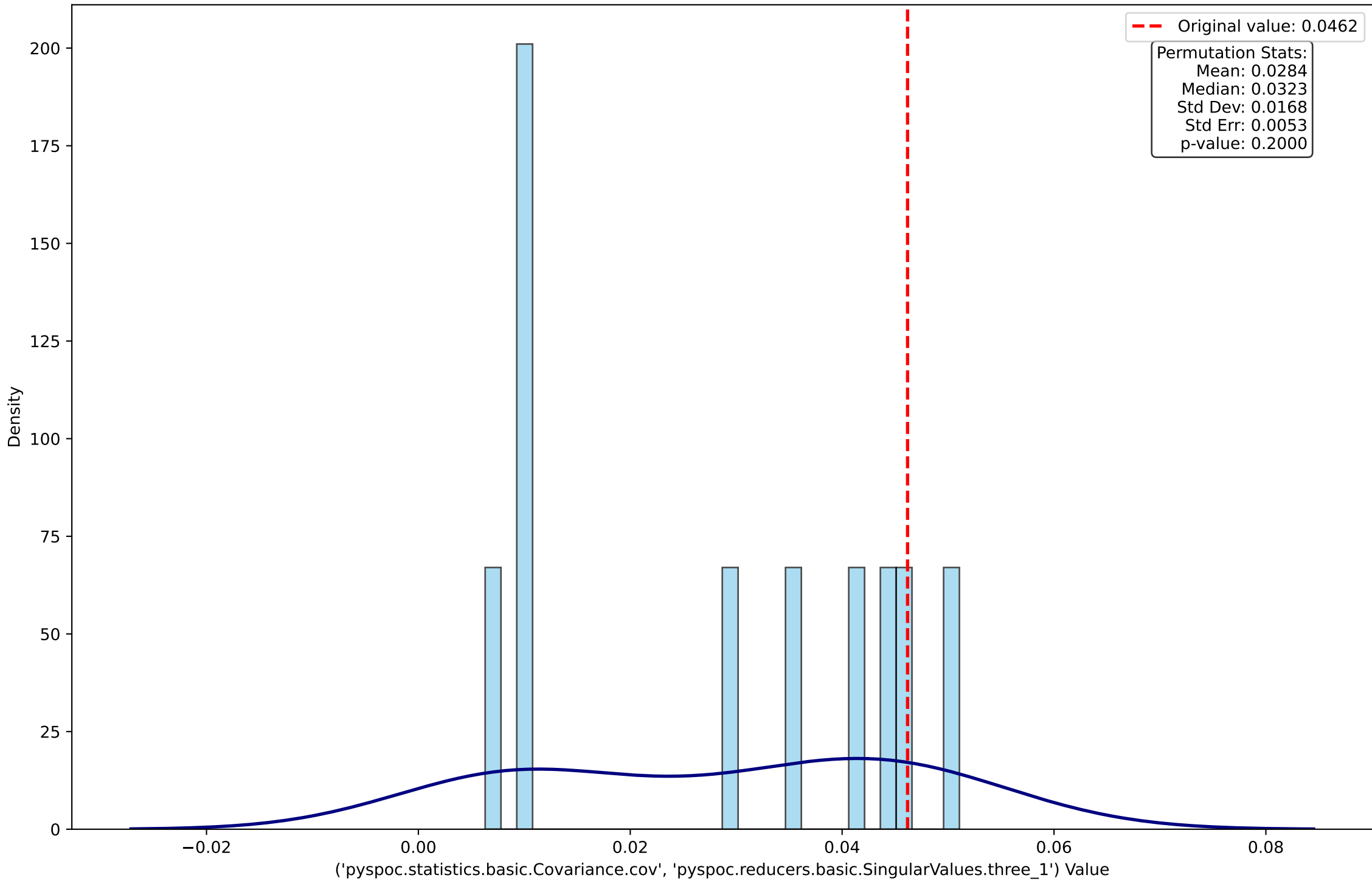


Filename: DailyDelhiClimateTest.csv  
Number of permutations: 10  
Number of bootstrap samples: 10  
Row bootstrap sample fraction: 90.0%  
Column bootstrap sample fraction: 90.0%  
Number of perturbations: 10  
Scale factor for perturbations: 0.1  
Normalization: z-score  
Random seed: 42

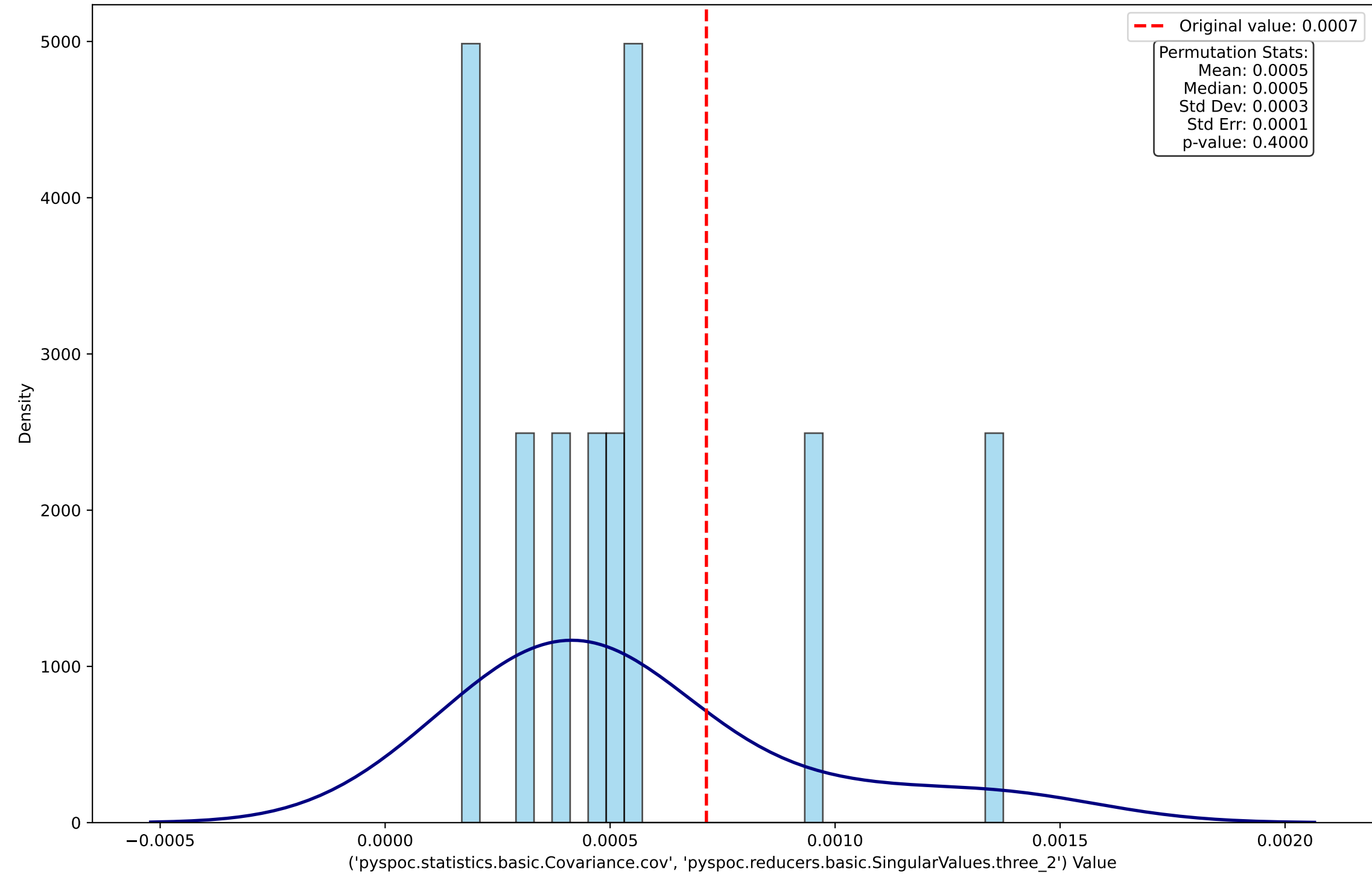
Permutation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_1')

Original value: 0.0462

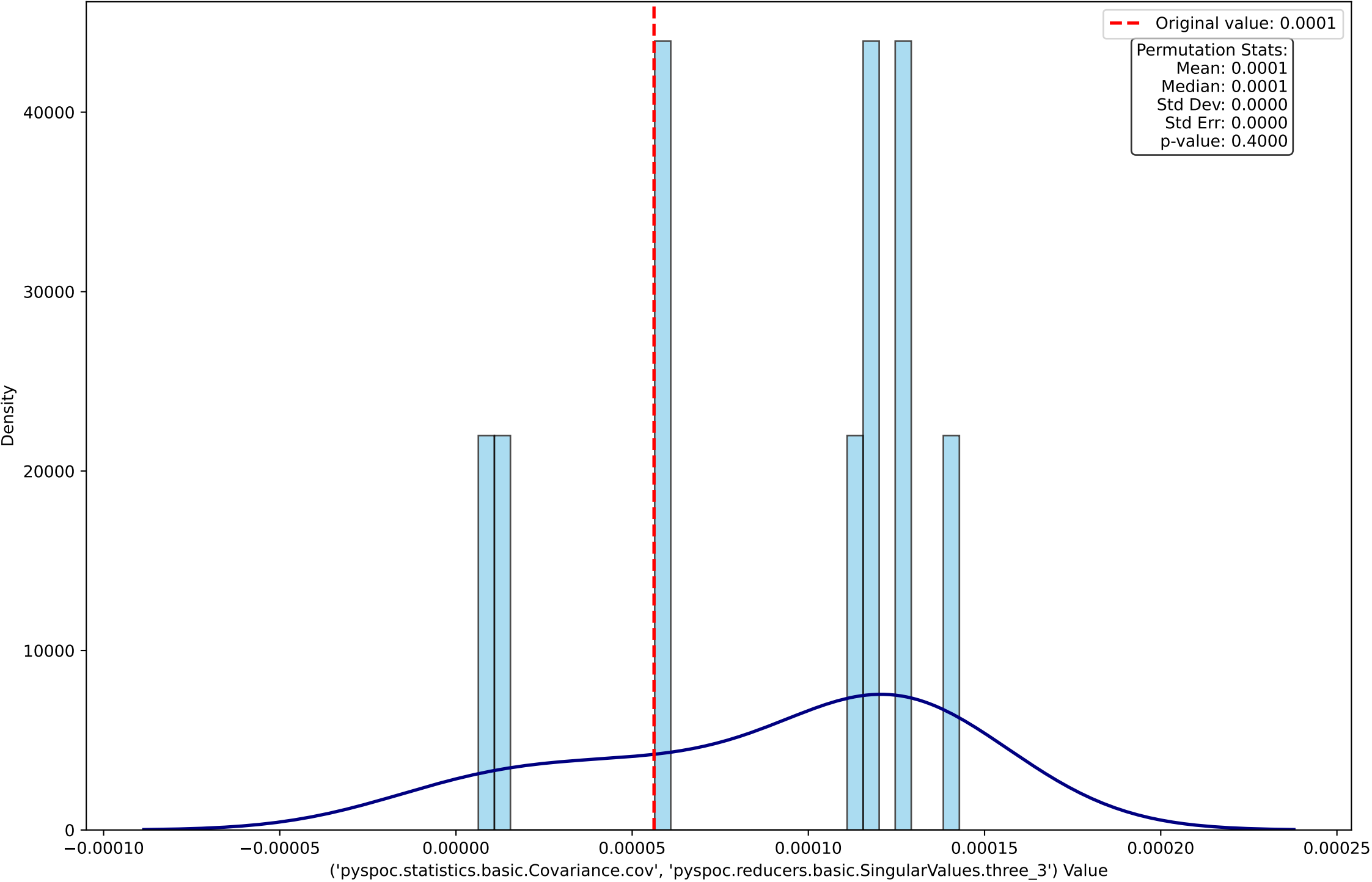
Permutation Stats:  
Mean: 0.0284  
Median: 0.0323  
Std Dev: 0.0168  
Std Err: 0.0053  
p-value: 0.2000



