

```
In[11]:= Ls = Z0^2 * Cs; Gs = Rs * Cs / Ls; td = x * Sqrt[Ls * Cs];
```

[Quadratwurzel](#)

```
gam = Sqrt[(Rs + p * Ls) * (Gs + p * Cs)];
```

[Quadratwurzel](#)

```
Tp = (Z2 * Cosh[gam * (1 - x)] + Z0 * Sinh[gam * (1 - x)]) /
```

[Kosinus Hyperbolicus](#)

[Sinus Hyperbolicus](#)

```
((Z1 + Z2) * Cosh[gam * l] + (Z0 + Z1 * Z2 / Z0) * Sinh[gam * l]) // TrigToExp // Simplify;
```

[Kosinus Hyperbolicus](#)

[Sinus Hyperbolicus](#)

[konvertiere tri...](#)

[vereinfache](#)

```
lap = FullSimplify[1 / p * Tp, Assumptions -> {Z0 > 0, tr > 0, (Rs + p * Cs * Z0^2) > 0}] /. {Z1 -> Z0};
```

[vereinfache vollständig](#)

[Annahmen](#)

```
InverseLaplaceTransform[lap, p, t]
```

[inverse Laplace-Transformation](#)

```
ua[t_] := InverseLaplaceTransform[lap, p, t]
```

[inverse Laplace-Transformation](#)

```
Out[15]= 0.00324698 (50.3292 HeavisideTheta[-7.57874 × 10-7 + t] + 152.982 HeavisideTheta[-2.52625 × 10-7 + t])
```

```
In[17]:= Z0 = 50; Z2 = 100; Cs = 101.049872*^-12; Rs = 6.56167979*^-3; l = 100; x = 50; tr = 1*^-7;
```

```
In[18]:= Plot[ua[t], {t, 0, 5 * td}, GridLines -> Automatic]
```

[stelle Funktion graphisch dar](#)

[Gitternetzlinien](#)

[automatisch](#)

