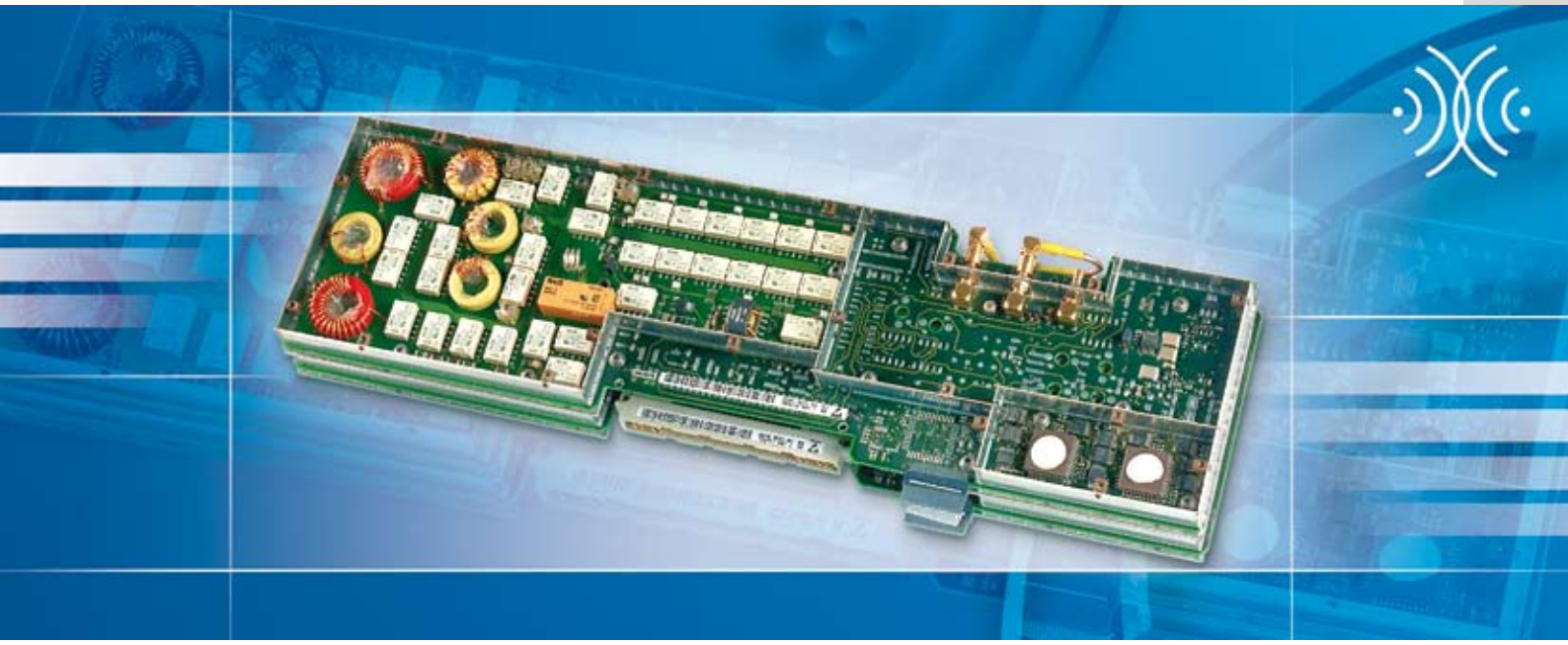
Data sheet



Digitally Tuned RF Selectors R&S®FK896D

Embedded, automatically tuned preselector, 20 dB and 40 dB selectivity

The Digitally Tuned RF Selectors R&S®FK896D are plug-in modules and can be retrofitted to the Receiver R&S®EK896. They provide the following functions:

- Seven-pole lowpass (0 Hz to 30 MHz) for suppressing interference >30 MHz
- Five-pole lowpass (0 Hz to 1.5 MHz) for suppressing strongly interfering shortwave signals
- Tunable tracking bandpass filter (1.5 MHz to 30 MHz) with stopband attenuation of 20 dB/40 dB at 10% frequency offset (model .02/.04)
- Remote control on/off (filter in RX direction can be bypassed)
- Input voltage protection up to 200 V EMF

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The use of the Digitally Tuned RF Selectors R&S®FK896D is recommended in strongly disturbed RF environments, i.e. for collocation scenarios such as they occur on board ships. The selectors improve the receiver input selectivity.

The R&S®FK896D can be bypassed (manually or via remote control).

Specifications

	Model .02	**Model .04**
Frequency range	10 kHz to 30 MHz lowpass function for f < 1.5 MHz	
Stopband attenuation	20 dB at 10 % offset from operating frequency	40 dB at 10 % offset from operating frequency
Receiver sensitivity (tested in radio)	S/N = 10 dB, f = 0.2 MHz to 30 MHz **without preamplifier** A1A (CW): typ. 0.4 µV EMF, bandwidth = 300 Hz J3E (SSB): typ. 1.1 µV EMF, bandwidth = 2700 Hz **with preamplifier** A1A (CW): typ. 0.3 µV EMF, bandwidth = 300 Hz J3E (SSB): typ. 0.9 µV EMF, bandwidth = 2700 Hz	
Intercept point (IP3) (tested in radio)	+30 dBm (Δf > 30 kHz, interfering signals 2 × –5 dBm) +53 dBm (interfering signals at 5 % and 10 % frequency offset, 2 × +10 dBm, **without** preamplifier)	
	+40 dBm (interfering signals at 5 % and 10 % frequency offset, 2 × +10 dBm, **with** preamplifier)	+53 dBm (interfering signals at 5 % and 10 % frequency offset, 2 × +10 dBm, **with** preamplifier)
Image frequency rejection	>130 dB	
IF rejection	>100 dB	>120 dB
Input power (operation)	typ. 6.3 V EMF	
Oscillator reradiation	<0.1 µV (at antenna input)	
Blocking (without preamplifier) Useful signal Interfering signal	1.5 MHz to 30 MHz <1 dB signal attenuation (interfering signal at 5 % frequency offset) 1 mV EMF (–53 dBm) 12.6 V (+29 dBm)	
Input voltage protection	max. 200 V EMF (with Z_{in} = 50 Ω)	
Tuning time	<10 ms	

Ordering information

Designation	**Type**	**Order No.**
Digitally Tuned RF Selector, 20 dB selectivity (model .02)	R&S®FK896D	6077.3019.02
Digitally Tuned RF Selector, 40 dB selectivity (model .04)	R&S®FK896D	6077.3019.04

Certified Quality System ISO 9001 DQS REG. NO 1954 QM

Certified Environmental System ISO 14001 DQS REG. NO 1954 UM

Certified Quality System AS 9100 DQS REG. NO 1954 AS

Certified Quality System AQAP-110 Audit report GP Q2-NO 96.07

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