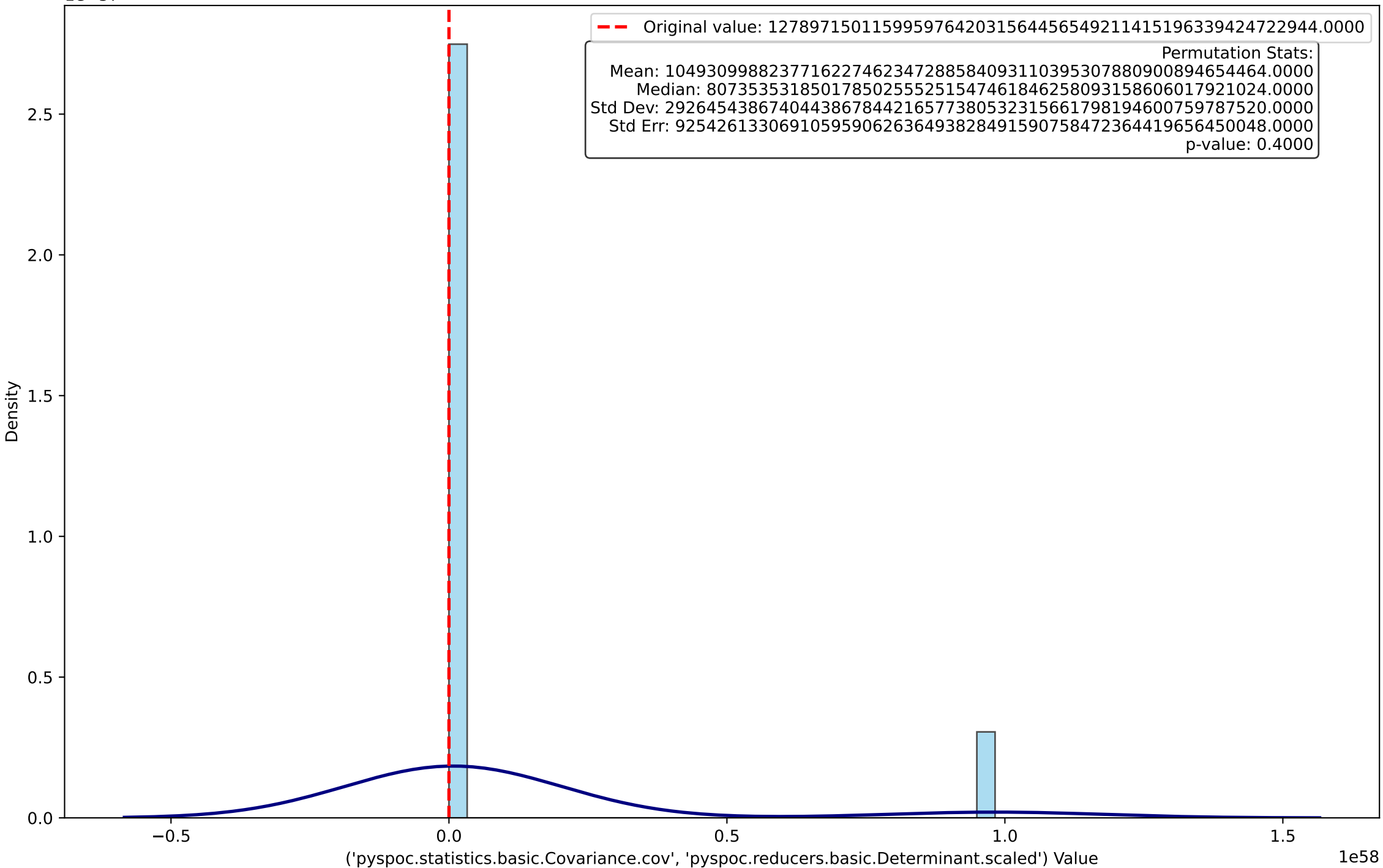
Permutation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_2')



Permutation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_3')



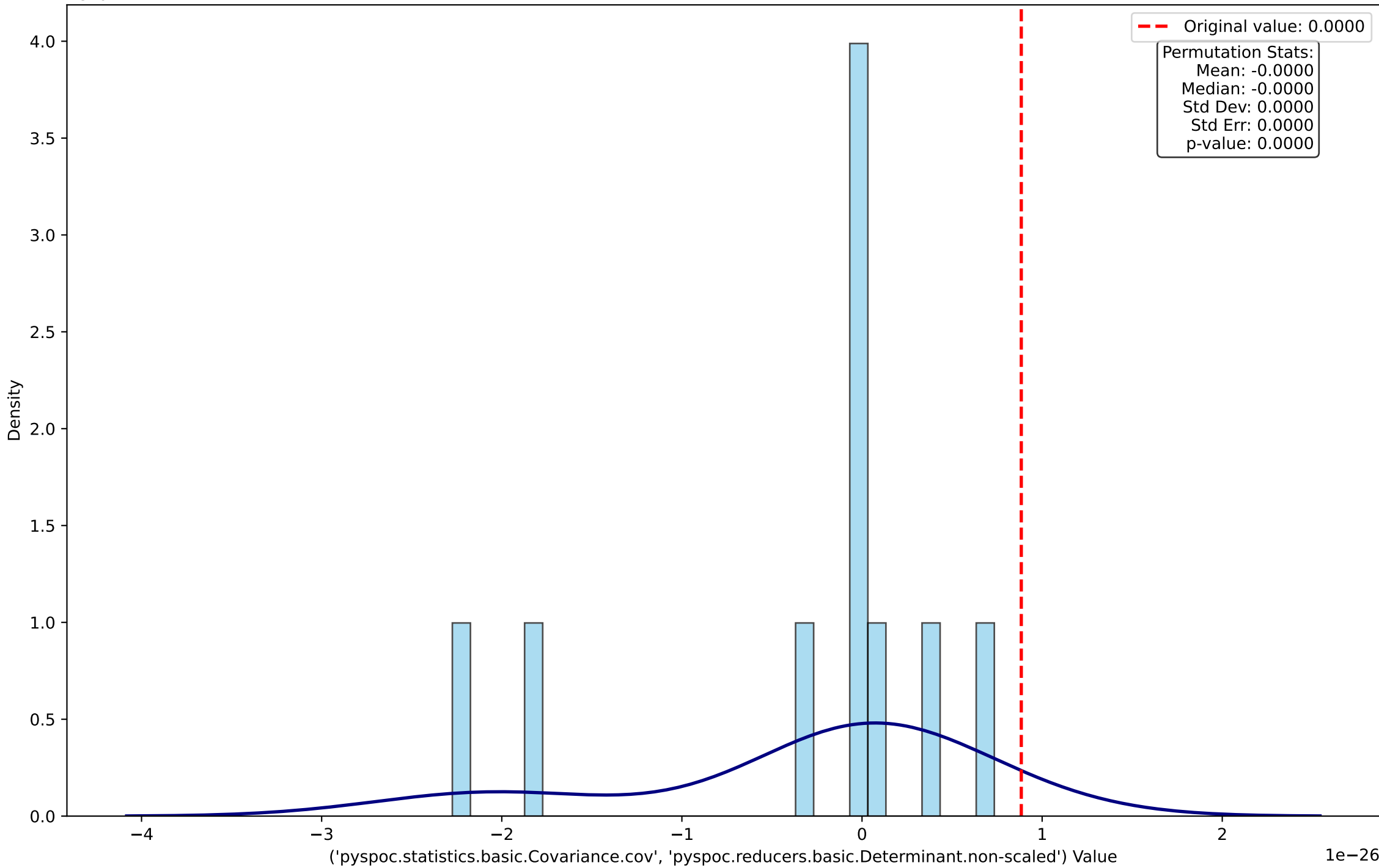
Permutation Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.Determinant.scaled')



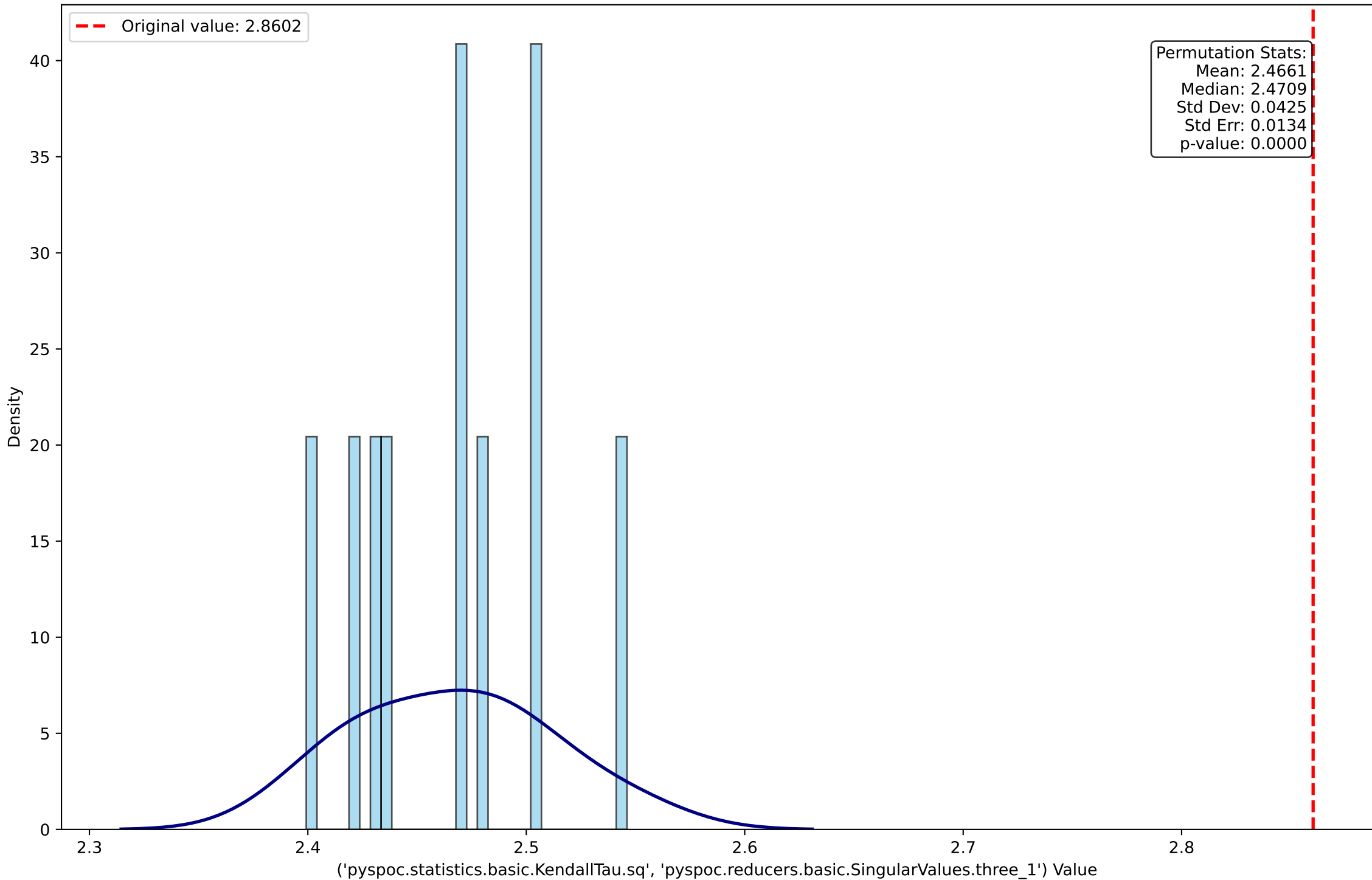
Permutation Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.Determinant.non-scaled')

