

HF DSP Receivers comparison chart

	Hagenuk (HMK-EADS) RX3002	Racal (Thales) RA3791	Rohde&Schwarz EK896	Collins (Rockwell Collins) 95S1	WJ (BA) WJ8711A/HF1000A	TEN-TEC RX-340	JRC NRD-371	Redifon-MEL (Thales) R6100S/D	Best
Max.input (Operating)	+47dBm	+39dBm	+30dBm with option +59dBm	+10dBm				with pre/post sel. +47dBm	HMK-EADS
Sensitivity SSB (Pre-amplifier off)	-113dBm BW 2.4KHz SINAD 10dB	-113dBm BW 2.7KHz S/N 13dB	-113dBm BW 2.7KHz S/N 10dB	-115dBm BW 3.2KHz SINAD 10dB	-113dBm BW 2.4kHz SINAD 10dB	-112dBm BW 3.2kHz S/N 10dB	-112dBm BW 2.4kHz S/N 10dB	-113dBm BW 3kHz SINAD 10dB	Collins
Intercept Point IP2 IP3	>+30dBm(+35--- +41dBm) (0dBm 30kHz Sep.)	>+30dBm Typ.+32dBm (-13dBm 20kHz Sep.)	>+70dBm >+30dBm Typ.+35dBm (0dBm 30kHz Sep.)	>+80dBm >+25dBm	>+44dBm/Typ.+60dBm >+27dBm/Typ.+30dBm	Typ.+75dBm/Min.+60dBm Typ.+30dBm/Min.+25dBm (0dBm 100kHz Sep.)	+30dBm Typ.+32dBm	+25dBm	HMK-EADS R & S
Out of band IP3 with pre/post selector	>+65dBm(+70--- +76dBm)		>+50dBm (+55dBm)		>+47dBm	>+45dBm		>+55dBm 5%&10% Sep	HMK-EADS
Desensitization Signal 20KHz 30KHz 80KHz SINAD	?-113dBm BW:2.4kHz 70dB 80dB 20dB	-113dBm BW:2.7KHz 102dB 115dB 10dB	-83dBm BW:3.1KHz 80dB 20dB	-103dBm BW:4.8KHz 80dB 86dB 97dB 10dB					Racal
Blocking Dynamic Range	138dB				>107dB		109dB		HMK-EADS
IMD Dynamic Range					>97dB				
Crossmodulation Signal Interfering signal Transfer Interfering signal level	-53dBm 50% 1kHz Mod/20kHz Sep -20dB +21dBm	-53dBm BW:2.7KHz 30% 1kHz Mod/20kHz Sep -20dB +7dBm	-33dBm Bw:3.1KHz 30% 1kHz Mod/30kHz Sep -20dB +21dBm						HMK-EADS
Blocking Signal Interfering signal Compression Interfering signal level	-53dBm 50% 1kHz Mod/20kHz Sep 1dB +21dBm	-53dBm 30% 1kHz Mod/20kHz Sep 3dB +13dBm	-53dBm 30% 1kHz Mod/30kHz Sep 1dB +23dBm		-107dBm 20kHz Sep 3dB -47dBm	-40dBm 30% 1kHz Mod/200kHz Sep 3dB >+15dBm		100kHz 3dB +7dBm	HMK-EADS R&S
Out of band intermodulation products Signal level IMD3	(2x 0dBm 30kHz Sep) (<-60dB) 2x -13dBm 30kHz Sep <-86dB	2x -13dBm 20kHz Sep <-90dB	2x -13dBm 20kHz Sep <-100dB						R&S
In band IMD Signal level IMD3 (< -60dB)	2x-13dBm 1.2KHz Sep -45dB	2x -13dBm 600Hz Sep -55dB	2x 0dBm 600Hz Sep -40dB					2x -6dBm -50dB	Racal
IF rejection	>100dB	>100dB	>90dB	>80dB (>100dB)	>90dB	90dB	>85dB	>80dB	HMK-EADS Racal
Spurious	-100dBm	-87dBm	-124dBm	-115dBm		-119dBm			R&S
AGC Attack time Decay time AGC error	<10ms 25ms 200ms 500ms 1s 3s (-119dBm to +1dBm) 120dB <3dB (>130dB)--- <4dB		<10ms 25ms 150ms 500ms 1s 3s (-113dBm to +7dBm) 120dB <3dB		<15ms 25ms~4s	<10ms 10ms --- 99.9s	<10ms 10ms --- 5.0s		Racal
Phase noise 10Hz : -80dBc/Hz 100Hz : -100dBc/Hz 1kHz : -120dBc/Hz 2kHz : -125dBc/Hz 10kHz : -140dBc/Hz 20kHz : -145dBc/Hz 30kHz : -150dBc/Hz 100kHz : -160dBc/Hz 300kHz : -165dBc/Hz 1MHz : -170dBc/Hz	-106dBc/Hz -133dBc/Hz -143dBc/Hz		-55dBc/Hz -70dBc/Hz -90dBc/Hz -120dBc/Hz -160dBc/Hz -165dBc/Hz	-55dBc/Hz -90dBc/Hz -105dBc/Hz -110dBc/Hz -135dBc/Hz -145dBc/Hz		-120dBc/Hz	-110dB/Hz	-165dBc/Hz	R&S
IF BW Range SF (3dB/60dB) Inband Ripple	9steps 100Hz --- 7kHz 3 --- 2	100 steps 300Hz --- 12kHz	128steps 100Hz --- 9kHz <1.5	74steps 100Hz --- 300kHz <1.5	66steps 56Hz --- 16kHz <1.5	57steps 100Hz --- 16kHz <1.5	8steps 200Hz --- 10kHz	5steps 0.3,1.1,2.75,3.1,6kHz	HMK-EADS
External frequency standard	10MHz 0dBm ±10dBm	1MHz 5MHz 10MHz 0dBm(typ)	1MHz 5MHz 10MHz 0dBm(typ)	1MHz 5MHz 10MHz 0.2 to 1Vrms <1.5	10MHz	1, 2, 5, 10MHz 200mVp-p	10MHz -10dBm		NA
Data interface	RS-232C RS-422 RS-485	RS-423A (RS-232C)	RS-232C RS-485	RS-232C RS-422 RS-485	RS-232C	RS-232C	RS-232C		NA
I/Q outputs	Option	Option	Digital 16-bit	Digital 16-bit					NA
		Discon.		1st GM DCR	Discon.		JSDF spec.		NA