

# R&S® SFU-K356

## Cable Interferers

# Specifications

The scope of cable interferer applications depends on the R&S®SFx-B3 ARB memory of the R&S®SFx.

Cable interferers	I/Q sequences	country-specific analog signals
	release	1.30 see description of option for details
ARB memory (R&S®SFx-B3)	minimum required waveform memory	1 Gbyte (256 Msample)
	recommended waveform memory	1 Gbyte (256 Msample)
ARB clock rate	bandwidth	depending on loaded waveform
	symbol rate	depending on loaded waveform
Transmission	operating modes	CW, NTSC M, J.83/B, DVB-C
CW signal FullCWLoad_6_MHz_NoCenter	modulation	continuous wave
	channel bandwidth	6 MHz
	channel scenario	14-channel scenario (N ±1 to N ±7)
	wanted channel gap	center (N)
CW signal FullCWLoad_7_MHz_NoCenter	modulation	continuous wave
	channel bandwidth	7 MHz
	channel scenario	12-channel scenario (N ±1 to N ±6)
	wanted channel gap	center (N)
CW signal FullCWLoad_8_MHz_NoCenter	modulation	continuous wave
	channel bandwidth	8 MHz
	channel scenario	10-channel scenario (N ±1 to N ±5)
	wanted channel gap	center (N)
CW signal FullCWLoad_6_MHz	modulation	continuous wave
	channel bandwidth	6 MHz
	channel spacing	6 MHz
	channel scenario	full-load channel scenario (15 channels)
CW signal FullCWLoad_7_MHz	modulation	continuous wave
	channel bandwidth	7 MHz
	channel spacing	7 MHz
	channel scenario	full-load channel scenario (13 channels)
CW signal FullCWLoad_8_MHz	modulation	continuous wave
	channel bandwidth	8 MHz
	channel spacing	8 MHz
	channel scenario	full-load channel scenario (13 channels)

NTSC M SCTE_NTSC	analog TV signal	in line with NTSC M
	channel bandwidth	6 MHz
	channel scenario	one-channel scenario
	one-channel scenario	
	video	
	video content	NTSC SMPTE color bars with PLUGE
	vision modulation	amplitude modulation (AM), C3F neg., vestigial sideband (VSB), standard M
	vision carrier	centered (spectrum), 1.75 MHz below RF ( $f_0$ )
	group delay precorrection	FCC
	line frequency	15734.264 Hz
	width of vestigial sideband	0.75 MHz
	residual carrier	12.5 %
	chroma carrier	3.579545 MHz
	sound	
	vision/sound carrier frequency spacing	4.5 MHz
	sound modulation	frequency modulation (FM), F3E, mono
	audio carrier AF	400 Hz
nominal frequency deviation	$\pm 25$ kHz	
sound/vision carrier level	-7 dB	
NTSC M M_UDCP_NTSC	analog TV signal	in line with TRATP-M-UDCP-105-2008/03/04
	channel bandwidth	6 MHz
	channel scenario	one-channel scenario
	one-channel scenario	
	video	
	video content	NTSC SMPTE color bars 100 %
	vision modulation	amplitude modulation (AM), C3F neg., vestigial sideband (VSB), standard M
	group delay precorrection	FCC
	line frequency	15734.264 Hz
	width of vestigial sideband	0.75 MHz
	residual carrier	12.5 %
	chroma carrier	3.579545 MHz
	sound	
	vision/sound carrier frequency spacing	4.5 MHz
	sound modulation	frequency modulation (FM), F3E, mono
	audio carrier AF	400 Hz
	nominal frequency deviation	$\pm 25$ kHz
sound/vision carrier level	-13 dB	
NTSC M SCTE_NTSC_10_dB	analog TV signal	in line with ANSI/SCTE40-2004
	channel bandwidth	6 MHz
	channel scenario	one-channel scenario
	one-channel scenario	
	video	
	video content	NTSC SMPTE color bars 100 %
	vision modulation	amplitude modulation (AM), C3F neg., vestigial sideband (VSB), standard M
	vision carrier	centered
	group delay precorrection	FCC
	line frequency	15734.264 Hz
	width of vestigial sideband	0.75 MHz
	residual carrier	12.5 %
	chroma carrier	3.579545 MHz
	sound	
	vision/sound carrier frequency spacing	4.5 MHz
	sound modulation	frequency modulation (FM), F3E, mono
	audio carrier AF	400 Hz
nominal frequency deviation	$\pm 25$ kHz	
sound/vision carrier level	-10 dB	