Original value: 0.0000

Permutation Stats:  
Mean: -0.0000  
Median: -0.0000  
Std Dev: 0.0000  
Std Err: 0.0000  
p-value: 0.0000



Permutation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_1')



Permutation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_2')

Original value: 0.6962

Permutation Stats:  
Mean: 0.8986  
Median: 0.8976  
Std Dev: 0.0189  
Std Err: 0.0060  
p-value: 0.0000

Density

80

60

40

20

0

0.70

0.75

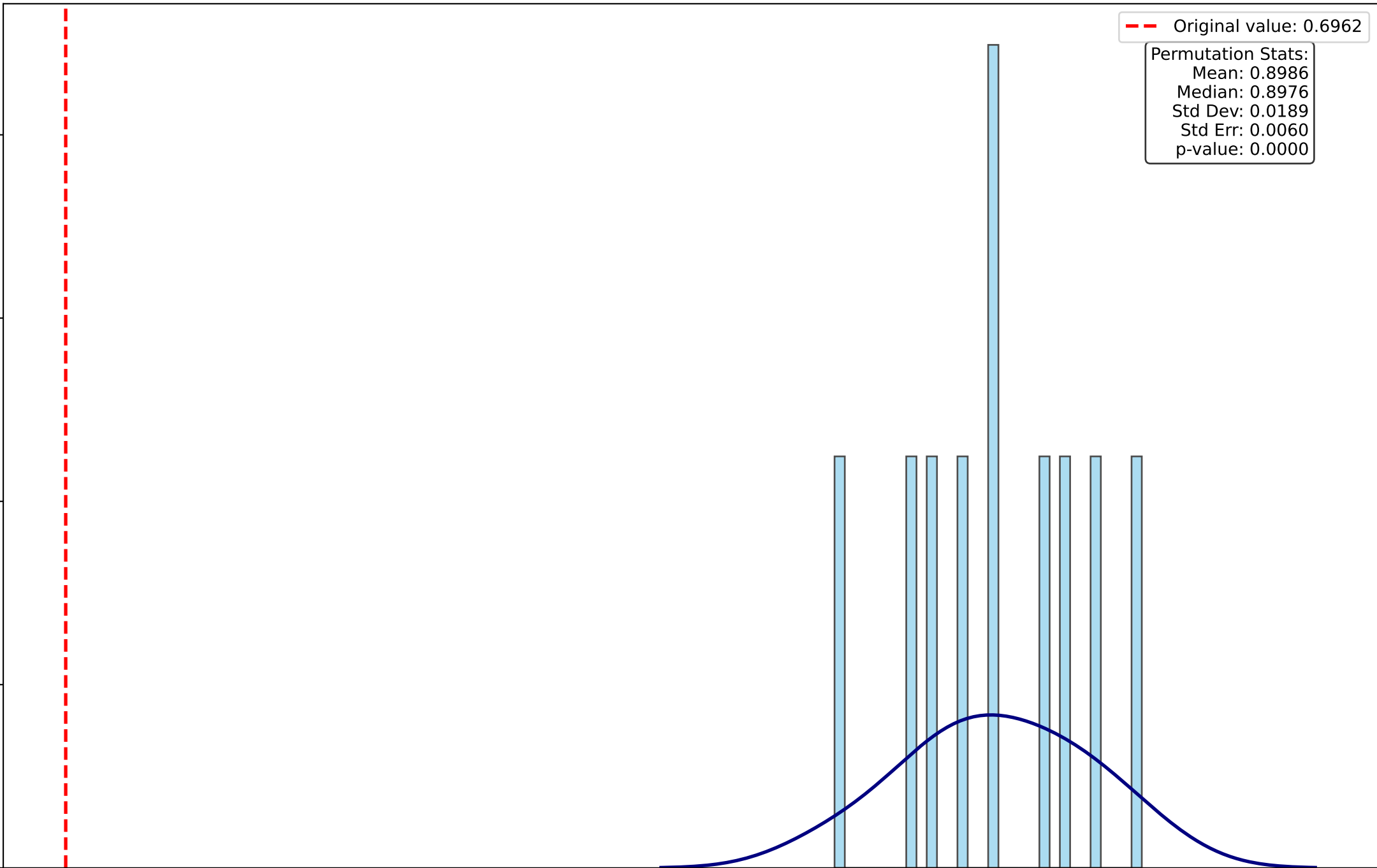
0.80

0.85

0.90

0.95

('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_2') Value





Permutation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_3')

Original value: 0.3434

Permutation Stats:  
Mean: 0.5066  
Median: 0.5033  
Std Dev: 0.0226  
Std Err: 0.0072  
p-value: 0.0000

