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5.3 4
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7.4 10
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Федеральное агентство
по техническому регулированию
и метрологии

Федеральное агентство
по техническому регулированию
и метрологии

Федеральное агентство
по техническому регулированию
и метрологии

Community antenna television systems for terrestrial digital television broadcasting.
 General parameters, technical requirements, measurement and testing methods

— 2018—07—01

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1.1			DVB-T2	[1]	[2]
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».		DVB-T2			-
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1.2					-
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12.3.019					.
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11478 (68-1—88.	68-2-1—90.	68-2—74.	68-2-3—69.	68-2-5—75.
68-2-6—82,	68-2-13—83,	68-2-14—84,	68-2-27—87,	66-2-28—90.	
68-2-29—87.	68-2-32—75,	68-2-33—71.	68-2-52—84)		
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(3)

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3.27 :
 U_H U_0

$U = 20\lg(U_H/U_0)$ (5)

3.28 : , -

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4.1 , -

DVB-T2 [3].

[1]. [2]. [3] (4).
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4.7 7845 IV V (470—862). -

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(Hybrid Fiber Coaxial — HFC)

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5.2.3 -

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DVB-T2

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OVb-T2

6.1.2

DV8-T2

6.1.3

OVb-T2

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6.1.4

DVB-T2.

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2 3.

1		47 70	7.3.1
2	-	10 7 3	7.3.2
3	() -	3	7.3.3
4		31	7.3.4
5		22	7.3.5
6	LDPC (BER) 8	10 ¹⁷	7.3.6*
7		4.5	7.3.7*
*			

3 — ()

1		12	7.4.1
2		10	7.4.2
3	-	2	7.4.3
4	8 , 8	57	7.4.4
5	() . . .	14	7.4.5
470—862 .			

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7.1.1

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7.1.2

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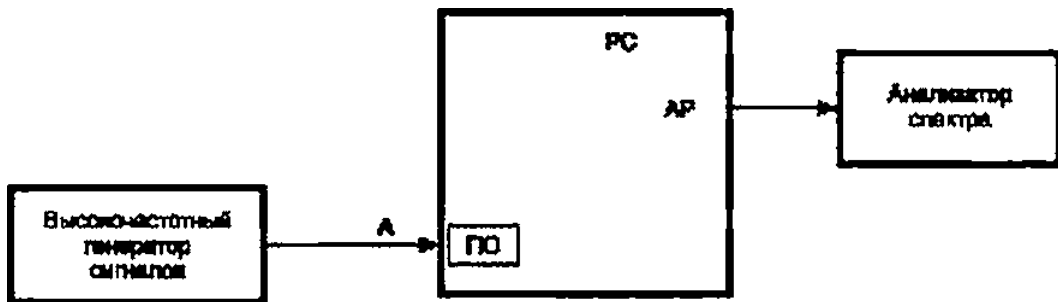
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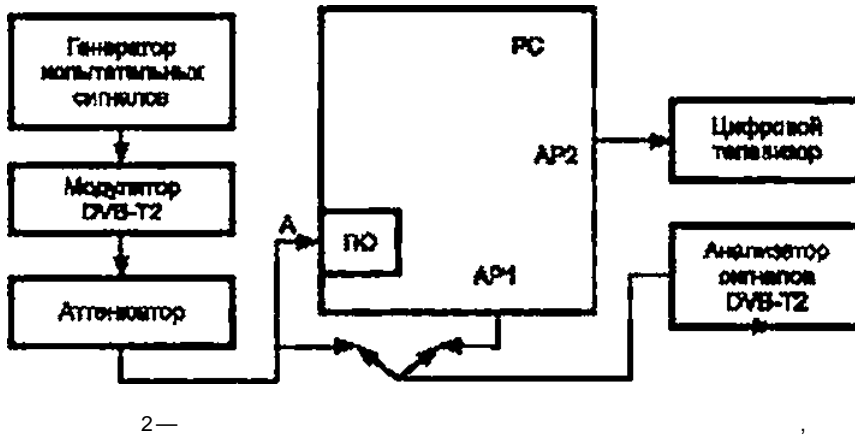
2)
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 3) 6

$$F_u = F_H - F_u - 4 \cdot 0.5 \cdot F_e = 4 \cdot F_B$$

 4)

7.3.4 (2. 4) OVB-T2 1 -
 (.1.), DVB-T2 (.1. 9)
 (.1. 7) DVB-T2 (.1. 9)
 1) (.1. 1)

2)
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 — 32 — 1/16. — 64-QAM. — 4/5,
 4.



