

Initial Parameters...

R(load) = 500 ohms

r = 1.00

w = 0.50

INITIAL Particle 1 :: pos(duty)= 0.69482862 fitness(Output Power)= 40.04134853
INITIAL Particle 2 :: pos(duty)= 0.31709948 fitness(Output Power)= 8.41032495
INITIAL Particle 3 :: pos(duty)= 0.95022205 fitness(Output Power)= 36.78731864

=====
+++++Start of Iterations+++++
=====

Iteration No: 1

c1 = 0.03444608 c2 = 0.43874436

velocity =

0
0.1657
-0.1121

Particle 1 :: pos(duty)= 0.69482862 fitness(Output Power)= 40.04134853
Particle 2 :: pos(duty)= 0.48282601 fitness(Output Power)= 14.31259415
Particle 3 :: pos(duty)= 0.83816962 fitness(Output Power)= 128.64864675

Updated best Fitness Position = 0.83816962

Iteration No: 2
c1 = 0.38155846 c2 = 0.76551679
velocity =

0.1097
0.3549
-0.0560

Particle 1 :: pos(duty)= 0.80455857 fitness(Output Power)= 92.73425150
Particle 2 :: pos(duty)= 0.83771078 fitness(Output Power)= 128.08579104
Particle 3 :: pos(duty)= 0.78214341 fitness(Output Power)= 76.26727134

Updated best Fitness Position = 0.83816962

Iteration No: 3
c1 = 0.79519990 c2 = 0.18687260
velocity =

0.0611
0.1775
0.0270

```
Particle 1 :: pos(duty)= 0.86570452 fitness(Output Power)= 167.55540107
Particle 2 :: pos(duty)= 0.95000000 fitness(Output Power)= 37.11431295
Particle 3 :: pos(duty)= 0.80915211 fitness(Output Power)= 96.90931004
```

Updated best Fitness Position = 0.86570452

Iteration No: 4

c1 = 0.48976440 c2 = 0.44558620

velocity =

```
0.0306
-0.0038
0.0529
```

```
Particle 1 :: pos(duty)= 0.89627750 fitness(Output Power)= 157.10247783
Particle 2 :: pos(duty)= 0.94620790 fitness(Output Power)= 42.94568160
Particle 3 :: pos(duty)= 0.86206718 fitness(Output Power)= 162.49577390
```

Updated best Fitness Position = 0.86570452

Iteration No: 5

c1 = 0.64631301 c2 = 0.70936483

velocity =

```
-0.0262
-0.1291
0.0290
```

```
Particle 1 :: pos(duty)= 0.87011688 fitness(Output Power)= 173.18730074
Particle 2 :: pos(duty)= 0.81708248 fitness(Output Power)= 104.39883887
Particle 3 :: pos(duty)= 0.89110492 fitness(Output Power)= 169.20319252
```

Updated best Fitness Position = 0.87011688

Iteration No: 6

c1 = 0.75468668 c2 = 0.27602508

velocity =

```
-0.0131
-0.0344
0.0087
```

```
Particle 1 :: pos(duty)= 0.85703657 fitness(Output Power)= 155.21992333
Particle 2 :: pos(duty)= 0.78272650 fitness(Output Power)= 76.26727134
Particle 3 :: pos(duty)= 0.89983056 fitness(Output Power)= 147.61883308
```

