



Вариант 1.1а. Для $(m'2v^+, B'4, 6-, J_{+2v^+}, J_{3\gamma})P$ -схем, $\forall v \in N, B_{II}(m', v')_{\Delta L} = 2\Delta 3$ Таблица 1.Рн
Основные показатели простых $m'2v^+$ -лучевых (№ 4, 6, 8-10), J_{+2v^+} - (строки 15,16 – общие и для $D_a, K_{прII}, K_{пр}$) и $J_{3\gamma}$ - (№ 7) мостовых (все - XIX века) и $B'4-, B'6$ -кольцевых (конца XX века) схем

№	1	2	3	4	5	6	7	8	9	10
1	Π	2Π' = 4Π''	8		12			16	20	24
2	Π', m'	2Π'' = Π/2	4		6			8	10	12
3	Π''	Π'/2 = Π/4	2	2	3	3		4	5	6
4	θ	π/Π	π/8; 22,5°		π/12; 15°			π/16; 11,6°	π/20; 9°	π/24; 7,5°
5	BΛB _Δ	Π; (Π'ΛΠ) ⁺⁺	8	6Λ10	12	8Λ14	18	10Λ18	12Λ22	14Λ26
6	W _I	sc ² (θ/4)	0.292893 ≈ 0.293		0.26795 ≈ 0.268			0.25989	0.2563	0.2543
7	W _c	1 - sc ² (θ/2)	√2 ⁻ = 0.4142135		2√3 - 3 = 0.4640162			0.4802	0.4875	0.4913
8	W _{1c}	(3 - tg ² θ)/4	1/√2 = 0.7071068		√3 ⁻ = 0.7320508			0.7401	0.7437	0.7457
9	a	y _p = cosθ/cos2θ	0.92388	1.3066	0.64391	√3 ⁺ /√6 = 1.115355		1.0616	1.0385	1.0264
10'	B _a	θctgθ / √2 cos2θ	π√2 ⁺ /8√2	π√2 ⁺ /8	π√3 ⁺⁺ /18√2	π√3 ⁺⁺ /6√6				
10			0.67038	0.94806	0.46059	0.7977567 ≈ 0.8		0.75551	0.73737	0.72787
11	D _a	√2(W _I ² +W _{1c} ²)/Π	0.62964	0.38268	0.51764	0.31825	√3 ⁻ = 0.732	0.27733	0.24876	0.22743
12	W _{Σa}	a Π'	3.69552	5.22625	3.8637	6.692	1.932	8.493	10.385	12.317
13	W _{Σ0}	πsc2θ/2tgθ	3.7922	5.363	3.9082	6.7692	1.9541	8.548	10.428	12.352
14'	K _{нII}	Π'D _a B _a		π√2 ⁺ /2√2/2	π√3 ⁺ /6	π√5+2√3/6	π√3 ⁺ /6√2			
14	K _{прII}	K _{нII} ⁻ , %	68.839	45.12min	43.05	52.331	1.152MIN	67.621	83.43	98.65
15'	D _Δ	√2 aD _a	1/√2 MIN		√2/3 MIN	√4-√3/3	√2/3 MIN			
15			0.707107	0.47141	0.502	0.47141	0.41636	0.36535	0.33014	
16'	K _{нI}	K _{нII} /√2	π√2 ⁺ /√2/4		π√3 ⁺ /6√2	π√10+4√3/12	MIN			
16	K _{прI}	K _{нI} ⁻ -1, %	2.6172 MIN		1.152 MIN	7.71467	1.15152	18.526	29.71	40.465
17'	K _н	√2 ⁺ K _{нI} /2		π√5+7/√2/8	π√2 ⁺ √3 ⁺ /12√2	π√2 ⁺ √25+√3/12	MIN			
17	K _{пр}	K _н ⁻ , %	35.728	23.87	22.1	30.02	1.15152	43.073	56.57	69.557
18	A	K _{нII} /B ₀	2.3268	2	2	2.13	√2 = 1.414	2.3553	2.584	2.802
19	G	W _{Σ0} /K _{нII}	2.246	2√2 ⁺⁺ = 3.7	√3 ⁺ = 2,73	4.444	√3 ⁺ /√2 = 1,93	5.1	5.685	6.2182