NTSC M SCTE_2CH_NTSC	analog TV signal	in line with NTSC M
	channel bandwidth	6 MHz
	channel scenario	two-channel scenario N $\pm$ 1
	two-channel scenario	
	video	
	video content	NTSC SMPTE color bars with PLUGE
	vision modulation	amplitude modulation (AM), C3F neg., vestigial sideband (VSB), standard M
	group delay precorrection	FCC
	line frequency	15734.264 Hz
	width of vestigial sideband	0.75 MHz
	residual carrier	12.5 %
	chroma carrier	3.579545 MHz
	sound	
	vision/sound carrier frequency spacing	4.5 MHz
	sound modulation	frequency modulation (FM), F3E, mono
	audio carrier AF	400 Hz
	nominal frequency deviation	$\pm$ 25 kHz
sound/vision carrier level	-7 dB	
NTSC M SCTE_2CH_NTSC_10_dB	analog TV signal	in line with ANSI/SCTE 40-2004
	channel bandwidth	6 MHz
	channel scenario	two-channel scenario N $\pm$ 1
	two-channel scenario	
	video	
	video content	NTSC SMPTE color bars with PLUGE
	vision modulation	amplitude modulation (AM), C3F neg., vestigial sideband (VSB), standard M
	group delay precorrection	FCC
	line frequency	15734.264 Hz
	width of vestigial sideband	0.75 MHz
	residual carrier	12.5 %
	chroma carrier	3.579545 MHz
	sound	
	vision/sound carrier frequency spacing	4.5 MHz
	sound modulation	frequency modulation (FM), F3E, mono
	audio carrier AF	400 Hz
	nominal frequency deviation	$\pm$ 25 kHz
sound/vision level spacing	-10 dB	
DVB-C DVB_C_64QAM	digital cable TV signal	in line with EN 300 429 (ITU-T J.83/A)
	channel bandwidth	8 MHz
	channel scenarios	one-channel scenario
	one-channel scenario	
	modulation	64QAM
	symbol rate	6.9 Msymbol/s
	pulse filtering	Nyquist roll-off, $\alpha = 0.15$
DVB-C DVB_C_256QAM	digital cable TV signal	in line with EN 300 429 (ITU-T J.83/A)
	channel bandwidth	8 MHz
	channel scenarios	one-channel scenario
	one-channel scenario	
	modulation	256QAM
	symbol rate	6.9 Msymbol/s
	pulse filtering	Nyquist roll-off, $\alpha = 0.15$
DVB-C DVB_C_2CH_64QAM_8_MHz	digital cable TV signal	in line with EN 300 429 (ITU-T J.83/A)
	channel bandwidth	8 MHz
	channel scenarios	two-channel scenario N $\pm$ 1
	two-channel scenario	
	modulation	64QAM (N $\pm$ 1)
	symbol rate	6.9 Msymbol/s
	pulse filtering	Nyquist roll-off, $\alpha = 0.15$

DVB-C DVB_C_2CH_256QAM_8_MHz	digital cable TV signal	in line with EN 300 429 (ITU-T J.83/A)
	channel bandwidth	8 MHz
	channel scenarios	two-channel scenario N ±1
	two-channel scenario	
	modulation	256QAM (N ±1)
	symbol rate	6.9 Msymbol/s
	pulse filtering	Nyquist roll-off, $\alpha = 0.15$
J.83/B SCTE_64QAM	digital cable TV signal	in line with ITU-T J.83/B
	channel bandwidth	6 MHz
	channel scenarios	one-channel scenario
	one channel scenario	
	modulation	64QAM
	symbol rate	5.056941 Msymbol/s
	pulse filtering	Nyquist roll-off, $\alpha = 0.18$
J.83/B SCTE_256QAM	digital cable TV signal	in line with ITU-T J.83/B
	channel bandwidth	6 MHz
	channel scenarios	one-channel scenario
	one channel scenario	
	modulation	256QAM
	symbol rate	5.360537 Msymbol/s
	pulse filtering	Nyquist roll-off, $\alpha = 0.12$
J.83/B SCTE_2CH_64QAM	digital cable TV signal	in line with ITU-T J.83/B
	channel bandwidth	6 MHz
	channel scenarios	two-channel scenario N ±1
	two-channel scenario	
	modulation	64QAM (N ±1)
	symbol rate	5.056941 Msymbol/s
	pulse filtering	Nyquist roll-off, $\alpha = 0.18$
J.83/B SCTE_2CH_256QAM	digital cable TV signal	in line with ITU-T J.83/B
	channel bandwidth	6 MHz
	channel scenarios	two-channel scenario N ±1
	two-channel scenario	
	modulation	256QAM (N ±1)
	symbol rate	5.360537 Msymbol/s
	pulse filtering	Nyquist roll-off, $\alpha = 0.12$
J.83/B SCTE_QPSK_FDC_A	digital cable TV signal	in line with ITU-T J.83/B
	channel bandwidth	6 MHz
	channel scenarios	one-channel scenario
	one-channel scenario	
	modulation	QPSK
	symbol rate	0.772 Msymbol/s
	pulse filtering	Nyquist roll-off, $\alpha = 0.30$
J.83/B SCTE_QPSK_FDC_B	digital cable TV signal	in line with ITU-T J.83/B
	channel bandwidth	6 MHz
	channel scenarios	one-channel scenario
	one-channel scenario	
	modulation	QPSK
	symbol rate	1.544 Msymbol/s
	pulse filtering	Nyquist roll-off, $\alpha = 0.30$
Waveform support	R&S®SFU	full support of all cable interferers
	R&S®SFE	full support of all cable interferers
	R&S®SFE100	full support of all cable interferers

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