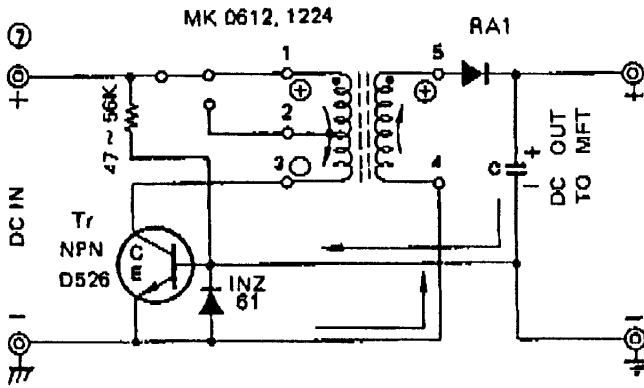
Typical Oscillation Circuits

MK 703, 706, 612, 612A, 624, 624A



Oscillation Transformers-Continued

Other reference circuits (Tr NPN-⊕ DC OUT)



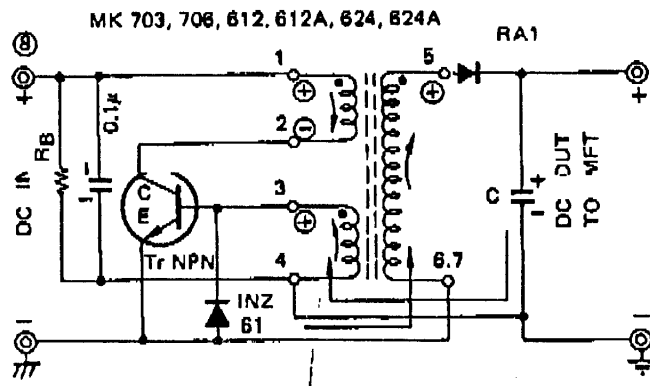
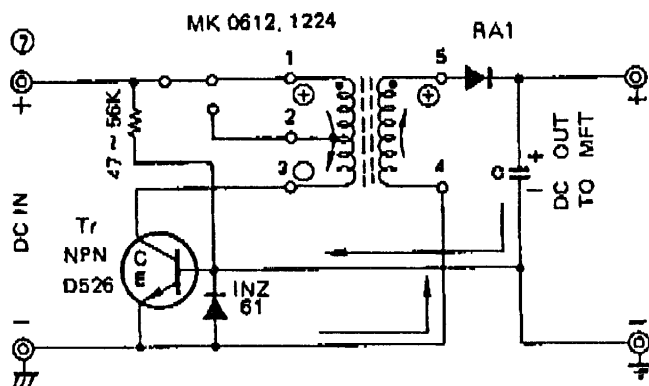
For Circuits ① ~ ⑧

DC IN	1.5V	3V	6V	12, 24V
Tr, R _B				
Silicon NPN	C2500(0.9W) x 2	C2500 x 2, C2270(10W)	C2270, D526(30W), D553(40W)	D526, D553, D717(80W)
Silicon PNP	B893(0.8W) x 2	B893 x 2, A1120(10W)	A1120, B596(30W), B553(40W)	B596, B553,
R _B KΩ	0.25 ~ 0.33	0.5	1	2~4.7

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Oscillation Transformers-Continued

Other reference circuits (Tr NPN-⊕ DC OUT)



For Circuits ① ~ ⑧

DC IN Tr, R _B	1.5V	3V	6V	12, 24V
Silicon NPN	C2500(0.9W) x 2	C2500 x 2, C2270(10W)	C2270, D526(30W), D553(40W)	D526, D553, D717(80W)
Silicon PNP	B893(0.8W) x 2	B893 x 2, A1120(10W)	A1120, B596(30W), B553(40W)	B596, B553,
R _B KΩ	0.25 ~ 0.33	0.5	1	2~4.7