Updated best Fitness Position = 0.87011688

Iteration No: 7

c1 = 0.67970268 c2 = 0.65509800

velocity =

0.0109

0.0774

-0.0210

Particle 1 :: pos(duty)= 0.86795602 fitness(Output Power)= 170.55392190

Particle 2 :: pos(duty)= 0.86017073 fitness(Output Power)= 159.79504910

Particle 3 :: pos(duty)= 0.87879717 fitness(Output Power)= 179.99215899

Updated best Fitness Position = 0.87879717

Iteration No: 8

c1 = 0.16261174 c2 = 0.11899768

velocity =

0.0071

0.0409

-0.0105

Particle 1 :: pos(duty)= 0.87505720 fitness(Output Power)= 178.00231250

Particle 2 :: pos(duty)= 0.90110935 fitness(Output Power)= 144.16661272

Particle 3 :: pos(duty)= 0.86828047 fitness(Output Power)= 170.97535041

Updated best Fitness Position = 0.87879717

Iteration No: 9

c1 = 0.49836405 c2 = 0.95974396

velocity =

0.0071

-0.0213

0.0101

Particle 1 :: pos(duty)= 0.88219720 fitness(Output Power)= 179.94965065

Particle 2 :: pos(duty)= 0.87976234 fitness(Output Power)= 180.17969307

Particle 3 :: pos(duty)= 0.87835660 fitness(Output Power)= 179.85642479

Updated best Fitness Position = 0.87976234

Iteration No: 10

c1 = 0.34038573 c2 = 0.58526775

velocity =

0.0021

-0.0107

0.0060

Particle 1 :: pos(duty)= 0.88434216 fitness(Output Power)= 178.81974908

Particle 2 :: pos(duty)= 0.86908884 fitness(Output Power)= 171.93775799

Particle 3 :: pos(duty)= 0.88436736 fitness(Output Power)= 178.79961210

Updated best Fitness Position = 0.87976234

Iteration No: 11

c1 = 0.22381194 c2 = 0.75126706

velocity =

-0.0028

0.0051

-0.0017

Particle 1 :: pos(duty)= 0.88149390 fitness(Output Power)= 180.12706955

Particle 2 :: pos(duty)= 0.87415959 fitness(Output Power)= 177.28563131

Particle 3 :: pos(duty)= 0.88266647 fitness(Output Power)= 179.77617519

Updated best Fitness Position = 0.87976234

Iteration No: 12

c1 = 0.25509512 c2 = 0.50595705

velocity =

-0.0023

0.0068

-0.0033

Particle 1 :: pos(duty)= 0.87919368 fitness(Output Power)= 180.08773402

Particle 2 :: pos(duty)= 0.88095896 fitness(Output Power)= 180.19995206

Particle 3 :: pos(duty)= 0.87935962 fitness(Output Power)= 180.11586081

Updated best Fitness Position = 0.88095896

Iteration No: 13

c1 = 0.69907672 c2 = 0.89090325

velocity =

0.0020
0.0034
-0.0002

Particle 1 ::	pos(duty)=	0.88122429	fitness(Output Power)=	180.16776157
Particle 2 ::	pos(duty)=	0.88435864	fitness(Output Power)=	178.79961210
Particle 3 ::	pos(duty)=	0.87913105	fitness(Output Power)=	180.07235905

Updated best Fitness Position = 0.88095896

Iteration No: 14

c1 = 0.95929143 c2 = 0.54721553

velocity =

0.0009
-0.0034
0.0011

Particle 1 ::	pos(duty)=	0.88209440	fitness(Output Power)=	179.98674573
Particle 2 ::	pos(duty)=	0.88093683	fitness(Output Power)=	180.19995206
Particle 3 ::	pos(duty)=	0.88023629	fitness(Output Power)=	180.21522271

Updated best Fitness Position = 0.88023629

Iteration No: 15

c1 = 0.13862444 c2 = 0.14929401

velocity =

0.0000
-0.0018
0.0006

Particle 1 ::	pos(duty)=	0.88213143	fitness(Output Power)=	179.96851855
Particle 2 ::	pos(duty)=	0.87912135	fitness(Output Power)=	180.06434098
Particle 3 ::	pos(duty)=	0.88078891	fitness(Output Power)=	180.21145647

Updated best Fitness Position = 0.88023629

Iteration No: 16

c1 = 0.25750825 c2 = 0.84071726

velocity =

-0.0018
0.0005
-0.0003

```
Particle 1 :: pos(duty)= 0.88032307 fitness(Output Power)= 180.21861699
Particle 2 :: pos(duty)= 0.87961845 fitness(Output Power)= 180.15679391
Particle 3 :: pos(duty)= 0.88045832 fitness(Output Power)= 180.22040503
```