Density

70  
60  
50  
40  
30  
20  
10  
0

0.35

0.40

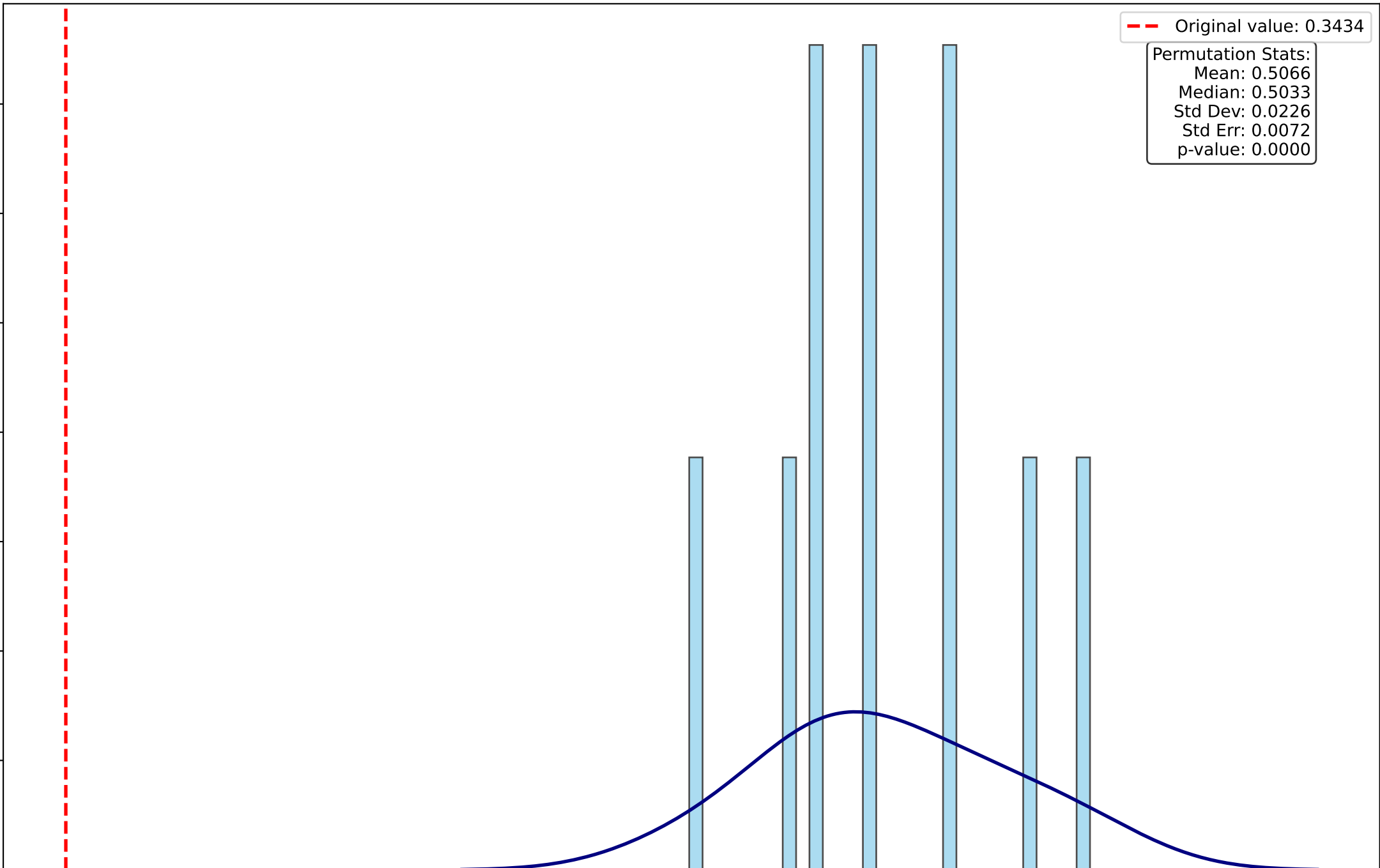
0.45

0.50

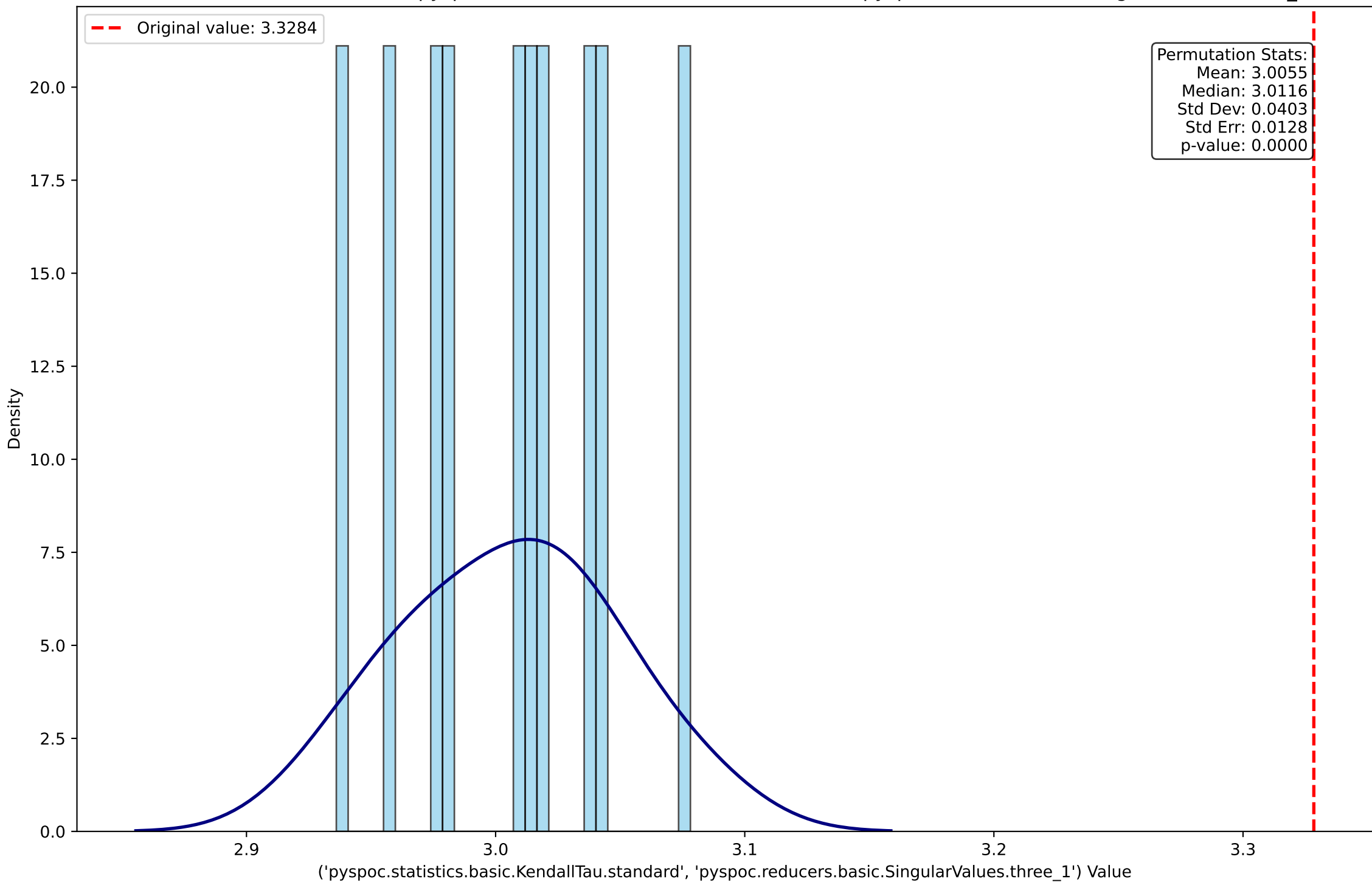
0.55

0.60

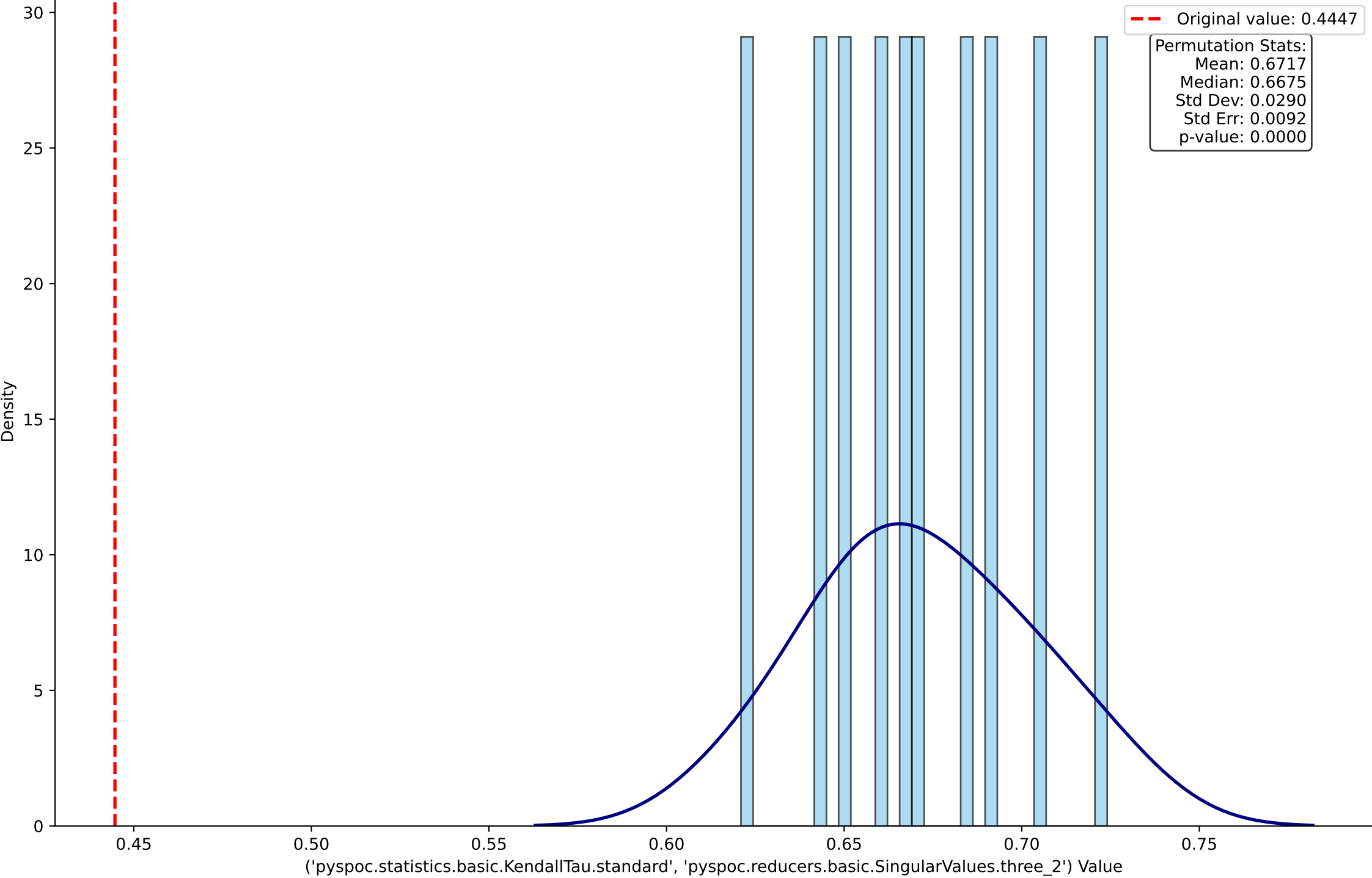
('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_3') Value



Permutation Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three\_1')



Permutation Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three\_2')

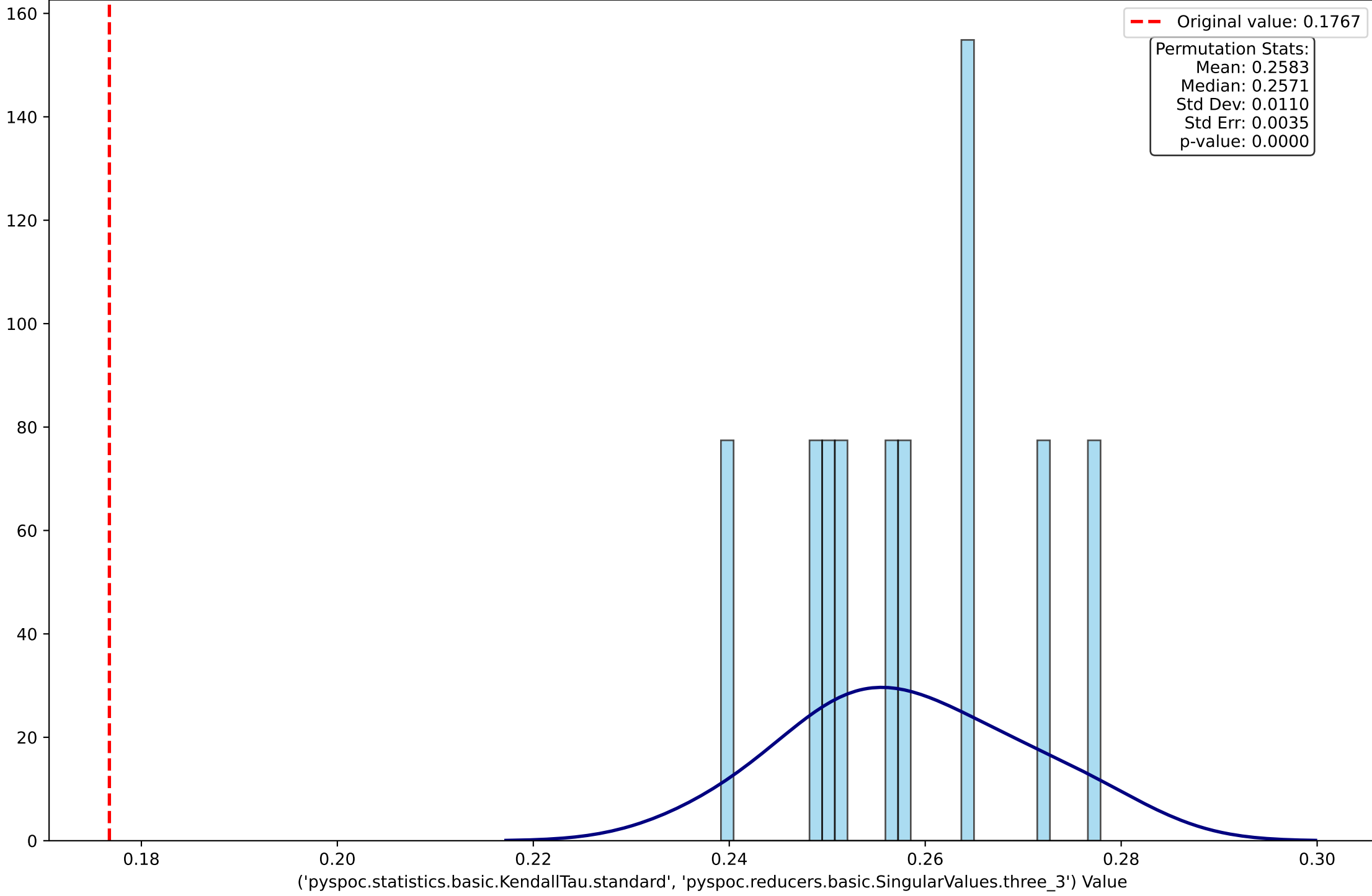


Permutation Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_3')

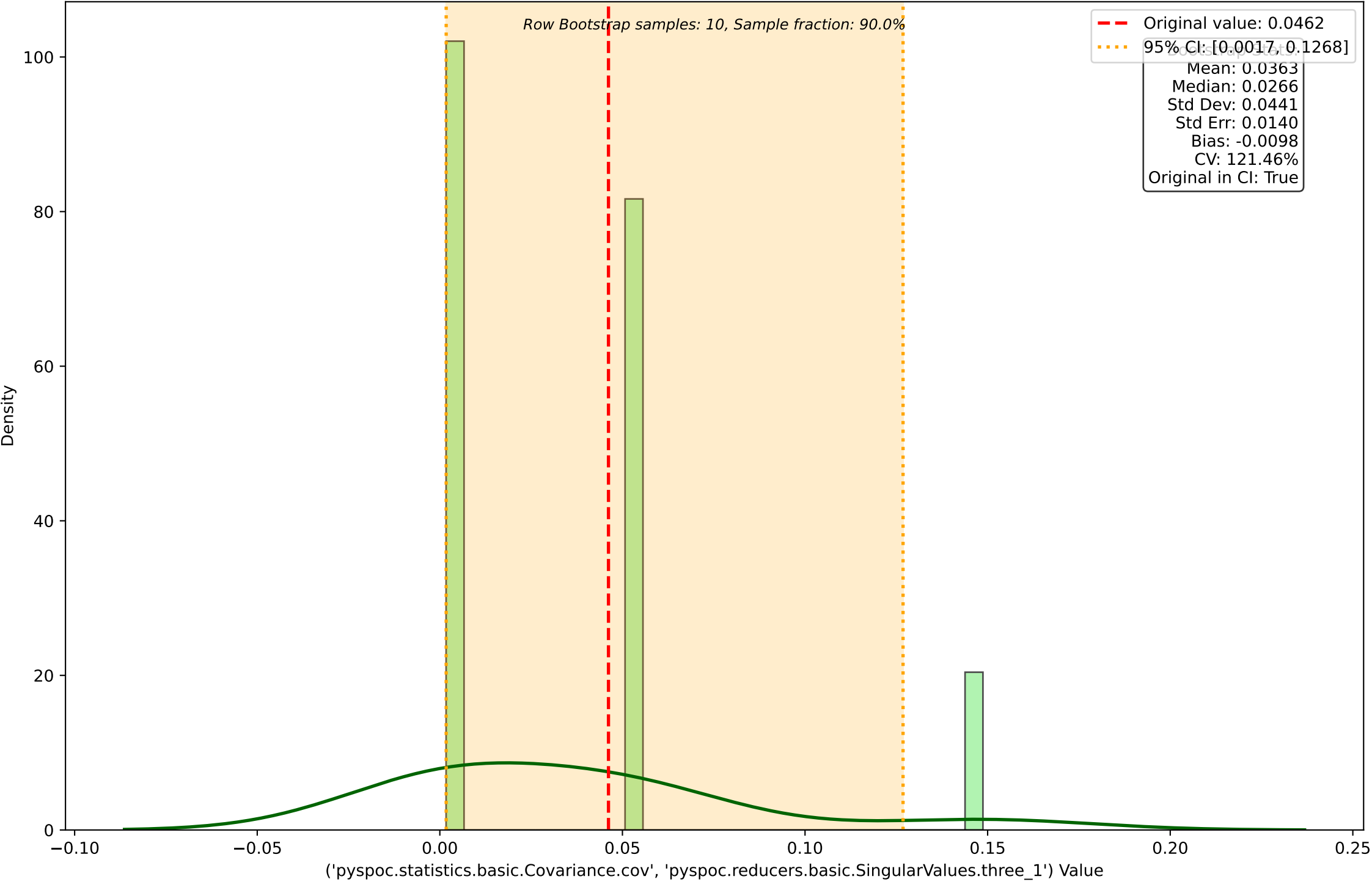
Original value: 0.1767

Permutation Stats:  
Mean: 0.2583  
Median: 0.2571  
Std Dev: 0.0110  
Std Err: 0.0035  
p-value: 0.0000

