

$$Z_L = 100 + j100 \Omega$$

$$Z_0 = 50 \Omega$$

$$Z_{LN} = 2 + j2$$

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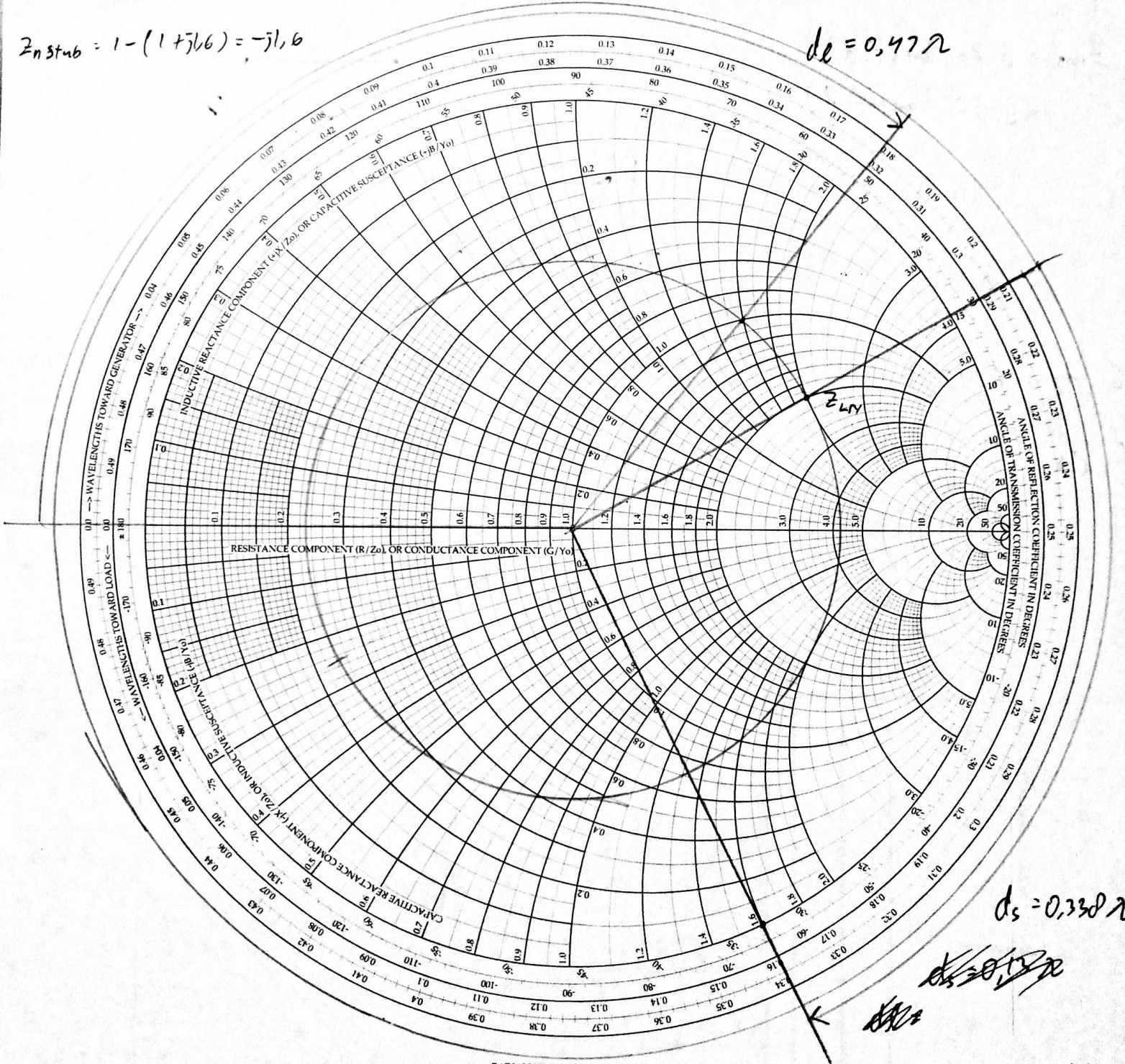
TT-43-11

The Complete Smith Chart

Black Magic Design

$$Z_{nstub} = 1 - (1 + j1.6) = -j1.6$$

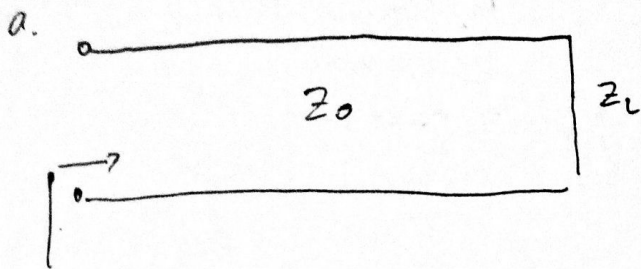
$$d_L = 0.477\lambda$$



RADIALLY SCALED PARAMETERS

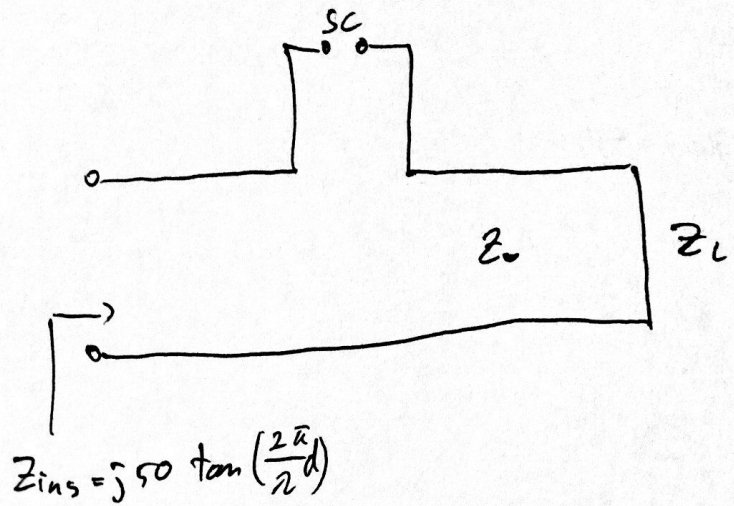
TOWARD LOAD →										← TOWARD GENERATOR									
SWR	100:1	20	10	5	4	3	2.5	2	1.8	1.6	1.4	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
RTN LOSS (dB)	40	30	20	15	10	8	6	5	4	3	2	1	1	1	1	1	1	1	1
REFL COEFF P	0	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	25	30	40
1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.05	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	2.0

ATTEN (dB)
SWR LOSS (dB)
REFL COEFF P
TRANSM COEFF P



$$Z_{ins} = j Z_0 \tan(\beta \cdot d)$$

$$= j \cdot 50 \tan\left(\frac{2\pi}{\lambda} \cdot d\right)$$



b. $d_L = 0,47 \lambda$

c. $d_S = 0,33 \lambda$