Updated best Fitness Position = 0.88045832

Iteration No: 17

c1 = 0.25428218 c2 = 0.81428483

velocity =

```
-0.0008
0.0013
-0.0002
```

```
Particle 1 :: pos(duty)= 0.87952902 fitness(Output Power)= 180.14616388
Particle 2 :: pos(duty)= 0.88088614 fitness(Output Power)= 180.20510769
Particle 3 :: pos(duty)= 0.88029302 fitness(Output Power)= 180.21768226
```

Updated best Fitness Position = 0.88045832

Iteration No: 18

c1 = 0.24352497 c2 = 0.92926362

velocity =

```
1.0e-03 *
0.6599
0.2363
0.1112
```

```
Particle 1 :: pos(duty)= 0.88018893 fitness(Output Power)= 180.21369650
Particle 2 :: pos(duty)= 0.88112242 fitness(Output Power)= 180.18386976
Particle 3 :: pos(duty)= 0.88040423 fitness(Output Power)= 180.21989981
```

Updated best Fitness Position = 0.88045832

Iteration No: 19

c1 = 0.34998377 c2 = 0.19659525

velocity =

```
1.0e-03 *
0.4299
-0.0951
0.0852
```

```
Particle 1 :: pos(duty)= 0.88061879 fitness(Output Power)= 180.21830170
Particle 2 :: pos(duty)= 0.88102730 fitness(Output Power)= 180.19406398
Particle 3 :: pos(duty)= 0.88048940 fitness(Output Power)= 180.22036773
```

```
Updated best Fitness Position = 0.88045832
```

```
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```

```
Iteration No: 20
```

```
c1 = 0.25108386 c2 = 0.61604468
```

```
velocity =
```

```
1.0e-03 *
```

```
0.0418
```

```
-0.4335
```

```
0.0156
```

```
Particle 1 :: pos(duty)= 0.88066061 fitness(Output Power)= 180.21730934
Particle 2 :: pos(duty)= 0.88059378 fitness(Output Power)= 180.21910439
Particle 3 :: pos(duty)= 0.88050503 fitness(Output Power)= 180.22036773
```

```
Updated best Fitness Position = 0.88045832
```

```
-----
```

```
Iteration No: 21
```

```
c1 = 0.47328885 c2 = 0.35165951
```

```
velocity =
```

```
1.0e-03 *
```

```
-0.2100
```

```
-0.2644
```

```
-0.0307
```

```
Particle 1 :: pos(duty)= 0.88045063 fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88032938 fitness(Output Power)= 180.21861699
Particle 3 :: pos(duty)= 0.88047431 fitness(Output Power)= 180.22036773
```

