

R&S® WV-K818

Waveforms Library

Specifications

ATSC 3.0 waveforms	sequences in line with ATSC A/322	
	arbitrary waveform generator (R&S®BTC-K35)	required for playout
Modulation	modulation	COFDM
	PLP number	1 (single PLP)
	subframe number	1 (single subframe)
Coding	bandwidth	6 MHz
	MER	> 40 dB
	modulation frequency response	< ±0.2 dB
	shoulder attenuation	> 45 dB
	PLP layer	core
	FEC type	BCH+16K, BCH+64K, CRC+16K, CRC+64K, 16K only, 64K only
	code rate	2/15, 3/15, 4/15, 5/15, 6/15, 7/15, 8/15, 9/15, 10/15, 11/15, 12/15, 13/15
	constellation	QPSK, 16QAM-NUC, 64QAM-NUC, 256QAM-NUC, 1024QAM-NUC, 4096QAM-NUC
	PLP type	non-dispersed
	time interleaver	off, CTI
	extended interleaving	off/on
Subframing	FFT size	8k, 16k, 32k COFDM
	reduced carrier mode	0, 1, 2, 3, 4
	guard interval	192, 384, 512, 768, 1024, 1536, 2048, 2432, 3072, 3684, 4096, 4864
	pilot pattern	3_2, 3_4, 4_2, 4_4, 6_2, 6_4, 8_2, 8_4, 12_2, 12_4, 16_2, 16_4, 24_2, 24_4, 32_2, 32_4
	pilot boost mode	0, 1, 2, 3, 4
	frequency interleaver	off/on
	number of data OFDM symbols	in line with V&V test case ¹
	time info	in line with V&V test case ¹
System	PAPR reduction	off, tone reservation (TR) ²
	frame mode	time-aligned, symbol-aligned
	frame length	in line with V&V test case ¹
	L1-Basic FEC type	mode 1, mode 2, mode 3, mode 4, mode 5
	L1-Detail FEC type	mode 1, mode 2, mode 3, mode 4, mode 5, mode 6, mode 7
	reduced carrier mode (preamble)	0, 1, 2, 3, 4
	pilot pattern Dx (preamble)	3, 4, 6, 8, 12, 16, 24, 32

Special functions	bootstrap minor version	0, 1, 2, 3, 4, 5, 6, 7
	bootstrap emergency alert signaling	no emergency, setting 1, setting 2, setting 3
PLP content		IP test packets ³ or TS test packets ⁴ with PRBS payload of sequence 2 ²³ -1 in line with ATSC 3.0 V&V specification as defined by ITU-T recommendation O.151
Waveform support	R&S®BTC	with firmware 2.00 or higher

Ordering information

Designation	Type	Order No.
Waveforms Library	R&S®WV-K818	2116.9941.02

¹ Test case in line with ATSC 3.0 verification and validation (V&V) workgroup.

² If PAPR is set to TR, the reserved carriers are modulated with 0+j0 only.

³ IP test packets of fixed length with 8 byte UDP header, 20 byte IP header, 2 byte ALP header and 1200 byte payload.

⁴ TS test packets of fixed length with 4 byte header and 184 byte payload encapsulated in ALP packets.

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