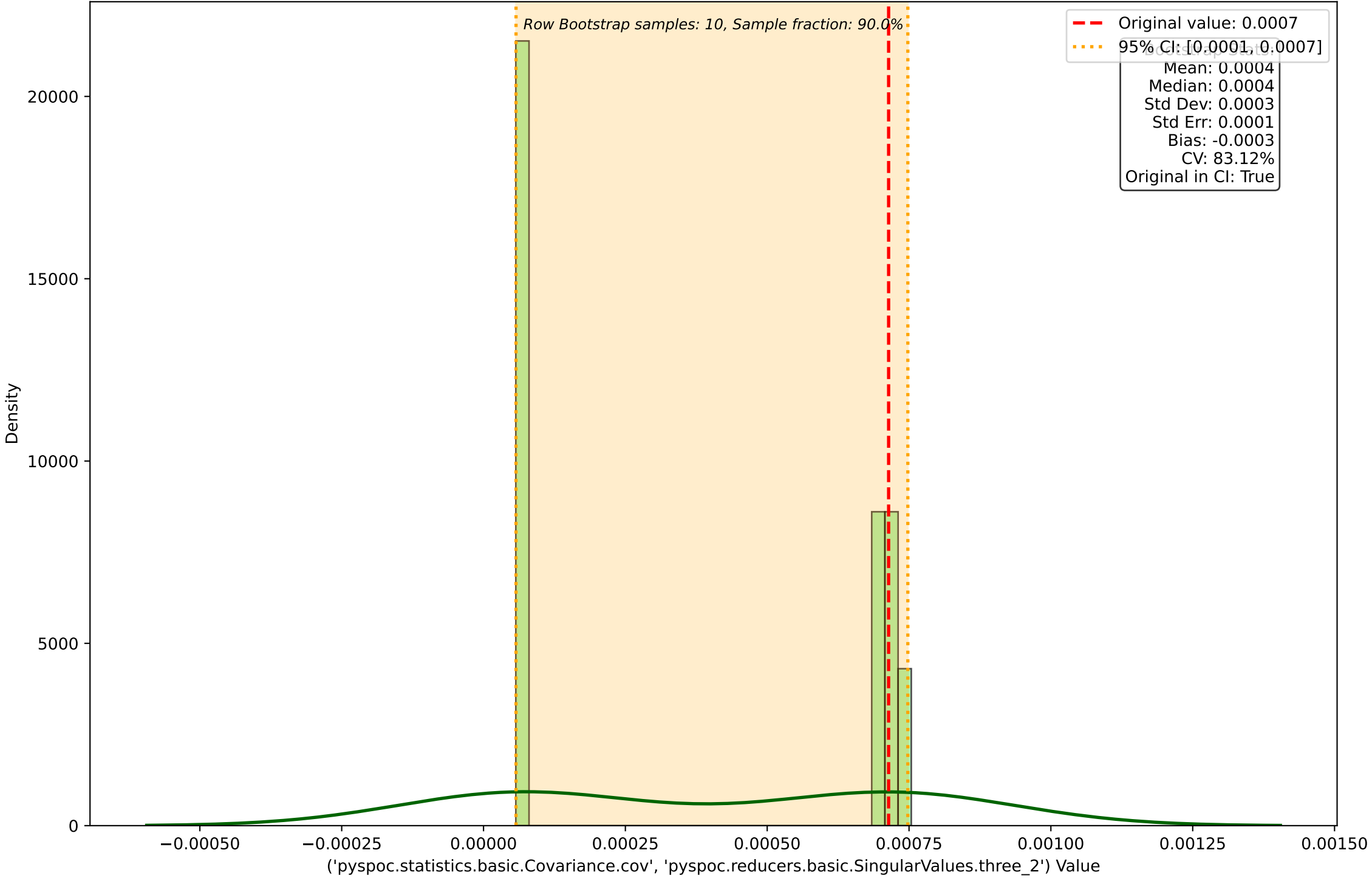
Density



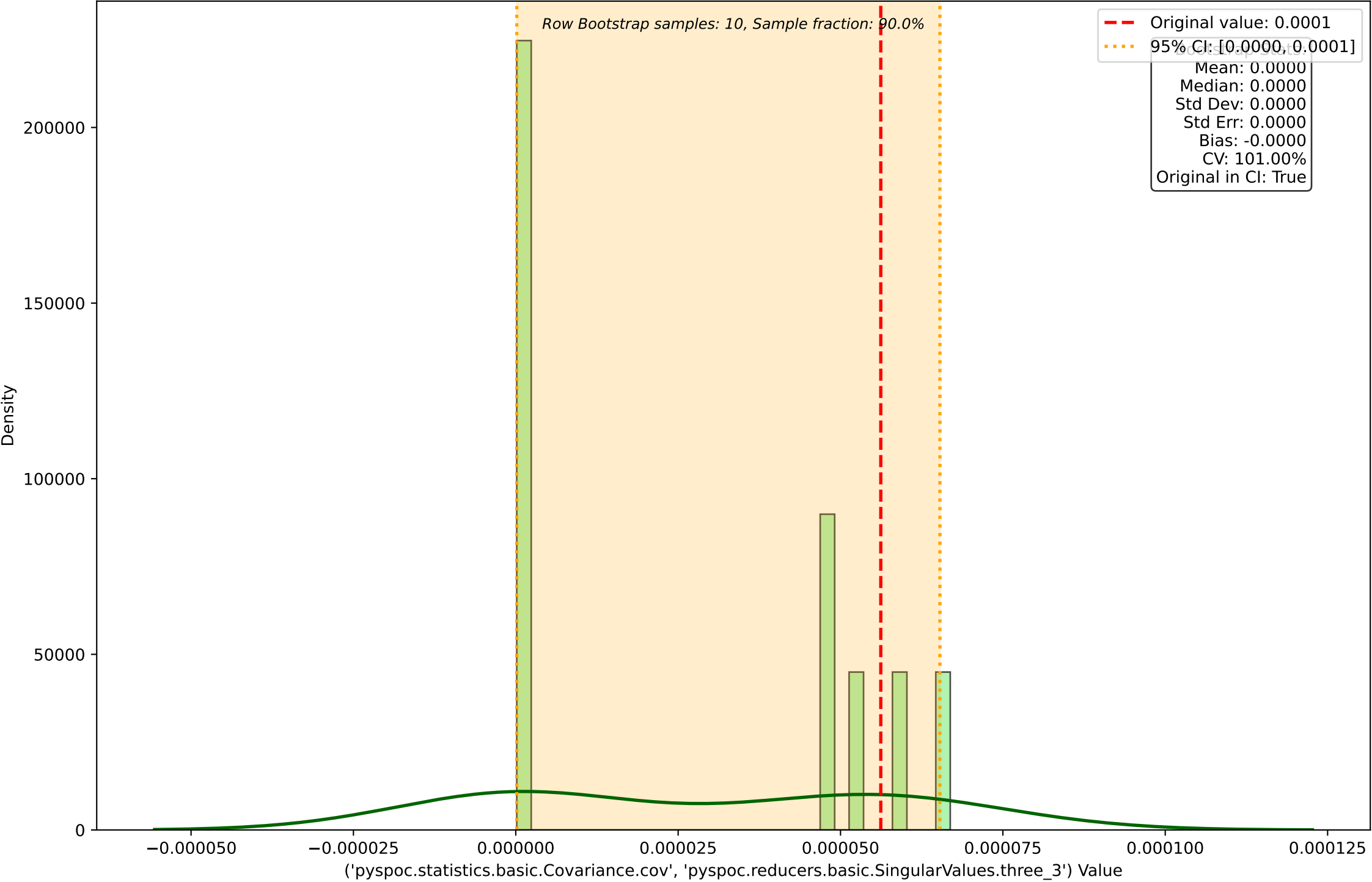
Row Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_1')



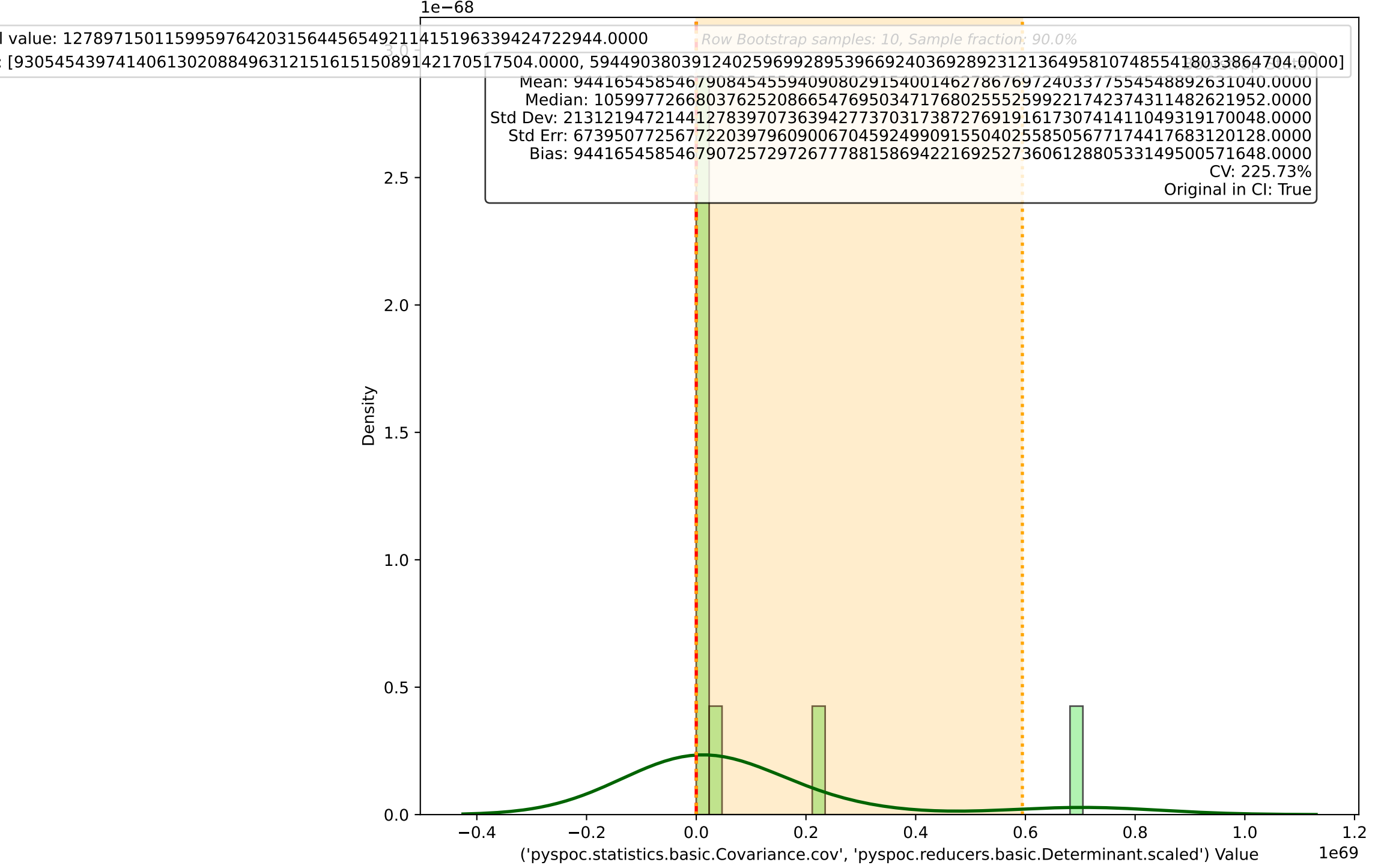
Row Bootstrap Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.SingularValues.three\_2')