```
Updated best Fitness Position = 0.88045063
```

```
-----
```

```
Iteration No: 22
```

```
c1 = 0.83082863 c2 = 0.58526409
```

```
velocity =
```

```
1.0e-03 *
```

```
-0.1050
```

0.1584
-0.0425

Particle 1 ::	pos(duty)=	0.88034564	fitness(Output Power)=	180.21935595
Particle 2 ::	pos(duty)=	0.88048781	fitness(Output Power)=	180.22036773
Particle 3 ::	pos(duty)=	0.88043180	fitness(Output Power)=	180.22024928

Updated best Fitness Position = 0.88045063

Iteration No: 23

c1 = 0.54972361 c2 = 0.91719366

velocity =

1.0e-03 *

0.1015
0.0451
0.0106

Particle 1 ::	pos(duty)=	0.88044716	fitness(Output Power)=	180.22040503
Particle 2 ::	pos(duty)=	0.88053292	fitness(Output Power)=	180.22013808
Particle 3 ::	pos(duty)=	0.88044239	fitness(Output Power)=	180.22040503

Updated best Fitness Position = 0.88044716

Iteration No: 24

c1 = 0.28583902 c2 = 0.75720023

velocity =

1.0e-04 *

0.5076
-0.5528
0.0890

Particle 1 ::	pos(duty)=	0.88049791	fitness(Output Power)=	180.22036773
Particle 2 ::	pos(duty)=	0.88047764	fitness(Output Power)=	180.22036773
Particle 3 ::	pos(duty)=	0.88045129	fitness(Output Power)=	180.22040503

Updated best Fitness Position = 0.88044716

Iteration No: 25

c1 = 0.75372909 c2 = 0.38044585

velocity =

1.0e-04 *

-0.3219
-0.3924
0.0288

Particle 1 :: pos(duty)= 0.88046572 fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88043840 fitness(Output Power)= 180.22024928
Particle 3 :: pos(duty)= 0.88045417 fitness(Output Power)= 180.22040503

Updated best Fitness Position = 0.88046572

Iteration No: 26

c1 = 0.56782164 c2 = 0.07585429

velocity =

1.0e-04 *

-0.1610
0.0473
0.0231

Particle 1 :: pos(duty)= 0.88044963 fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88044314 fitness(Output Power)= 180.22040503
Particle 3 :: pos(duty)= 0.88045648 fitness(Output Power)= 180.22040503

Updated best Fitness Position = 0.88044963

Iteration No: 27

c1 = 0.05395012 c2 = 0.53079755

velocity =

1.0e-05 *

-0.8048
0.5814
-0.2482

Particle 1 :: pos(duty)= 0.88044158 fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88044895 fitness(Output Power)= 180.22040503
Particle 3 :: pos(duty)= 0.88045400 fitness(Output Power)= 180.22040503

Updated best Fitness Position = 0.88044158

Iteration No: 28

c1 = 0.77916723 c2 = 0.93401068

velocity =

1.0e-04 *

-0.0402

-0.0397

-0.1284

Particle 1 ::	pos(duty)=	0.88043756	fitness(Output Power)=	180.22024928
Particle 2 ::	pos(duty)=	0.88044497	fitness(Output Power)=	180.22040503
Particle 3 ::	pos(duty)=	0.88044116	fitness(Output Power)=	180.22040503

Updated best Fitness Position = 0.88044158

Iteration No: 29

c1 = 0.12990621 c2 = 0.56882366

velocity =

1.0e-05 *

0.0800

-0.3917

-0.6182

Particle 1 ::	pos(duty)=	0.88043836	fitness(Output Power)=	180.22024928
Particle 2 ::	pos(duty)=	0.88044106	fitness(Output Power)=	180.22040503
Particle 3 ::	pos(duty)=	0.88043498	fitness(Output Power)=	180.22024928

Updated best Fitness Position = 0.88044158

Iteration No: 30

c1 = 0.46939064 c2 = 0.01190207

velocity =

1.0e-05 *

0.1952

-0.1952

-0.0111

Particle 1 ::	pos(duty)=	0.88044031	fitness(Output Power)=	180.22040503
Particle 2 ::	pos(duty)=	0.88043911	fitness(Output Power)=	180.22024928
Particle 3 ::	pos(duty)=	0.88043487	fitness(Output Power)=	180.22024928

Updated best Fitness Position = 0.88044031

Iteration No: 31

```
c1 = 0.33712264    c2 = 0.16218231
velocity =
```

```
1.0e-05 *
```

```
0.0976
-0.0123
0.2948
```

```
Particle 1 :: pos(duty)= 0.88044128    fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88043898    fitness(Output Power)= 180.22024928
Particle 3 :: pos(duty)= 0.88043782    fitness(Output Power)= 180.22024928
```

```
Updated best Fitness Position = 0.88044128
```

```
-----
```

```
Iteration No: 32
```

```
c1 = 0.79428454    c2 = 0.31121504
velocity =
```

```
1.0e-05 *
```

```
0.0488
0.2303
0.5210
```

```
Particle 1 :: pos(duty)= 0.88044177    fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88044129    fitness(Output Power)= 180.22040503
Particle 3 :: pos(duty)= 0.88044303    fitness(Output Power)= 180.22040503
```