A.M.Repin. To the history of **conversics** and **reactronics**. Simple **reactronic power converters**. 1979-2013. Продолжение таблицы 1.Рн
Экономии Э (выгоды, выигрыши, в разгах) или ухудшения $Y = 1/\mathcal{E}$ при $\mathcal{E} < 1$ и тех же (знак Э) Π или m

№	1	2	3	4	5	6	7	8	9	10
20'	Э _{III}	K _{нII} mΠ' / K _{нII} mP	5.√2.5 + 3/√2	√4 - 2√2	√2√3 ⁻	2√3 / √5 + 2√3	√2√3 ⁻			
20			Y = 1.075	1.0824	1.0353	1.1907	1.0353	1.2244	1.526	1.498
21'	Э _{III}	K _{нII} mЭΠ / K _{нII} mP		√2	√3√3 ⁻	√6(4+√3)/13	Y/K _{нII} / Δ/K _{нII} √2	1.6983		1.7488
21			Y = 1.075	1.4142	1.268	1.6265	1.414	1.7	1.731	1.75
22	Э _{прII}	/Эm / ЭΠ	Y = 1.21	1.265	1.1172	1.555	4.1	1.558 max	1.526	1.498
23			Y = 1.21	2.3322	1.89	2.824 max	37.385	2.731	2.607	2.508
24'	Э _{II}	K _{нI} mΠ' / K _{нI} mP	√4 - 2√2		√2√3 ⁻	2√3 / √5 + 2√3	√2√3 ⁻		2 / √5 - √2 - 2√3 + √6	
24			1.0824	1.0353	1.1907	1.0353	1.2244	1.239	1.2473	
25	Э _{III}	K _{нII} mЭΠ / K _{нII} mP	1.0824	1.4142	1.268усл	1.6265	1.4142	1.6983	1.731	1.7488
27	Э _{прI}	/Эm / ЭΠ		4.2305	4.1		4.1			
28			4.231	17.241	24.5 усл.	9.7479	37.385	5.4676	4.193	3.6
29'	Э _I	K _{нI} mΠ' / K _{нI} mP	Y = 1.012	2√2 ⁻ /√2	√2√3 ⁻		√2√3 ⁻	√3/√2		
29			Э = 0.988	1.0824	1.035	1.191	1.035	1.2244	1.239	1.2473
30	Э _{III}	K _{нII} mЭΠ / K _{нII} mP	0.9878	1.4142	1.268	1.6265	1.21Λ1.41	1.6983	1.731	1.7488
31	Э _{пр}	/Эm / ЭΠ	Y = 1.048	1.4276	1.1946	1.826	4.1	1.7454	1.663	1.603
32			0.9537	3.15	2.48	3.113	19.2Λ37.4	3.32	3.024	2.8254



К истории конверсии и реактроники. Простые реактронные БВК ЭЭ. Репин А.М.

Вариант 1.16. Для $(m'2v^+, B'4, 6-, J_{+2v^+}, J_{3\gamma-})P_-$ -схем, $\forall v \in N$, $B_{II}(m', v) \wedge L = 2 \wedge 3$ Таблица 1.Рн
Основные показатели простых $m'2v^+$ -лучевых (№ 4, 6, 8-10), J_{+2v^+} - (строки 15,16 – общие и для D_a , $K_{прII}$, $K_{пр}$) и $J_{3\gamma-}$ (№ 7) **мостовых** (все – XIX века) и $B'4-$, $B'6$ -**кольцевых** (конца XX века) **схем**