Row Bootstrap Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.SingularValues.three\_3')

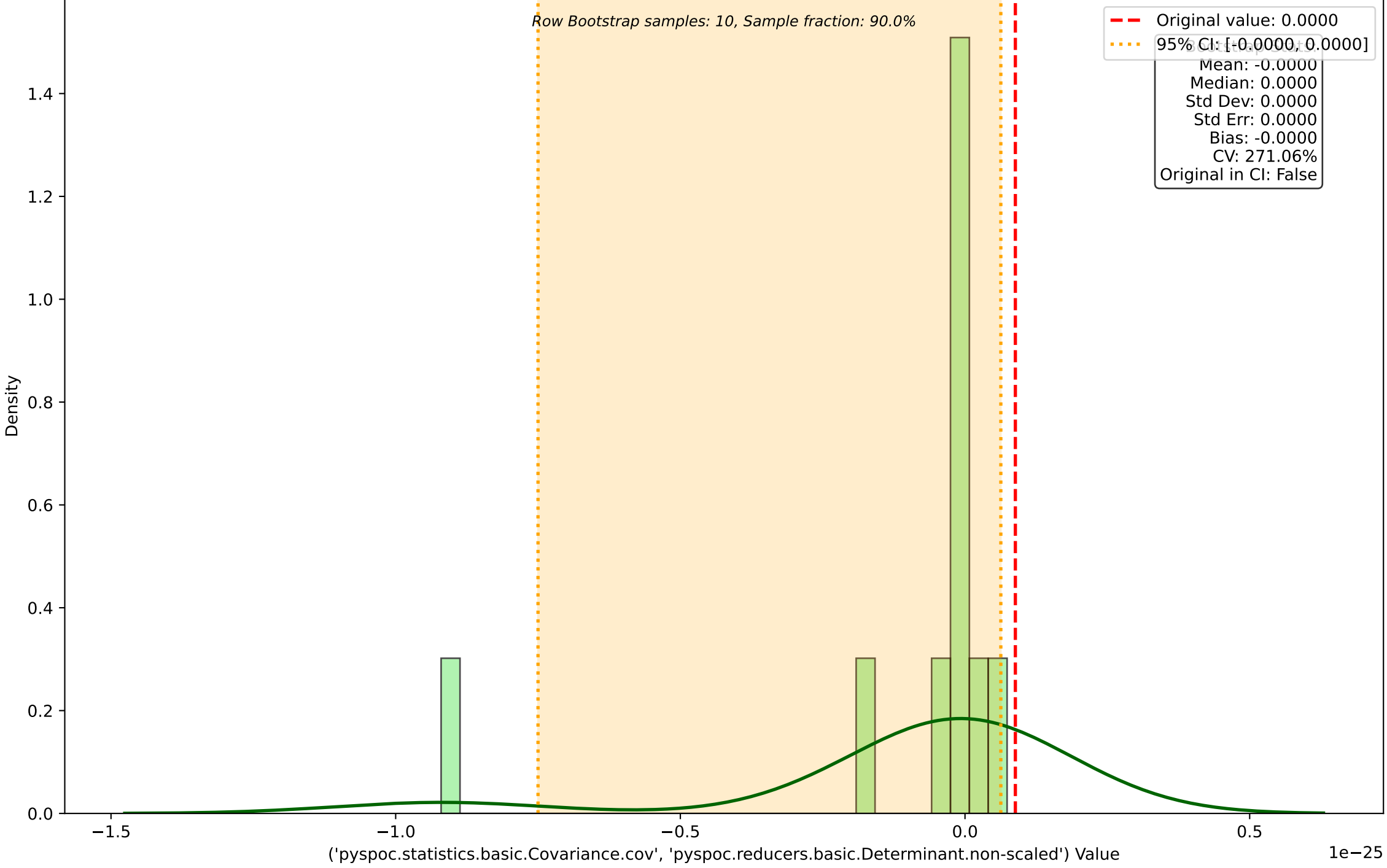


Row Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.Determinant.scaled')

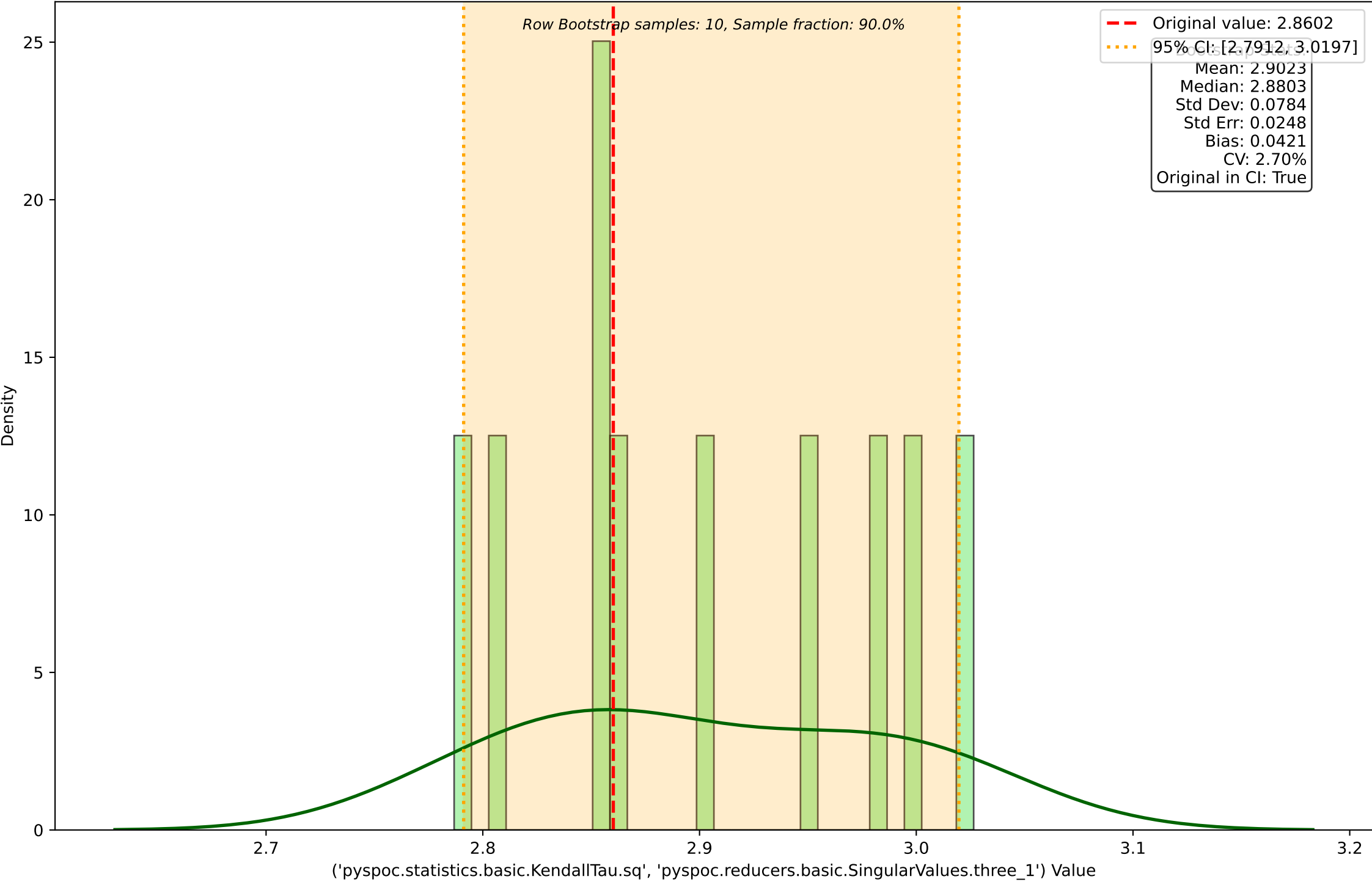




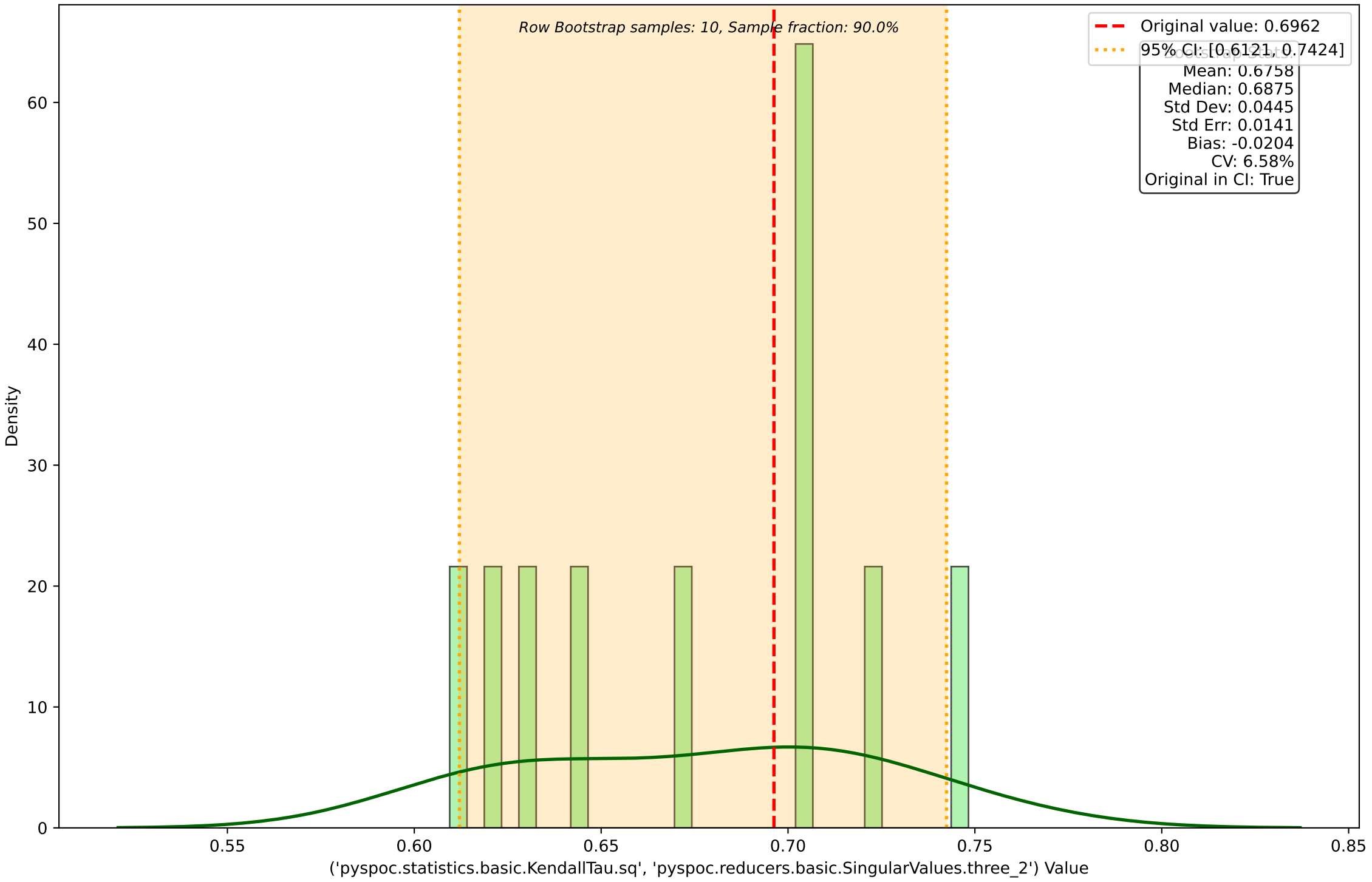
1e26 Row Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.Determinant.non-scaled')



