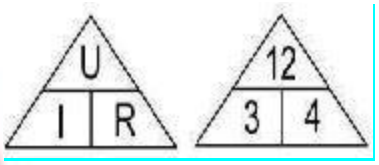
00 01 000 Formules

H 1 01	001	Lading	**Q = I x t**
H 1 01	002	Wet van Ohm	**U = I x R**



H 1 01	003	Totale weerstand	**Rt = R1 + R2**
H 1 01	004	Vervangingsweerstand	**Rv = 1/ [1/R1 + 1/R2]**

$$Rv = \frac{1}{\frac{1}{R1} + \frac{1}{R2}}$$

H 1 01	005	De 1ste Wet Van Kirchoff	**∑ I=0**
H 1 01	006	De 2de Wet Van Kirchoff	**∑ U=0**
H 1 01	007	Vermogen	**P = U x I** **P = U² / R** **P = I² x R**
H 1 01	008	Energie in Watt	**W = P x T**
H 1 01	009	Energie in Joules	**E = P x t**
H 1 02	010	Ueff	**Ueff = Umax*0.707**
H 1 02	011	Ugem	**Ugem = Umax*0.64**

$$\vec{E} = \frac{\vec{F}_e}{q}$$

H 1 03	012	Veldsterkte	
H 1 04	013	Wet van Lenz	
H 1 05	014	Voortplantingssnelheid	**f = 300 / λ** **λ = 300 / f**
H 1 06	015	Frequentie	**f = p / s** **f = 1 t** **f = p / t**
H 1 07	016	Audiosignaal	**300 / t = distance** **300/distance = t**
H 1 08	017	Modulatie index	**β = Δ**f / f-mod
H 1 08	018	BB-CW	**BB cw = f-tone**

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H 1 08	019	BB-AM	**BB AM = 2*f-mod**
H 1 08	020	BB-SSB	**BB SSB = 1*f-mod**
H 1 08	021	BB-FM	**BB FM = 2*f-mod + 2*Δf**
H 1 09	022	dB decibel	**dB = 10 x log [P1 / P2]**
H 1 09	023	Rendement	**n = [Pout / Pin] x 100%**
H 1 09	065	Ieff wisselstroom	**I eff = 0.707 x I max** **I eff = 1/2√2 x I max**
H 1 09	066	Ueff wisselspanning	**U eff = 0.707 x U max** **U eff = 1/2√2 x U max**
H 1	>>>>>		**1 Elektriciteitsleer, elektromagnetisme en radio theorie**
H 2 01	024	Weerstand van een draad	$R = \frac{rho * l}{q}$
H 2 01	025	Oppervlakte	**q = 1/4π x d²**
H 2 02	026	Capaciteit	$C = \frac{0.088 * isolator * A}{d}$
H 2 02	027	RC-tijd	**t = 5 x RC**
H 2 02	028	Schijnbare weerstand	**Xc = 1/ [2*π*f*C]** $XC = \frac{1}{2\ PI\ x\ f\ x\ C}$
H 2 02	029	Impedantie	**Z = √ [RxR] + [XxX]** $Z = \sqrt{R^2 + X^2}\ Ohm$
H 2 03	031	Inductie	$L = \frac{D^2 * n^2}{25 * (18 * D + 40 * L)}$

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H 2 03 032 Schijnbare weerstand **Xl = 2*π*f*L**

H 2 03 033 Resonantie **f.res = 1 / [2*π*√(L*C)]**

H 2 03 034 Bandbreedte **BW = fh – fl**

H 2 03 035 Q-faktor **Q = f.res / BW**

H 2 03 036 Impedantie $Z = \sqrt{R^2 + [Xc - Xl]^2}$

H 2 04 037 Trafo **P = P Up * Ip = Us * Is**

H 2 04 038 Wikkelverhouding **n = Np/Ns n = Up/Us n = Is/Ip**
n^2 = Zp/Zs n^2 = Cs/CP n = √ Cs /Cp

