

FORMULE NEL FOGLIO DI CALCOLO "Trafi_RX"

CELLA	FORMULA	NOTE
B11	$tg \delta_m = \frac{\mu_s''}{\mu_s'}$	
B12	$\mu_p' = \mu_s' \left[1 + \left(\frac{\mu_s''}{\mu_s'} \right)^2 \right]$	
B13	$\mu_p'' = \mu_s'' \left[1 + \left(\frac{\mu_s''}{\mu_s'} \right)^2 \right]$	
B14	$Z_p = Z_{in} \sqrt{(1 - 10^{\frac{ \Gamma _{dB}}{20}}) / (1 + 10^{\frac{ \Gamma _{dB}}{20}})}$ [Ω]	
B15	$SWR = \left (1 - 10^{\frac{ \Gamma _{dB}}{20}}) / (1 + 10^{\frac{ \Gamma _{dB}}{20}}) \right $	
B16	$N_p = \sqrt{(Z_p 10^6) / (8\pi^2 f \sqrt{\mu_s'^2 + \mu_s''^2} \frac{A_e}{l_e})}$ [spire]	f [kHz], A_e [cm ²] e l_e [cm]
B18	$L_m = 4\pi \frac{A_e}{l_e} N_p^2 \mu_p'$ [nH]	A_e [cm ²] e l_e [cm]
B19	$X_m = 2\pi f L_m 10^{-6}$ [Ω]	f [kHz] e L_m [nH]
B20	$R_c = 8\pi^2 f \frac{A_e}{l_e} N_p^2 \mu_p'' 10^{-6}$ [Ω]	f [kHz], A_e [cm ²] e l_e [cm]
B21	$N_s = N_p \sqrt{Z_{out} / Z_{in}}$ [spire]	
B23	$Z'_{out} = \left(\frac{N_p}{N_s} \right)^2 Z_{out}$ [Ω]	
B24	$N = \frac{N_p}{N_s}$	
B25	$ \Gamma _{dB} = 20 \log \left \frac{Z_p - Z_{in}}{Z_p + Z_{in}} \right $ dove $Z_p = \frac{R_p + jX_m}{R_p + jX_m}$ e $R_p = \frac{R_c Z'_{out}}{R_c + Z'_{out}}$	X_m [H] il resto in [Ω]
B26	$SWR = \left (1 - 10^{\frac{ \Gamma _{dB}}{20}}) / (1 + 10^{\frac{ \Gamma _{dB}}{20}}) \right $	
B27	$f_L = \frac{Z_{in} R_c Z'_{out}}{(R_c Z'_{out} + Z_{in} Z'_{out} + Z_{in} R_c) 2\pi L_m 10^{-6}}$ [kHz]	L_m [nH] il resto in [Ω]
B29	$l_{wP} = l_w (N_p + 1)$ [cm]	L_w [cm]
B30	$l_{wS} = l_w (N_s + 1)$ [cm]	L_w [cm]