№	1	2	3	4	5	6	7	8	9	10
1	Π	$2\Pi' = 4\Pi \gg$		8		12		16	20	24
2	Π', m'	$2\Pi \gg = \Pi/2$		4		6		8	10	12
3	$\Pi \gg$	$\Pi'/2 = \Pi/4$	2	2	3	3		4	5	6
4	θ	π/Π	$\pi/8; 22,5^\circ$			$\pi/12; 15^\circ$		$\pi/16; 11,6^\circ$	$\pi/20; 9^\circ$	$\pi/24; 7,5^\circ$
5	$B \wedge B_L$	$\Pi; (\Pi' \wedge \Pi)^{++}$	8	6 \wedge 10	12	8 \wedge 14	18	10 \wedge 18	12 \wedge 22	14 \wedge 26
6	W_I	$sc^2(\theta/4)$	$0.292893 \approx 0.293$			$0.26795 \approx 0.268$		0.25989	0.2563	0.2543
7	W_c	$1 - sc^2(\theta/2)$	$\sqrt{2}^- = 0.4142135$			$2\sqrt{3} - 3 = 0.4640162$		0.4802	0.4875	0.4913
8	W_{1c}	$(3 - tg^2\theta)/4$	$1/\sqrt{2} = 0.7071068$			$\sqrt{3}^- = 0.7320508$		0.7401	0.7437	0.7457
9	a	$y_p = \cos\theta/\cos 2\theta$	0.92388	1.3066	0.64391	$\sqrt{3}^+/\sqrt{6} = 1.115355$		1.0616	1.0385	1.0264
10'		$\theta \text{ctg } \theta /$	$\pi\sqrt{2}^+/8\sqrt{2}$	$\pi\sqrt{2}^+/8$	$\pi\sqrt{3}^{++}/18\sqrt{2}$	$\pi\sqrt{3}^{++}/6\sqrt{6}$				
10	B_a	$\sqrt{2} \cos 2\theta$	0.67038	0.94806	0.46059	$0.7977567 \approx 0.8$		0.75551	0.73737	0.72787
11	D_a	$\sqrt{2(W_I^2 + W_{1c}^2)}/\Pi$	0.62964	0.38268	0.51764	0.31825	$\sqrt{3}^- = 0.732$	0.27733	0.24876	0.22743
12	$W_{\Sigma a}$	$a \Pi'$	3.69552	5.22625	3.8637	6.692	1.932	8.493	10.385	12.317
13	$W_{\Sigma 0}$	$\pi sc 2\theta/2tg\theta$	3.7922	5.363	3.9082	6.7692	1.9541	8.548	10.428	12.352
14'	$K_{ИII}$	$\Pi'D_a B_a$		$\pi\sqrt{2}^+/2\sqrt{2}/2$	$\pi\sqrt{3}^+/6$	$\frac{\pi\sqrt{5+2\sqrt{3}}}{6}$	$\pi\sqrt{3}^+/6\sqrt{2}$			
14	$K_{прII}$	$K_{ИII}^-, \%$	68.839	45.12 min	43.05	52.331	1.152 MIN	67.621	83.43	98.65
15'	D_A	$\sqrt{2} a D_a$	1 / $\sqrt{2}$ MIN		$\sqrt{2}/3$ MIN	$\sqrt{4-\sqrt{3}}/3$	$\sqrt{2}/3$ MIN			
15			0.707107		0.47141	0.502	0.47141	0.41636	0.36535	0.33014
16'	$K_{ИI}$	$K_{ИII}/\sqrt{2}$		$\pi\sqrt{\sqrt{2}^+}/\sqrt{2}/4$	$\pi\sqrt{3}^+/6\sqrt{2}$	$\frac{\pi\sqrt{10+4\sqrt{3}}}{12}$	MIN			
16	$K_{прI}$	$K_{ИI} - 1, \%$	2.6172 MIN	1.152 MIN	7.71467	1.15152	18.526	29.71	40.465	
17'	$K_{И}$	$\sqrt{2}^+ K_{ИI}/2$		$\frac{\pi\sqrt{5+7/\sqrt{2}}}{8}$	$\frac{\pi\sqrt{2}^+ \sqrt{3}^+}{12\sqrt{2}}$	$\frac{\pi\sqrt{2}^+ \sqrt{25+\sqrt{3}}}{12}$	MIN			
17	$K_{пр}$	$K_{И}^-, \%$	35.728	23.87	22.1	30.02	1.15152	43.073	56.57	69.557
18	A	$K_{ИII}/B_0$	2.3268	2	2	2.13	$\sqrt{2} = 1,414$	2.3553	2.584	2.802
19	G	$W_{\Sigma 0}/K_{ИII}$	2.246	$2\sqrt{2}^{++} = 3,7$	$\sqrt{3}^+ = 2,73$	4.444	$\sqrt{3}^+/\sqrt{2} = 1,93$	5.1	5.685	6.2182