```
Updated best Fitness Position = 0.88044177
```

```
-----
```

```
Iteration No: 33
```

```
c1 = 0.52853314    c2 = 0.16564873
velocity =
```

```
1.0e-05 *
```

```
0.0244
0.1232
0.2397
```

```
Particle 1 :: pos(duty)= 0.88044202    fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88044252    fitness(Output Power)= 180.22040503
Particle 3 :: pos(duty)= 0.88044542    fitness(Output Power)= 180.22040503
```

```
Updated best Fitness Position = 0.88044202
```

Iteration No: 34

c1 = 0.60198194 c2 = 0.26297128

velocity =

1.0e-06 *

0.1220

0.4843

0.3027

Particle 1 :: pos(duty)= 0.88044214 fitness(Output Power)= 180.22040503

Particle 2 :: pos(duty)= 0.88044300 fitness(Output Power)= 180.22040503

Particle 3 :: pos(duty)= 0.88044573 fitness(Output Power)= 180.22040503

Updated best Fitness Position = 0.88044214

Iteration No: 35

c1 = 0.65407910 c2 = 0.68921450

velocity =

1.0e-05 *

0.0061

-0.0353

-0.2321

Particle 1 :: pos(duty)= 0.88044220 fitness(Output Power)= 180.22040503

Particle 2 :: pos(duty)= 0.88044265 fitness(Output Power)= 180.22040503

Particle 3 :: pos(duty)= 0.88044341 fitness(Output Power)= 180.22040503

Updated best Fitness Position = 0.88044220

Iteration No: 36

c1 = 0.74815159 c2 = 0.45054160

velocity =

1.0e-05 *

0.0030

-0.0379

-0.1704

Particle 1 :: pos(duty)= 0.88044223 fitness(Output Power)= 180.22040503

Particle 2 :: pos(duty)= 0.88044227 fitness(Output Power)= 180.22040503

Particle 3 :: pos(duty)= 0.88044170 fitness(Output Power)= 180.22040503

Updated best Fitness Position = 0.88044223

Iteration No: 37

c1 = 0.08382138 c2 = 0.22897697

velocity =

1.0e-06 *

0.0152

-0.1987

-0.7307

Particle 1 :: pos(duty)= 0.88044225 fitness(Output Power)= 180.22040503

Particle 2 :: pos(duty)= 0.88044207 fitness(Output Power)= 180.22040503

Particle 3 :: pos(duty)= 0.88044097 fitness(Output Power)= 180.22040503

Updated best Fitness Position = 0.88044225

Iteration No: 38

c1 = 0.91333736 c2 = 0.15237802

velocity =

1.0e-06 *

0.0076

-0.0729

-0.1711

Particle 1 :: pos(duty)= 0.88044225 fitness(Output Power)= 180.22040503

Particle 2 :: pos(duty)= 0.88044200 fitness(Output Power)= 180.22040503

Particle 3 :: pos(duty)= 0.88044080 fitness(Output Power)= 180.22040503

Updated best Fitness Position = 0.88044225

Iteration No: 39

c1 = 0.82581698 c2 = 0.53834244

velocity =

1.0e-06 *

0.0038

0.1006

0.6969

Particle 1 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503

Particle 2 :: pos(duty)= 0.88044210 fitness(Output Power)= 180.22040503

Particle 3 :: pos(duty)= 0.88044150 fitness(Output Power)= 180.22040503

Updated best Fitness Position = 0.88044226

Iteration No: 40

c1 = 0.99613472 c2 = 0.07817553

velocity =

1.0e-06 *

0.0019

0.0626

0.4079

Particle 1 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503

Particle 2 :: pos(duty)= 0.88044216 fitness(Output Power)= 180.22040503

Particle 3 :: pos(duty)= 0.88044190 fitness(Output Power)= 180.22040503

Updated best Fitness Position = 0.88044226

Iteration No: 41

c1 = 0.44267827 c2 = 0.10665277

velocity =

1.0e-06 *

0.0010

0.0417

0.2418

Particle 1 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503

Particle 2 :: pos(duty)= 0.88044220 fitness(Output Power)= 180.22040503

Particle 3 :: pos(duty)= 0.88044215 fitness(Output Power)= 180.22040503

Updated best Fitness Position = 0.88044226

Iteration No: 42

c1 = 0.96189808 c2 = 0.00463422

velocity =

1.0e-06 *

0.0005

0.0211

0.1214

Particle 1 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503

Particle 2 :: pos(duty)= 0.88044222 fitness(Output Power)= 180.22040503

