```
clearvars
close all
format shortEng
syms R_a R_b C

assume(R_a > 0);
assume(R_b > 0);

C = 3.3e-9/2
```

```
C =
     1.6500e-009
```

```
wantedFreq = 20e3
```

```
wantedFreq =
    20.0000e+003
```

```
wantedDuty = 0.6
```

```
wantedDuty =
   600.0000e-003
```

```


freq = 1.44/( (R_a + 2*R_b)*C );
duty = 1 - R_b/(R_a + 2*R_b);

eq1 = wantedFreq == freq;
eq2 = wantedDuty == duty;

sln = solve([eq1, eq2], [R_a, R_b])
```

```
sln = struct with fields:
    R_a: 5440166188265831286177792/623352375738793203125
    R_b: 10880332376531662572355584/623352375738793203125
```

```


obtainedFreq = double(subs(freq, [R_a, R_b], [sln.R_a, sln.R_b]))
```

```
obtainedFreq =
    20.0000e+003
```

```
obtainedDuty= double(subs(duty, [R_a, R_b], [sln.R_a, sln.R_b]))
```

```
obtainedDuty =
   600.0000e-003
```

Experimanetal Solver

```
valR_a = 10e3
```

```
valR_a =
    10.0000e+003
```

```
valR_b = 20e3
```

```
valR_b =
    20.0000e+003
```

```
obtainedFreq = double(subs(freq, [R_a, R_b], [valR_a, valR_b]))
```

```
obtainedFreq =
    17.4545e+003
```

```
obtainedDuty= double(subs(duty, [R_a, R_b], [valR_a, valR_b]))
```

```
obtainedDuty =
   600.0000e-003
```