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№	1	2	3	4	5	6	7	8	9	10
20'	$\mathcal{E}_{ИII}^m$	$\frac{K_{ИII} m \Pi'}{K_{ИII} m \rho}$	$5\sqrt{2.5 + \frac{3}{\sqrt{2}}}$	$\sqrt{4-2\sqrt{2}}$	$\sqrt{2}\sqrt{3}^-$	$\frac{2\sqrt{3}}{\sqrt{5+2\sqrt{3}}}$	$\sqrt{2}\sqrt{3}^-$			
20			$Y = 1.075$	1.0824	1.0353	1.1907	1.0353	1.2244	1.526	1.498
21'	$\mathcal{E}_{ИII}^m \mathcal{E}$	$\frac{K_{ИII} m \mathcal{E} \Pi}{K_{ИII} m \rho}$		$\sqrt{2}$	$\sqrt{3}\sqrt{3}^-$	$\sqrt{\frac{6(4+\sqrt{3})}{13}}$	$\frac{Y/K_{ИII}}{\Delta/K_{ИII}} \sqrt{2}$	1.6983		1.7488
21			$Y = 1.075$	1.4142	1.268	1.6265	$\sqrt{2} = 1,414$	1.7	1.731	1.75
22	$\mathcal{E}_{ИII}^m$	$/\mathcal{E} m$	$Y = 1.21$	1.265	1.1172	1.555	4.1	1.558 max	1.526	1.498
23	$\mathcal{E}_{прII}^m$	$/\mathcal{E} \Pi$	$Y = 1.21$	2.3322	1.89	2.824 max	37.385	2.731	2.607	2.508
24'	$\mathcal{E}_{ИI}^m$	$\frac{K_{ИI} m \Pi'}{K_{ИI} m \rho}$		$\sqrt{4-2\sqrt{2}}$	$\sqrt{2}\sqrt{3}^-$	$\frac{2\sqrt{3}}{\sqrt{5+2\sqrt{3}}}$	$\sqrt{2}\sqrt{3}^-$			$\frac{2}{\sqrt{5-\sqrt{2}-2\sqrt{3}+\sqrt{6}}}$
24				1.0824	1.0353	1.1907	1.0353	1.2244	1.239	1.2473
25	$\mathcal{E}_{ИI}^m \mathcal{E}$	$\frac{K_{ИI} m \mathcal{E} \Pi}{K_{ИI} m \rho}$	1.0824	1.4142	1.268 усл	1.6265	1.4142	1.6983	1.731	1.7488
27	$\mathcal{E}_{ИI}^m$	$/\mathcal{E} m$		4.2305	4.1		4.1			
28	$\mathcal{E}_{прI}^m$	$/\mathcal{E} \Pi$	4.231	17.241	24.5 усл.	9.7479	37.385	5.4676	4.193	3.6
29'	$\mathcal{E}_{И}^m$	$\frac{K_{И} m \Pi'}{K_{И} m \rho}$	$Y = 1.012$	$2\sqrt{2}^-/\sqrt{2}$	$\sqrt{2}\sqrt{3}^-$		$\sqrt{2}\sqrt{3}^-$	$\sqrt{3}/\sqrt{2}$		
29			$\mathcal{E} = 0.988$	1.0824	1.035	1.191	1.035	1.2244	1.239	1.2473
30	$\mathcal{E}_{И}^m \mathcal{E}$	$\frac{K_{И} m \mathcal{E} \Pi}{K_{И} m \rho}$	0.9878	1.4142	1.268	1.6265	1.21 \wedge 1.41	1.6983	1.731	1.7488
31	$\mathcal{E}_{И}^m$	$/\mathcal{E} m$	$Y = 1.048$	1.4276	1.1946	1.826	4.1	1.7454	1.663	1.603
32	$\mathcal{E}_{пр}^m$	$/\mathcal{E} \Pi$	0.9537	3.15	2.48	3.113	19.2\wedge37.4	3.32	3.024	2.8254

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