3)) DVB-T2 (.1. 8 .1, 7 -
DV8-T2 (.1. 8).

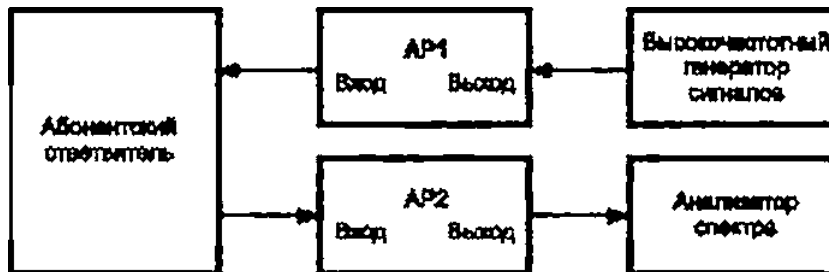
4) ().

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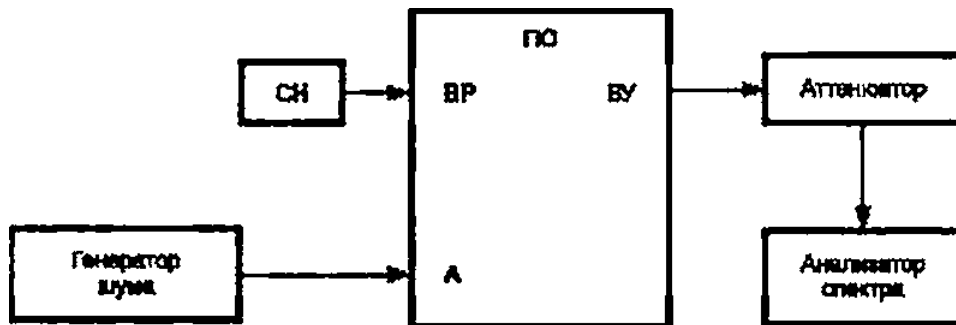
(. 2. 1).

6) (. BER).

DVB-T2
7.3.5 (2. 5) (.1, 2), -
(.1. 3)
3.

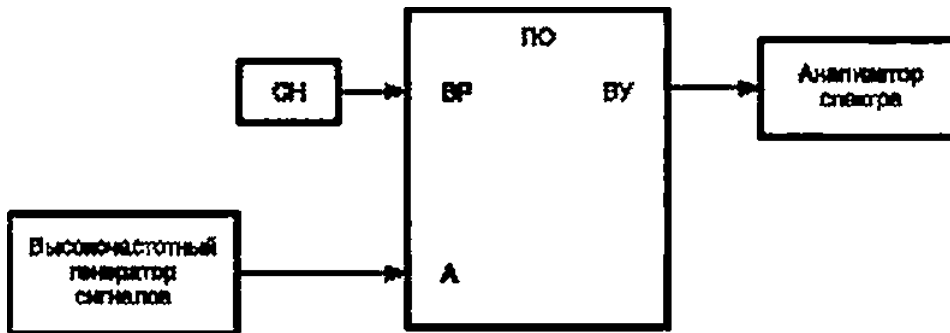


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		1.			
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7.3.6	LDPC		(BER)	2. 6).	*
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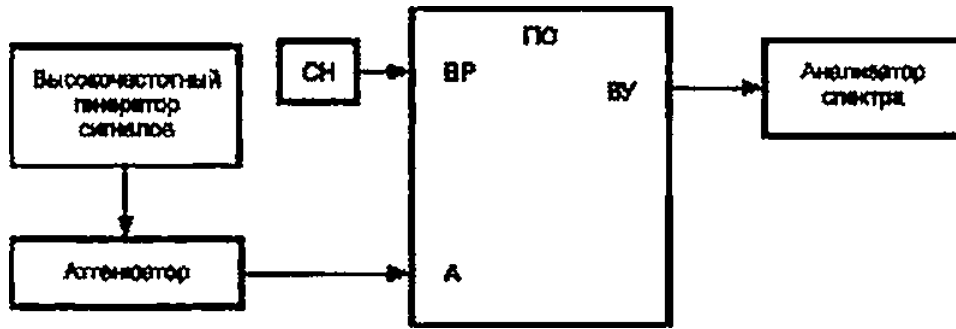


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- 1) 1 7.4.1. () -
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 (3. 3)

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- 1) 1) 7.4.1.
- 2)

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- 3) $F_e = +4$ 0.5 1 $F_H - -4$
- 4)
- 5)

7.4.4

(.1. 3) (.1. 2 3. 4)
 (.1. 7)
 6.