```
Particle 3 :: pos(duty)= 0.88044227 fitness(Output Power)= 180.22040503
```

```
Updated best Fitness Position = 0.88044226
```

```
-----
```

```
Iteration No: 43
```

```
c1 = 0.77491046 c2 = 0.81730322
```

```
velocity =
```

```
1.0e-07 *
```

```
0.0024
```

```
0.3972
```

```
0.5471
```

```
Particle 1 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
```

```
Particle 2 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
```

```
Particle 3 :: pos(duty)= 0.88044232 fitness(Output Power)= 180.22040503
```

```
Updated best Fitness Position = 0.88044226
```

```
-----
```

```
Iteration No: 44
```

```
c1 = 0.86869471 c2 = 0.08443585
```

```
velocity =
```

```
1.0e-07 *
```

```
0.0012
```

```
0.1954
```

```
0.2214
```

```
Particle 1 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
```

```
Particle 2 :: pos(duty)= 0.88044228 fitness(Output Power)= 180.22040503
```

```
Particle 3 :: pos(duty)= 0.88044234 fitness(Output Power)= 180.22040503
```

```
Updated best Fitness Position = 0.88044226
```

```
-----
```

```
Iteration No: 45
```

```
c1 = 0.39978265 c2 = 0.25987040
```

```
velocity =
```

```
1.0e-07 *
```

```
0.0006
```

```
0.0374
```

```
-0.1071
```

```
Particle 1 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88044229 fitness(Output Power)= 180.22040503
Particle 3 :: pos(duty)= 0.88044233 fitness(Output Power)= 180.22040503
```

Updated best Fitness Position = 0.88044226

Iteration No: 46

c1 = 0.80006848 c2 = 0.43141383

velocity =

1.0e-07 *

0.0003

-0.0973

-0.3687

```
Particle 1 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88044228 fitness(Output Power)= 180.22040503
Particle 3 :: pos(duty)= 0.88044230 fitness(Output Power)= 180.22040503
```

Updated best Fitness Position = 0.88044226

Iteration No: 47

c1 = 0.91064759 c2 = 0.18184703

velocity =

1.0e-07 *

0.0001

-0.0798

-0.2501

```
Particle 1 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88044227 fitness(Output Power)= 180.22040503
Particle 3 :: pos(duty)= 0.88044227 fitness(Output Power)= 180.22040503
```

Updated best Fitness Position = 0.88044226

Iteration No: 48

c1 = 0.26380292 c2 = 0.14553898

velocity =

1.0e-07 *

0.0001

-0.0532

-0.1412

```
Particle 1 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
Particle 3 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
```

Updated best Fitness Position = 0.88044226

Iteration No: 49

c1 = 0.13606856 c2 = 0.86929221

velocity =

1.0e-08 *

0.0004

-0.5968

-0.4447

```
Particle 1 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
Particle 3 :: pos(duty)= 0.88044225 fitness(Output Power)= 180.22040503
```

Updated best Fitness Position = 0.88044226

Iteration No: 50

c1 = 0.57970459 c2 = 0.54986020

velocity =

1.0e-08 *

0.0002

-0.1793

0.1878

```
Particle 1 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
Particle 2 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
Particle 3 :: pos(duty)= 0.88044226 fitness(Output Power)= 180.22040503
```

Updated best Fitness Position = 0.88044226

>>