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% Hatarozzuk meg a "klasszikus" modon a helyettesito ellenallast

% 0. Halozati paramterek

R = 2; I0 = 4; % kOhm, mA

% 1. Lezaras szakadassal

A = [1/R+1/(2\*R) -1/(2\*R) 0;-1/(2\*R) 1/R+1/R+1/(2\*R) -1/R;0 -1/R 1/R+1/(2\*R)]

B = [I0;0;0]

x = A \ B

% szakadasi feszultseg a keresett mennyisege

UT = x(3)

% 2. Lezaras rovidzarral

A = [1/R+1/(2\*R) -1/(2\*R) 0;-1/(2\*R) 1/R+1/R+1/(2\*R) -1/R;0 0 1]

xrz = A \ B

% A rovidzarasi aramot keressuk

Irz = (xrz(2)-xrz(3))/R

% a Norton generator

IN = -Irz

% 3. Belso ellenallas erteke

RB = UT/(-IN)

% 4. Maximalis teljesitmeny

Pmax = UT^2/(4\*RB)

A =

```
0.7500    -0.2500         0
-0.2500    1.2500   -0.5000
         0   -0.5000    0.7500
```

B =

```
4
0
0
```

x =

```
5.8667
1.6000
1.0667
```

UT =

```
1.0667
```

A =

```
0.7500    -0.2500         0
-0.2500    1.2500   -0.5000
         0         0    1.0000
```

xrz =

---

```
    5.7143
    1.1429
    0
Irz =
    0.5714
IN =
   -0.5714
RB =
    1.8667
Pmax =
    0.1524
```

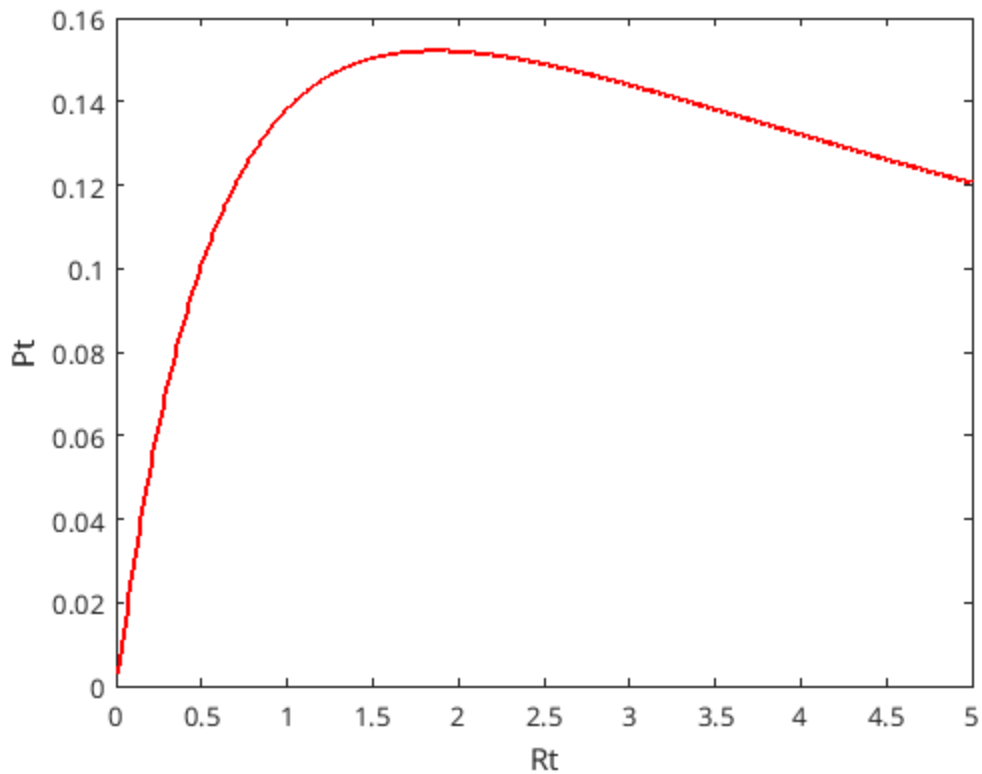
## A terhelo ellenallas hatasa a terheles teljesitmenyere

```
Rt = 0.01:0.01:5;
R = 2;
I0 = 4;

pt = zeros(size(Rt));
ut = zeros(size(Rt));
for id = 1:length(Rt)
    [utemp,ptemp] = peldabela(R,I0,Rt(id));
    ut(id) = utemp;
    pt(id) = ptemp;
end
```