- 1) 1) 7.4.1.
- 2)

7.4.3

F_u

$FF_u = F_u * 4$, $F_H = F_H - 4$

12

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W_{fp}

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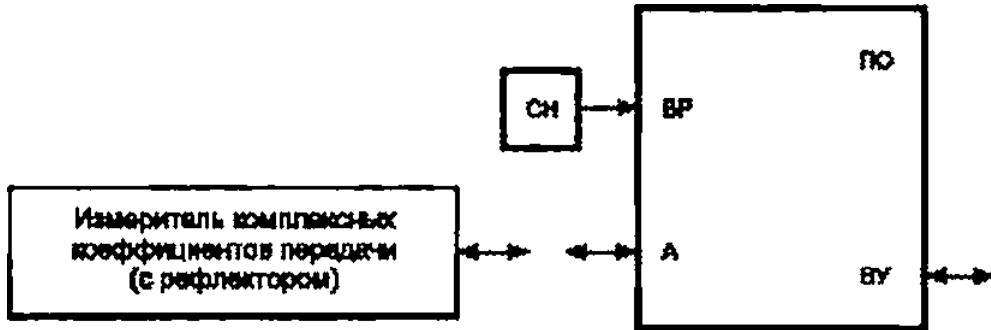
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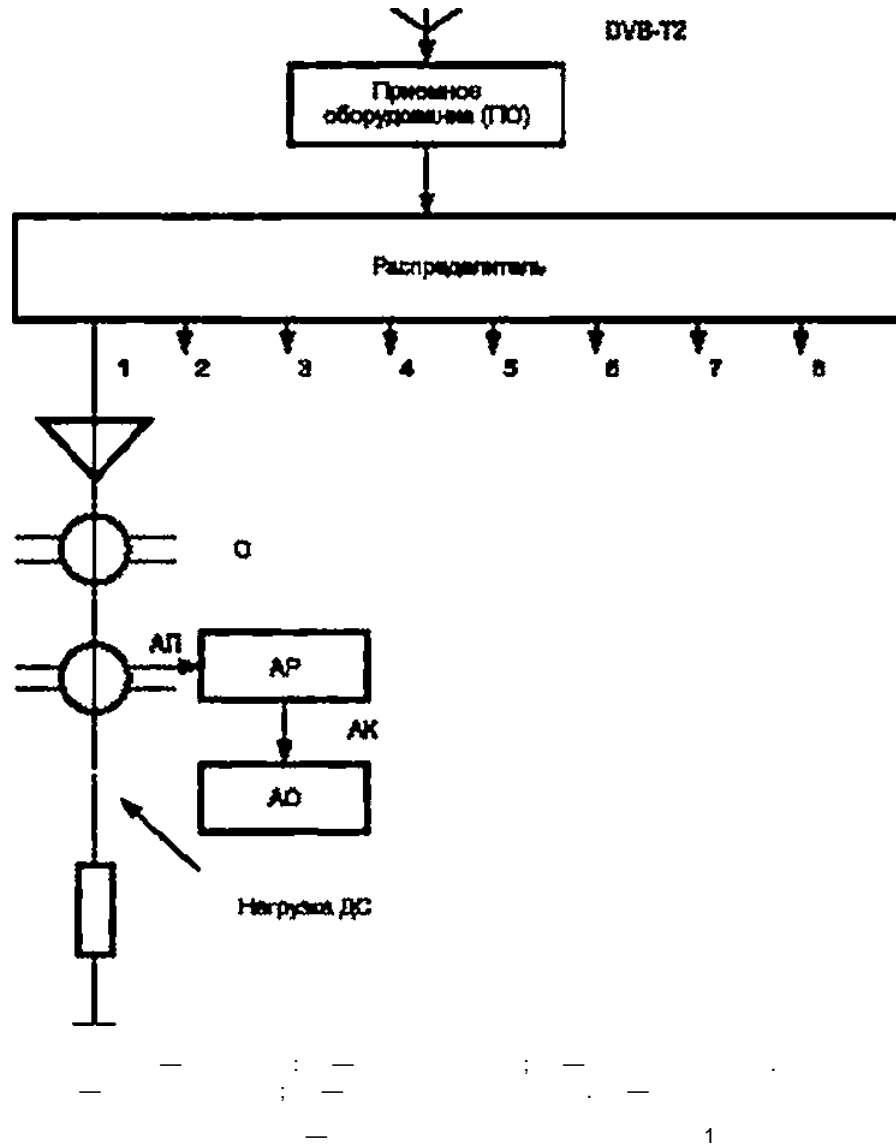
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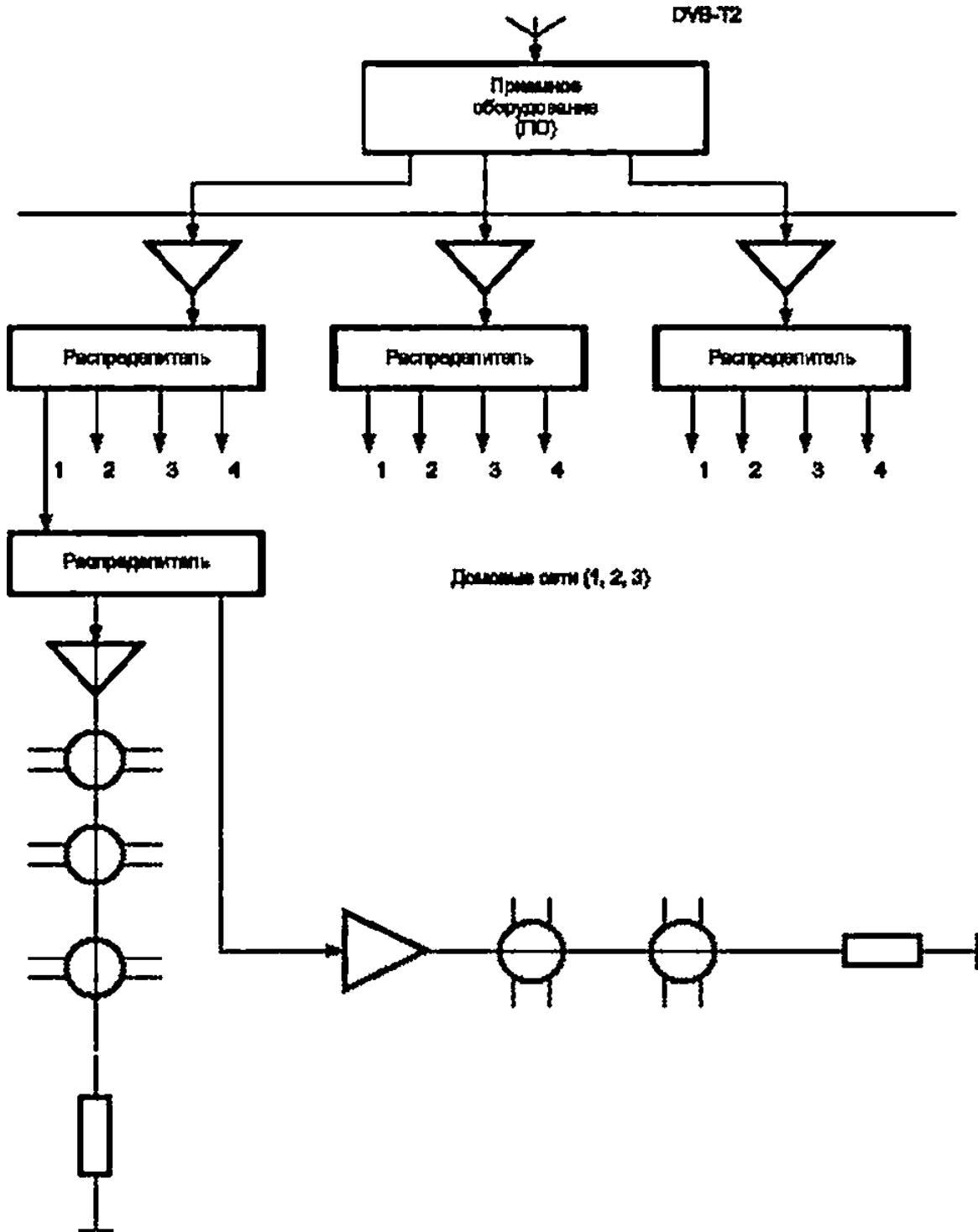
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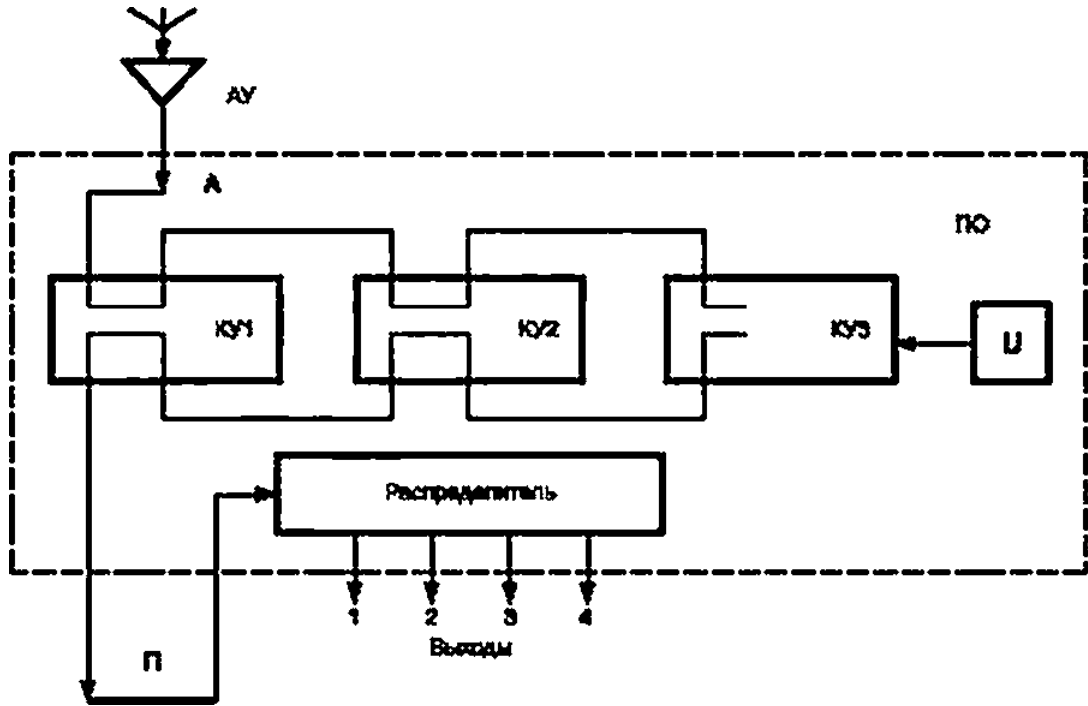




