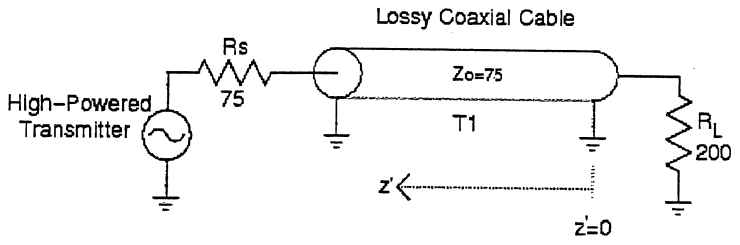
@ 450Mhz

7. A high-powered transmitter is attached to the end of a 75Ω coaxial transmission line with non-zero R and G parameters. The cable has $v_p = 0.7c$ and is shorted at its end.

$$\lambda = \frac{(0.7)(300 \times 10^6)\frac{m}{s}}{450 \times 10^6 \frac{1}{s}} = .4667m$$



a) Starting from the load, at what points on the line would it be most likely that a conductor could melt due to excessive current conditions?

Since A resistive load greater than Zo is the load, the voltage maximum & current minimum will be at the load. Thus, 1/4 away the current maximum will occur. That is where conductor melting would occur. This is 0.1167 metrs from the load.

b) Starting from the load, at what points would it be most likely for dielectric breakdown to occur?

First since A voltage max is at the load, breakdown could occur here as well as every 1/2 or .2334 metrs

c) every 1/2 you may see damage or every .2334 m