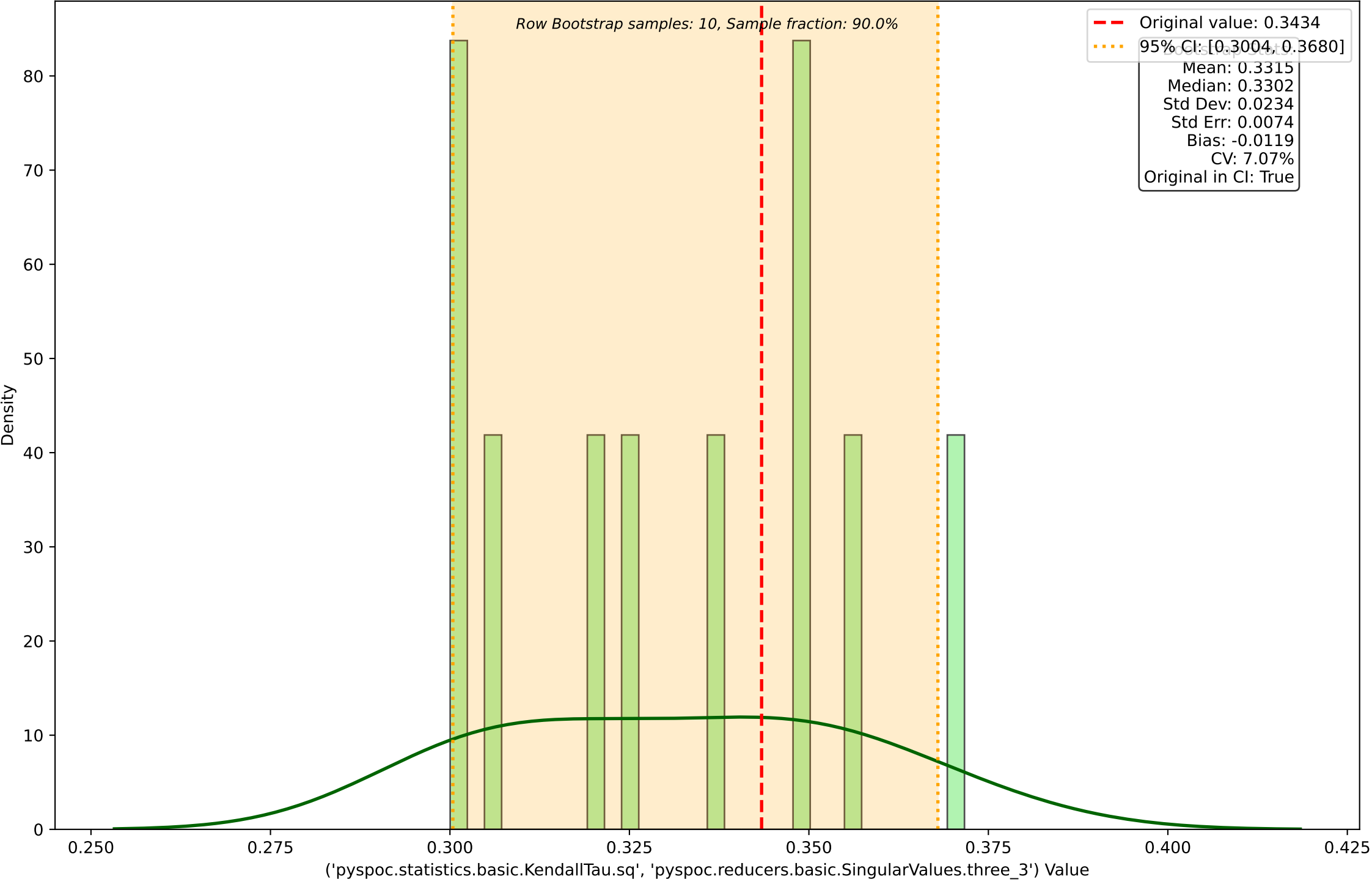
Row Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_1')



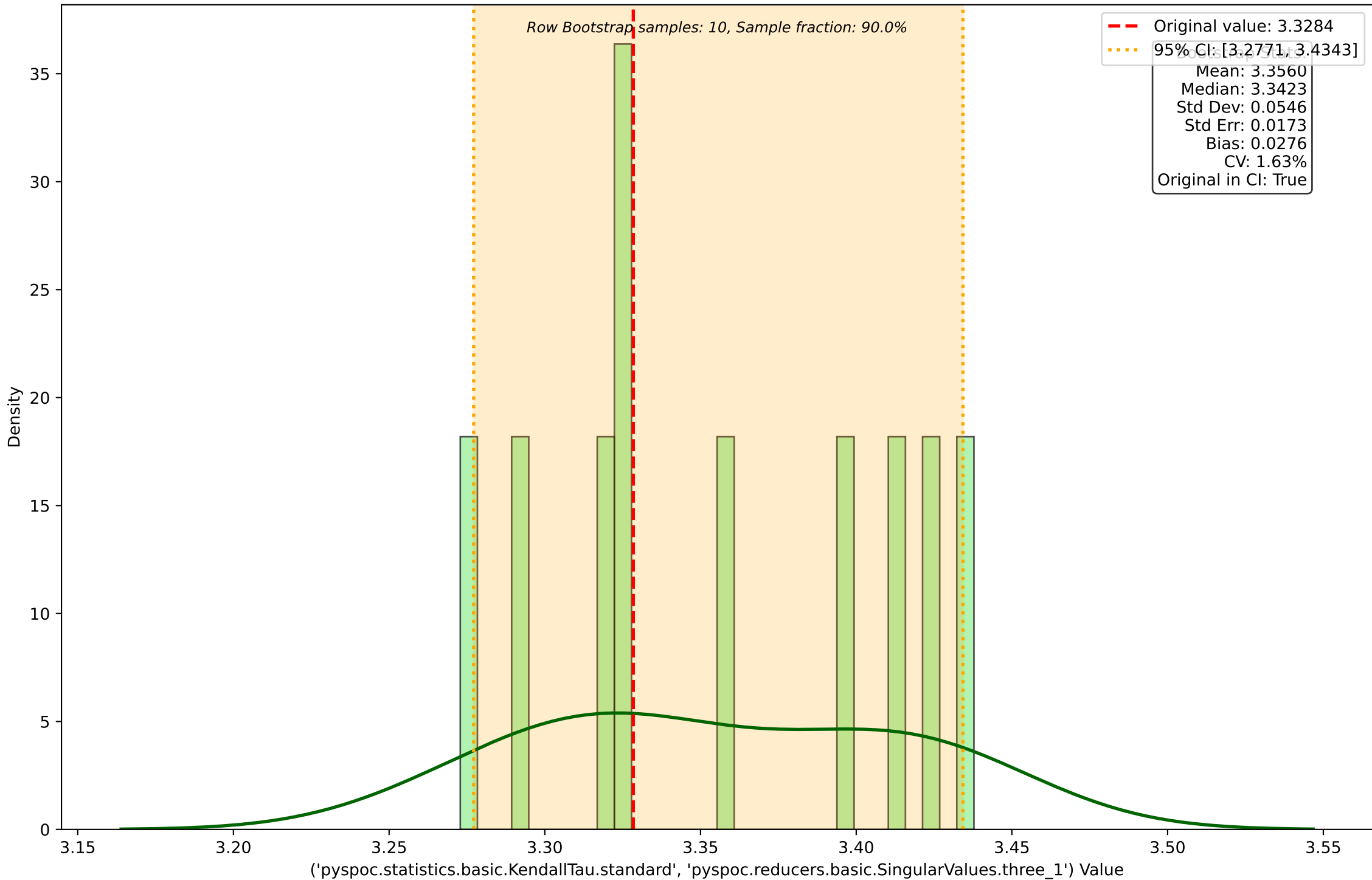
Row Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.sq', 'pypoc.reducers.basic.SingularValues.three\_2')



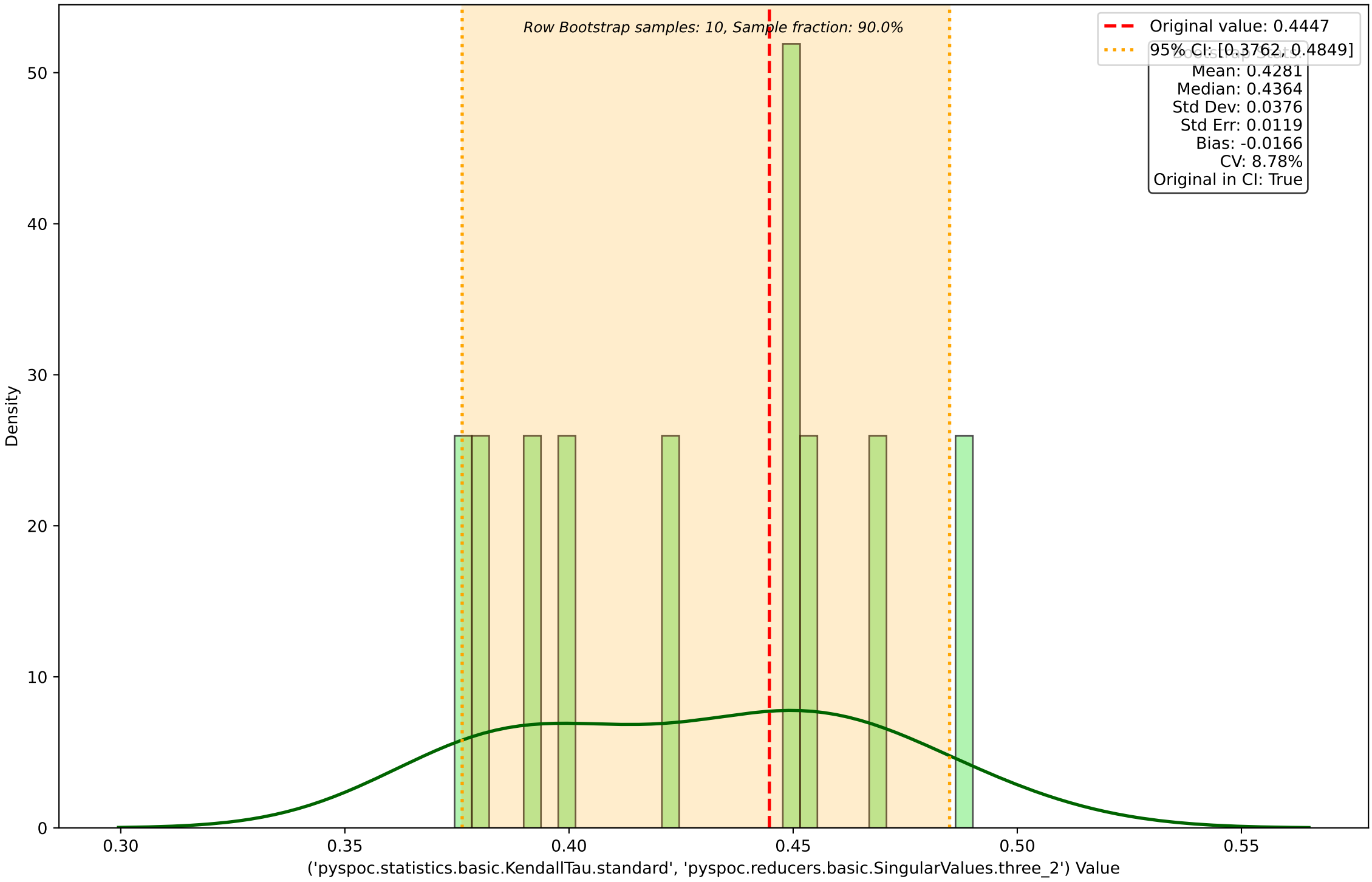
Row Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.sq', 'pypoc.reducers.basic.SingularValues.three\_3')