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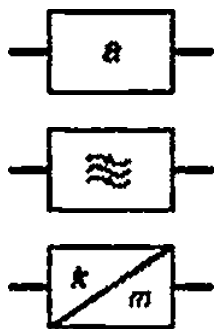


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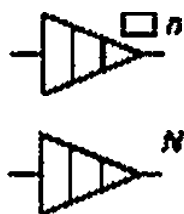
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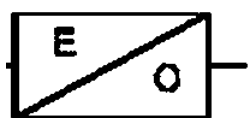
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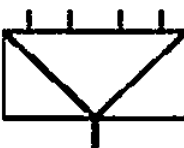


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1	.	470—862
2		1—4
3	()	21—69
4	.	28
5	.	12
6	.	2 102 (01N45004B)
7	.	3.3
8	(/), .	10
9	(50/60) .	230 ± 10
10	.°	-10—+60
11		F

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1	.	470—862
2		1
3	-	21—69
4	.	52
5	.	30
6	.	123<DIN45004B)
7	.	3.5
8	(/). .	10
9	(+1. +2. +3) . .	20/65/...
10	(/)	
11	.	24.60
12	.°	-10—+50

.5—

1	.	470—862
2	/	1/1
3	.	36
4	.	20
5	.	120 (DIN 45004)
6	.	8
7	(230 .50)	7
8	(/). .	10
9	.°	-10—+50
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1	47—862
2 /	1/1 +
3 . .	28
4 . . .	20
5	117 (DIN 45004)
6 . .	6
7 .	18
8 { / } . .	14
9	F
10 .°	-10—+50

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1		2	4	6 8
2	470—662 . . .	3.7	7.2	10.0 13.0
3	470—862 . . .	26		
4	/ 470—862 . . .	15/16		
5		F		
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1		4	4
2		10	23
3	470—862 . . .	3.8	0,7
4	470—862 . . .	14	7
5	8 470—862 . . .	26	26
6	/ 470—862 . . .	15 6	17/17
7	470—862 , . .	16	16
8		F	F