H 2 05 >>>>>

H 2 06 039 Versterking Transistor **HFe = Ic / Ib**

H 2 06 >>>>> GES, GBS, GCS

H 2 06 >>>>> Klasse A, Klasse B, Klasse AB, Klasse C

H 2 07 040 Steilheid $S = \frac{\Delta I_{out}}{\Delta U_{in}}$

H 2 07 041 Invertor **A = -R2 / R1**

H 2 07 042 Niet Invertor **A = 1 + [R2 / R1]**

H 2 >>>>> **2 Componenten**

H 3 01 043 Spoel in serie **Lt = L1 + L2**

H 3 01 044 Spoel parallel **Lv = 1 / (1/L1 + 1/L2)**

$$Lv = \frac{1}{\frac{1}{L1} + \frac{1}{L2}}$$

H 3 01 045 Condensator in serie **Cv = 1 / (1/C1 + 1/C2 + 1/C3)**

$$Cv = \frac{1}{\frac{1}{C1} + \frac{1}{C2} + \frac{1}{C3}}$$

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H 3 01 046 Condensator parallel — **Ct = C1 + C2**

H 3 01 047 Impedantie — **Z = U / I**

H 3 01 048 LEICIER — **LUICIUR**

H 3 02 049 Parallelkring — **$It = \sqrt{Ir^2 + Ix^2}$**

$It = \sqrt{Ir^2 + Ix^2}$

H 3 02 050 Parallelkring — **$It = \sqrt{Ir^2 + [Il - Ic]^2}$**

$U = \sqrt{Ur^2 + Ux^2}$

H 3 02 051 Parallelkring

H 3 02 052 Q-factor parallel kring — **Qp = Rp / XL**

$Qp = \frac{Rp}{X}$

H 3 02 053 Q-factor seriekring — **Qs = XL / Rs**

$Qs = \frac{X}{Rs}$

H 3 02 054 Bandbreedte — **B = f0 / Q**

$B = \frac{f0}{Q}$

H 3 02 055 Kantelfrequentie — **$Fk = \frac{1}{2 \times Pi \times R \times C} = HZ$** **$Fk = \frac{R}{2 \times Pi \times L} = Hz$**

H 3 03 >>>>>

H 3 04 056 LF-versterker — **A = R1 / R2**

H 3 04 057 Opamp — **A = Vout / Vin**

H 3 05 >>>>>

H 3 06 >>>>>

H 3 07 >>>>>

00 01 000 Formules

H 3 08 058 Spiegelfrequentie **fs = 2 * MF**

H 3 09 >>>>>

H 3 >>>>> **3 Schakelingen**

H 4 04 064 PPM stabiliteit **PPM = fAFw /fRes** **fAFw = PPM x fRes**

H 4 >>>>> **4 RX Ontvangers**

H 5 >>>>> **5 TX Zenders**

H 6 01 059 Verkortingsfaktor

$$1/2\ \text{Labda} = \frac{300/\text{MHZ}}{2} * V$$

H 6 03 060 SGV

$$SGV = \frac{Puit+Pref}{Puit-Pref}$$

H 6 >>>>> **6 Antennes en transmissielijnen**

H 7 01 061 Signaal / Ruis

$$SNR = \frac{P_{gewensd}}{P_{ruis}}$$

H 7 >>>>> **7 Propagatie en frequentiespectrum**

H 8 01 062 Voorschakelweerstand **Rv = (Ub-Um) / Im**

H 8 01 063 Shunt-weerstand **Rs = Um / (Ib-Im)**

H 8 >>>>> **8 Metingen**

H 9 >>>>> **9 Storing en immuniteit**

H 10 >>>>> **10 Veiligheid**

H 11 >>>>> **11 Nationale en internationale procedures**

H 12 >>>>> **12 Nationale en internationale gebruiksregels**

H 13 >>>>> **13 Gedragsregels**

H 14 >>>>> **14 Naschrift**

>>>>> **Waarden**