## abrazolas

```
figure;
plot(Rt, pt, 'r-', 'LineWidth', 2);
xlabel('Rt');
ylabel('Pt');
```

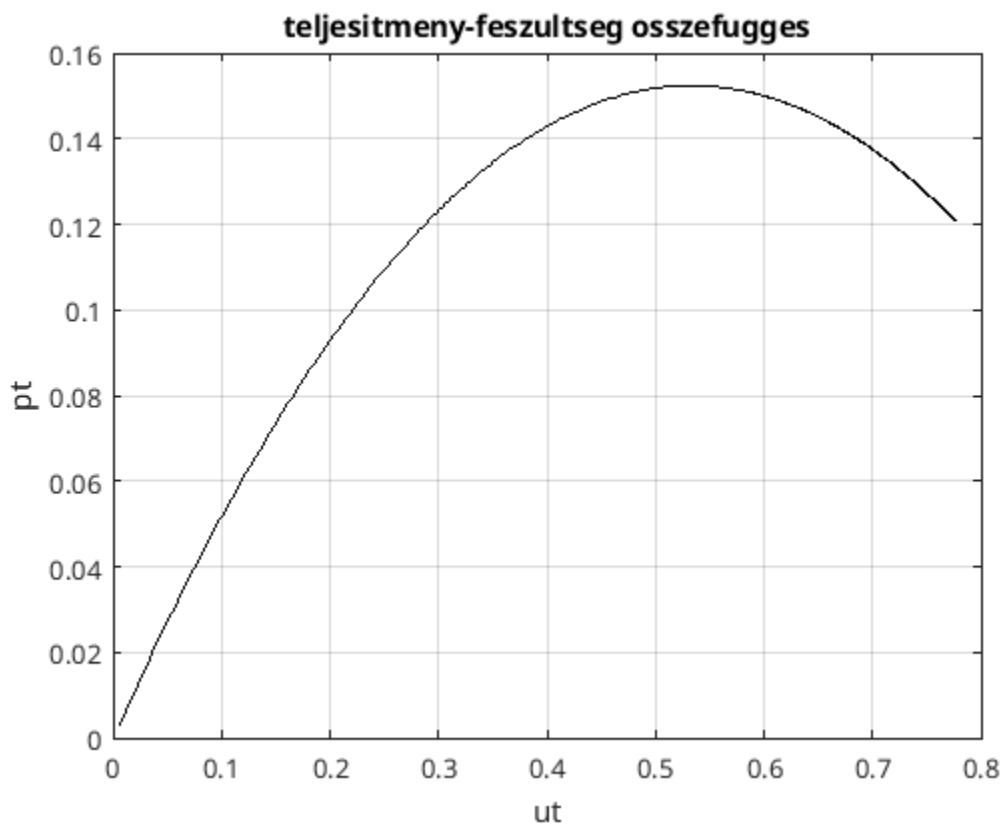
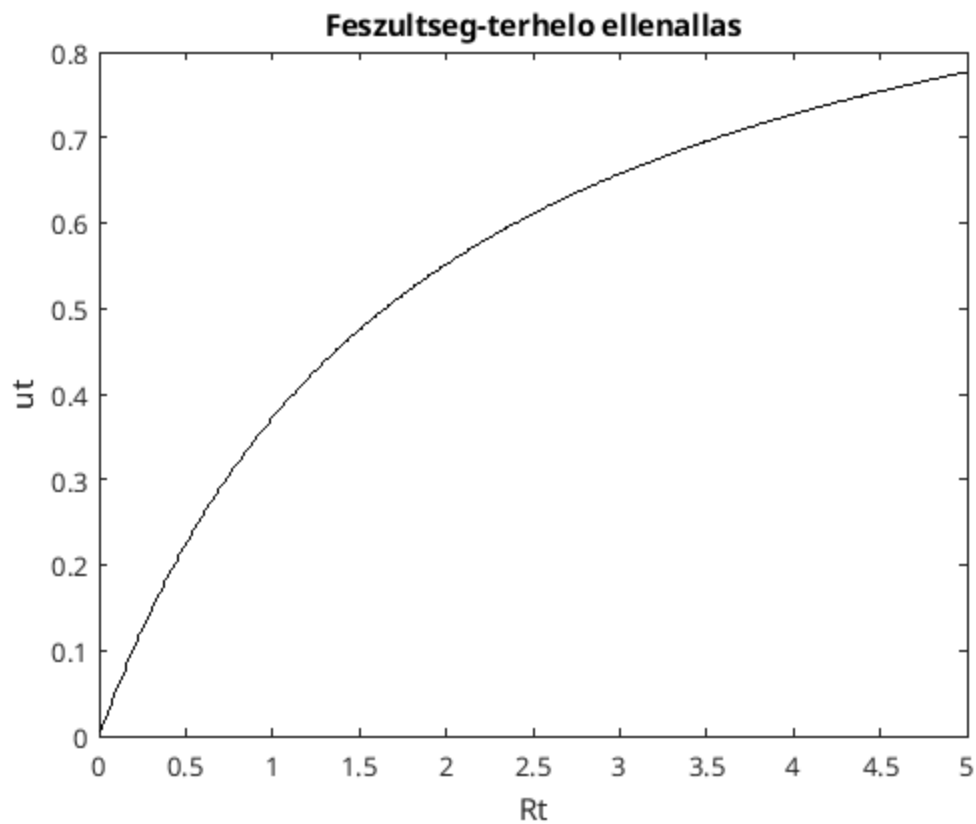


## További abrazolas

feszultseg-terhelo ellenallas osszefugges

```
figure;  
plot(Rt,ut,'k-');  
xlabel('Rt');  
ylabel('ut');  
title('Feszultseg-terhelo ellenallas');
```

```
% teljesitmeny-feszultseg osszefugges  
figure;plot(ut,pt,'k-');  
xlabel('ut'); ylabel('pt');  
set(gca,'XGrid','on','YGrid','on');  
title('teljesitmeny-feszultseg osszefugges');
```



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