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2		4—862		
3	. . .	3.7	12	14.5 17 21
4	. . .	—	3.2	1.5 1.3 1.2

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	RG-69	RG-6	RG-11
1	6.1	6.9	10.0
2	0.81	1.02	1.63
3	(/100)		
50	6.7	5.2	3.1
200	12.4	10.0	6.2
450	17.7	14.4	9.0
860	24.6	20.0	13.0
1000	26.6	21.5	14.3

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2	1..6	1..6	1..6	1	1
3	6 8	6 8	6	8 12	1 2
4	2.0	2.0	2.0	1.2 0.9	—
5					
6	15	15		10.5	0.9
8	17.5	16		10.5	2.9
6	20	20	20	15	15
7	10 000	3500	3500	500	10
8	-40—+50	-40 — +50	-60 —+60	-10 —+50	-10 —+50
9	336—559	190—240	170—202	112—116	—
10	2	2	2	0.3	0.3

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$$:=7_0/(0+7) = (-)/ . \quad (.1)$$

$$= \frac{7_0 - 7}{7_0} - \quad -$$

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1	:	0.9987 0.9985
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1	0.9995
2	0.9991
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$$« <«) = * > • « <«, 'X, <*) = 0.9985 \cdot 0.9995 \cdot 0.9991 = 0.997102.$$

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DVB-T2

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DVB-T2

1		QPSK. 16-QAM. 64-QAM 256-QAM
2	OFDM (ext)	1 . 2 . 4 . 8 . 16 . 32 8 . 16 . 32
3		64 800 16 200
4		1/2. 3/5. 2/3. 3/4. 4/5. 5/6
5		1/128. 1/32. 1/16. 19/256. 1/8. 19/128. 1/4
6		1. 2. . 4. 5. 6. 7. 8
7		8

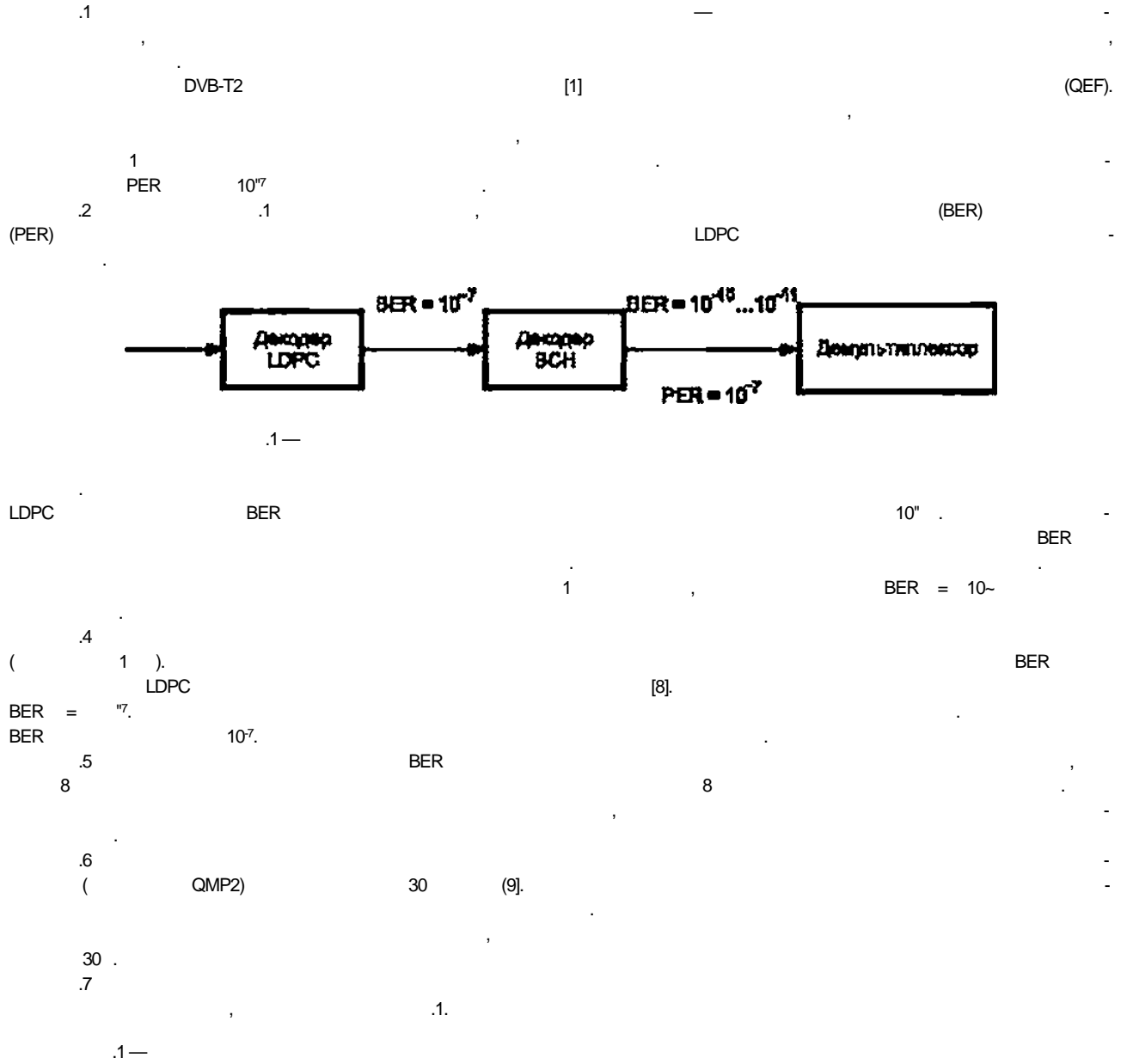
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DVB-T2,

