		CONRAD OrderNr	Order at www.conrad.nl
T1	BF998 (SOT143B) or BF998R (SOT143R)	**153029**	Dual gate MOSfet. S=21mS. (package SOT143B) **REM :** A BF998**R** is usable too (package SOT143**R**) by soldering it "Top-down" to the PCB. (always solder the broad leg to the broad PCB track). Order at **conrad.nl (SOT143B)** or **farnell.nl (SOT143R)**
T2	BFU590G	DARISUS GMBH	4-pin SOT223-4 12V 2W **Ft=8GHz** (eBay)
D1,2	1N4148	162280	Fast switching diode
D3	1N5929B	1305070	Zener diode 15V / 2W. Polarity and over voltage protection.
ZD1	BZX79-C1**4**	12 62 838	Zener diode 14V / 400mW. Over voltage protection. Normally not active.
1x	BNC bus.	1570027	PCB type, 90 degr. For antenna PCB. **Fits PCB.**
2x	BNC bus	156 48 88 (740 632)	Standard chassis type BNC bus. For splitter.
	2.1mm bus.	733946	"12V PWR" connector in splitter.
F1	PCB fuse holder 5x20mm Fuse 5x20mm	532908 533173 (157 65 02)	This fuse holder version will fit into the splitter PCB. Prefrable 0.16 A slow (or 0.2A slow)
Box	Cabinet	541621	Hammond 1590a Screening aluminum die cast box.
	Ferrite rings MIX#31 - or - 4S3.	Order at **ARROW.COM**	Cheap ferrite ring core **Fair-rite MIX#31 29mm (2631801202)** **For noise blocking on coax or power cables.** **Install one on every 3meter coax.** **Wind at least 14 turns RG316.**

L1			**Wire bridge.** If high frequency range must be limited, try 1 to 4.7 uH axial 7x3mm
L2,3,4	Bourns RLB0912 RM5 **(Low Ri)**	1056022 1056023	**10 uH RLB0912-100KL for ULF range down to 5 kHz.** else 100 uH RLB0912-101KL for LF range down to 50 kHz.
L2LF, L3LF, L4LF	Bourns RLB0912 RM5 **(Low Ri)**	1056024	**1 mH 200 mA. For extended ULF range down to 5 kHz.** else Wire bridge for LF range down to to 50 kHz.
L5	Order at **ARROW.COM 2631801202**		Common mode choke. See “Construction” how to. **Fair-rite MIX#31 29mm (2631801202)** **Wind 12 to 14 turns RG174 or RG316 coax .** **– or -** **Wind abt. 20 turns with one twisted wire pair 1mm.** (extracted from CAT5 or CAT6 network able).
C1,3	100n **FILM**	1235240	**NO ceramic !**
C2	47n **FILM**	1235249	**NO ceramic !** 47n limits low freq. range to 5kHz. else 1n limits low freq. range to 250 kHz.
C4LF, C7LF, C9LF	2,2uF **FILM RM5 7.2x5mm**	1569768	**NO ceramic !** **2u2 for extended low frequency range down to 5 kHz.** (1235240 0.1 uF if low frequency range limit = 100 kHz).
C8LF	**220uF 25V**	446108	Ensures 6 db/oct roll-off below 5 kHz.
C5,6	100uF 16V RM2.5	443906	
C4,7,8,9, 11.13	10n **FILM**	1569681	
C12,15	100pF **NP0**	**157 87 02**	
C14,16	22p **NP0** 500V	1589526	
C17	1n **FILM**	1235230	Or ceramic *NP0*. **NO other ceremattic.**

Miniwhip parts list Ver. 2018**1116** (20210119)
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		CONRAD OrderNr	**Resistors : Metalfilm 0.25W, 2.3x6.5mm (Bend their wires to RM10).**
R1,11, 12	47k	1584432	
R2	22k	1584427	
R3	1k	1583972	Limits VHF range to abt. 50MHz / prevents oscillation. Lower its value for VHF reception.
R4	180 Ohm	1584992	
R5	82 Ohm	1584975	
R6,7	2k2	1583718	
R6a	6k8	1583502	Adjusts to ½ Uc.
R8	220 Ohm	1583659	Limits VHF range to abt. 50MHz / prevents oscillation. Lower its value for VHF reception.
R9	(50 1W) Low Li	1583659	**2x220 + 2x180 Ohm 1/4W in parallel (low Li).** For lower current consumption : Omit one or two 180 Ohm resistors.
R10	1k		
R13	47 Ohm	1583650	Prevents oscillations.
R14	2k2		Prevents oscillations.
R16,17 ,18	22 MegOhm	1584841	Carbon resistor. If possible use metal film resistors.

Allowable supply range 9.0 Vdc to 14.0 Vdc.
NOISEFREE from ***linear*** power supply.

Supply : 14Vdc / 128mA (see R9).
Freq. Range : 5 kHz to 145 MHz.
R4 = 3.02 V Max antenna input 7Vpp.
R9 = 5.21 V Max splitter output @ 50 Ohms load (200 kHz) : 0.8 Vrms
=> Measured voltages will vary with varying power supply voltage <=