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1		64-
2	OFDM	2 ext
3		64 800
4		4/5
5		1/16
6		4
7		8

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52592. 52595. 52722		
2		5—1000 0.1 10 ^⑥
.%. , 300 1000		
3		5—1000 3—300 60 11
4		LED LCD 24 16:9
5		5—1000 1—50 0.1 (-90-----50)
7 ₀ /		
6 ()		5—1000 1.05—2 10—35
()		
7		10—1000 0—60 1 1.25 50
()		
8 DVB-T2		470—862 -80—+10 1.2 40 -2-10 ⁻¹¹ ±10 ⁷
() (MER). (BER) LDPC		

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9	DVB-T2	
<p>OFDM: : 16-QAM, 64-QAM, 256-QAM</p> <p>(PLP)</p> <p>(MER)</p>		<p>OFDM</p> <p>8</p> <p>±0.2</p> <p>1/2, 3/5, 2/3, 3/4, 4/5, 5/6</p> <p>+</p> <p>8, 16, 32</p> <p>8, 16, 32</p> <p>1— 8</p> <p>1/128, 1/32, 1/16, 19/256,</p> <p>1/8, 19/128, 1/4</p> <p>1—8</p> <p>_100----- 20</p> <p>0.1</p> <p>40</p> <p>-</p>

- (1) (European Standard. Telecommunications Series) ETSI EN 302 755 V1.3. (2012-04) (DVB). (DVB-T2) [Digital Video Broadcasting (DVB); Frame structure channel coding and modulation for a second generation digital terrestrial television broadcasting system (DVB-T2)]
- (2) (European Standard. Telecommunications Series) ETSI TS 102 831 V1.2.1 (2012-08) (DVB). (DVB-T2) [Digital Video Broadcasting (DVB): Implementation guidelines for a second generation digital terrestrial television broadcasting system (DVB-T2)]
- (3) Recommendation ITU-T J.87 (Cable networks and transmission of television, sound programme and other multimedia signals digital transmission of television signals. Use of hybrid cable television links for the secondary distribution of television into the user's premises)
- (4) « II.
- (5) 7 24.01.2008 1992
- (6) 2004
- (7) 50.2.006—94
- (8) The NorDig group Document ver. 2.2.2. 11.2012 NorDig. IP- (NorDig Unified Test Specifications for Integrated Receiver Decoders for use in cable, satellite, terrestrial and IP-based networks)
- (9) Recommendation ITU-R BT.500-13 (01/2012) (Methodology for the subjective assessment of the quality of television pictures)
- (10) Recommendation ITU-R BT.710-4 (1998) (Subjective assessment methods for image quality in high-definition television)

621.397.13:621.397.743:006.354 OKC 33.060.40

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DVB-T2.

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14.12.2017. IS.Ot.2016. 6 0 * 8 4 . . 4.19. . 3.76. 22 . . 2740.

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