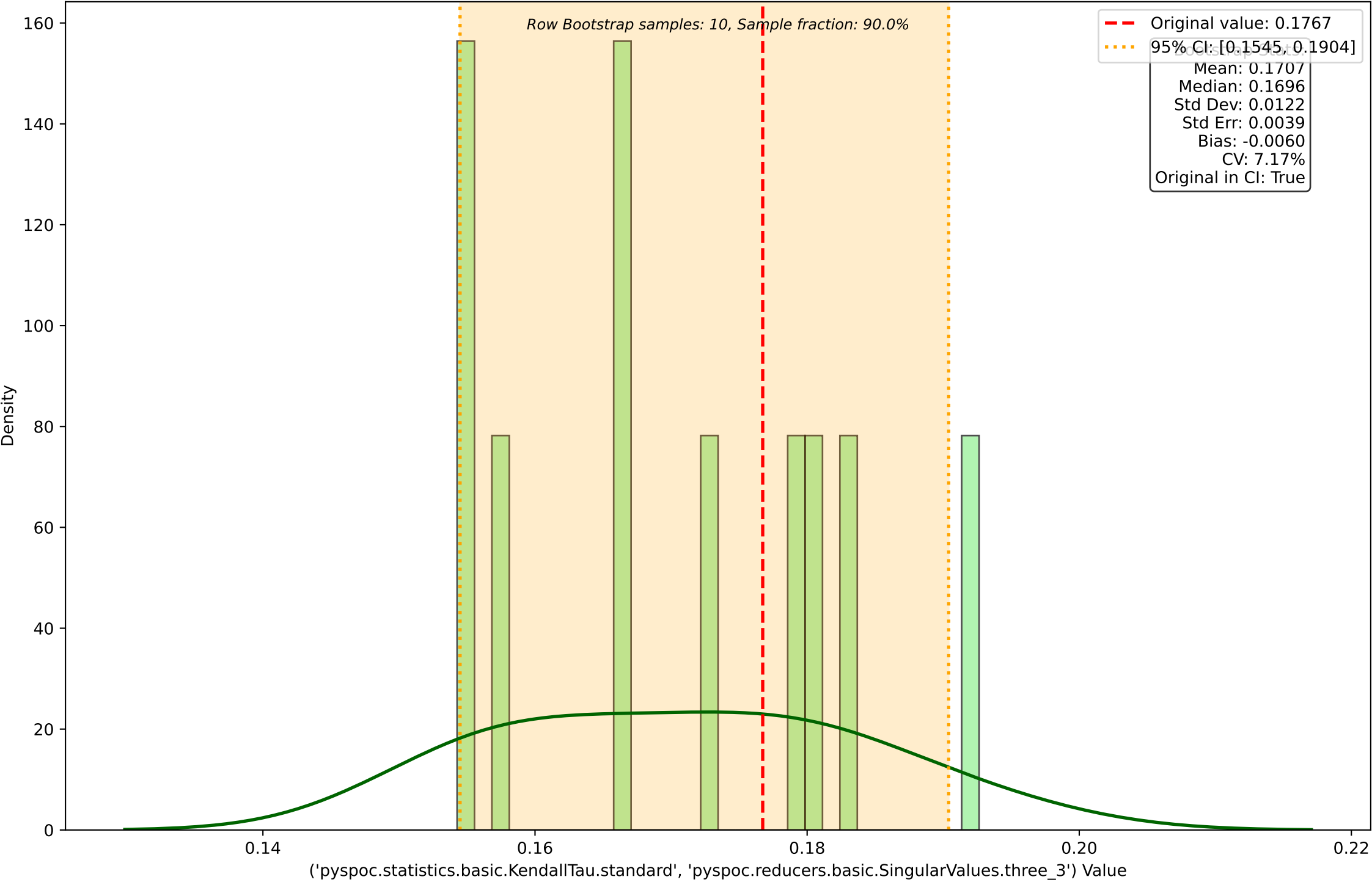
Row Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_1')



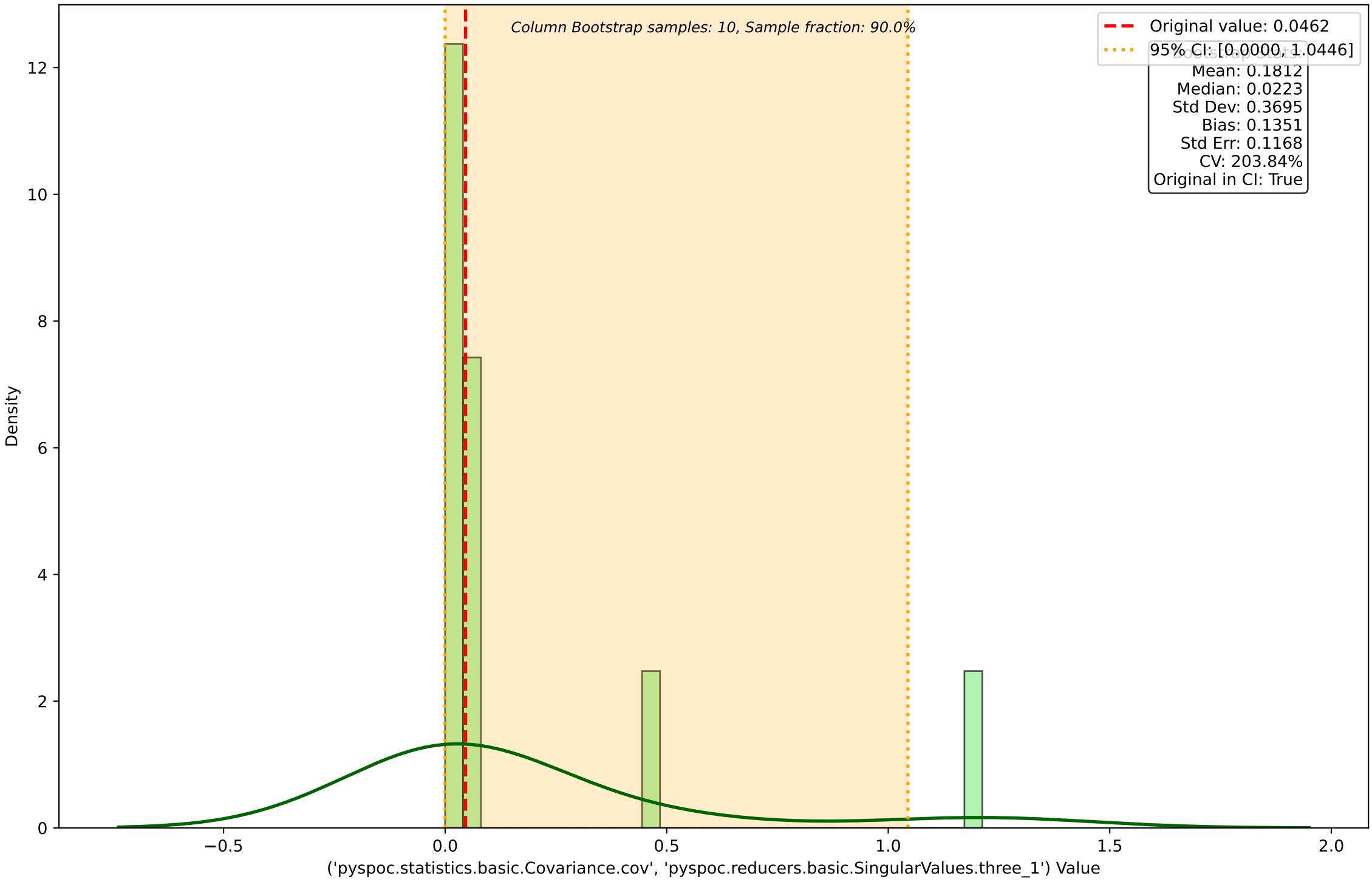
Row Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three\_2')



Row Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_3')

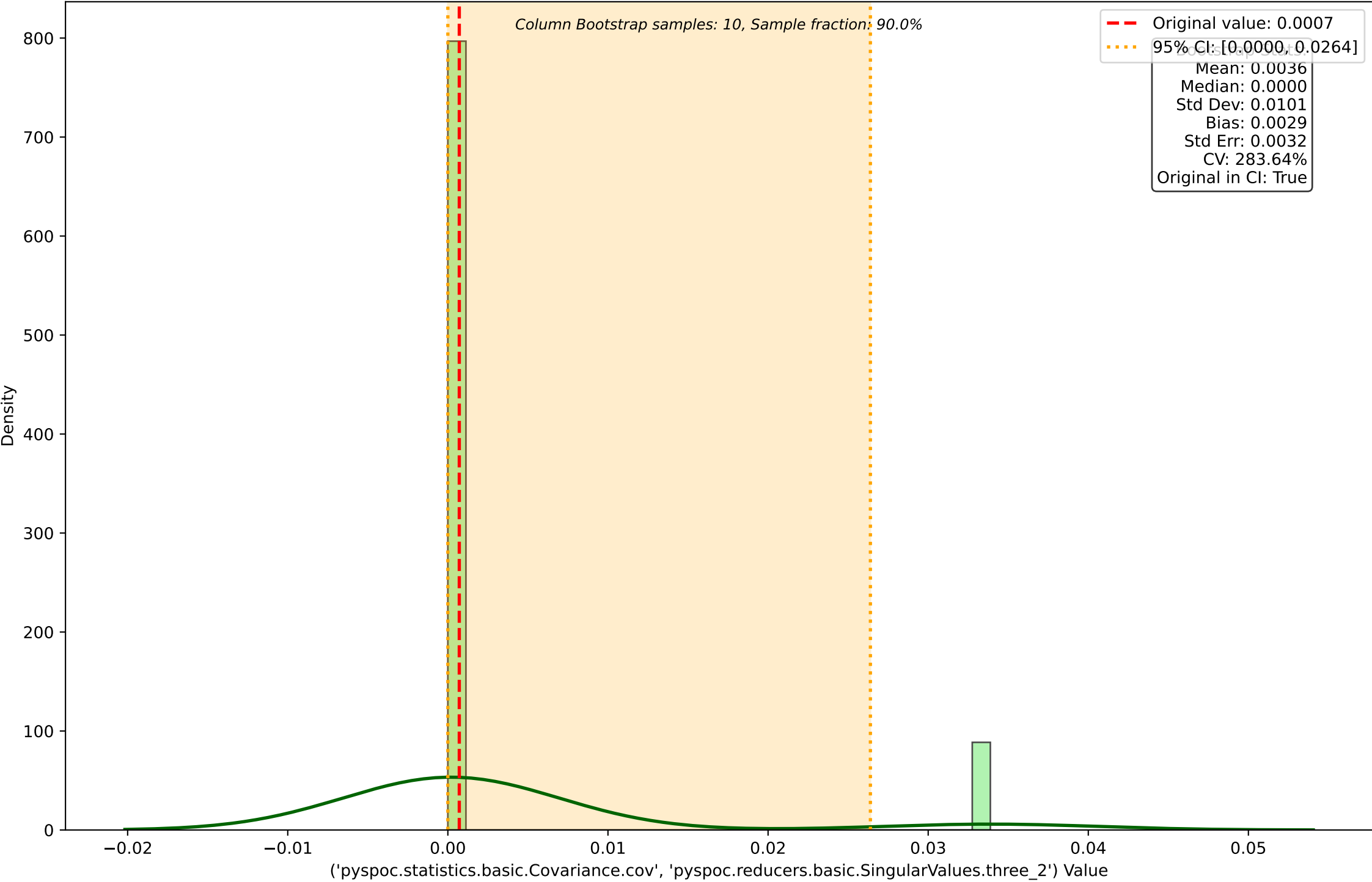


Column Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_1')





Column Bootstrap Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.SingularValues.three\_2')



1e18 Column Bootstrap Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_3')

Column Bootstrap samples: 10, Sample fraction: 90.0%

Bootstrap Stats:  
Mean: 0.0000  
Median: 0.0000  
Std Dev: 0.0000  
Bias: -0.0001  
Std Err: 0.0000  
CV: 121.69%  
Original in CI: False

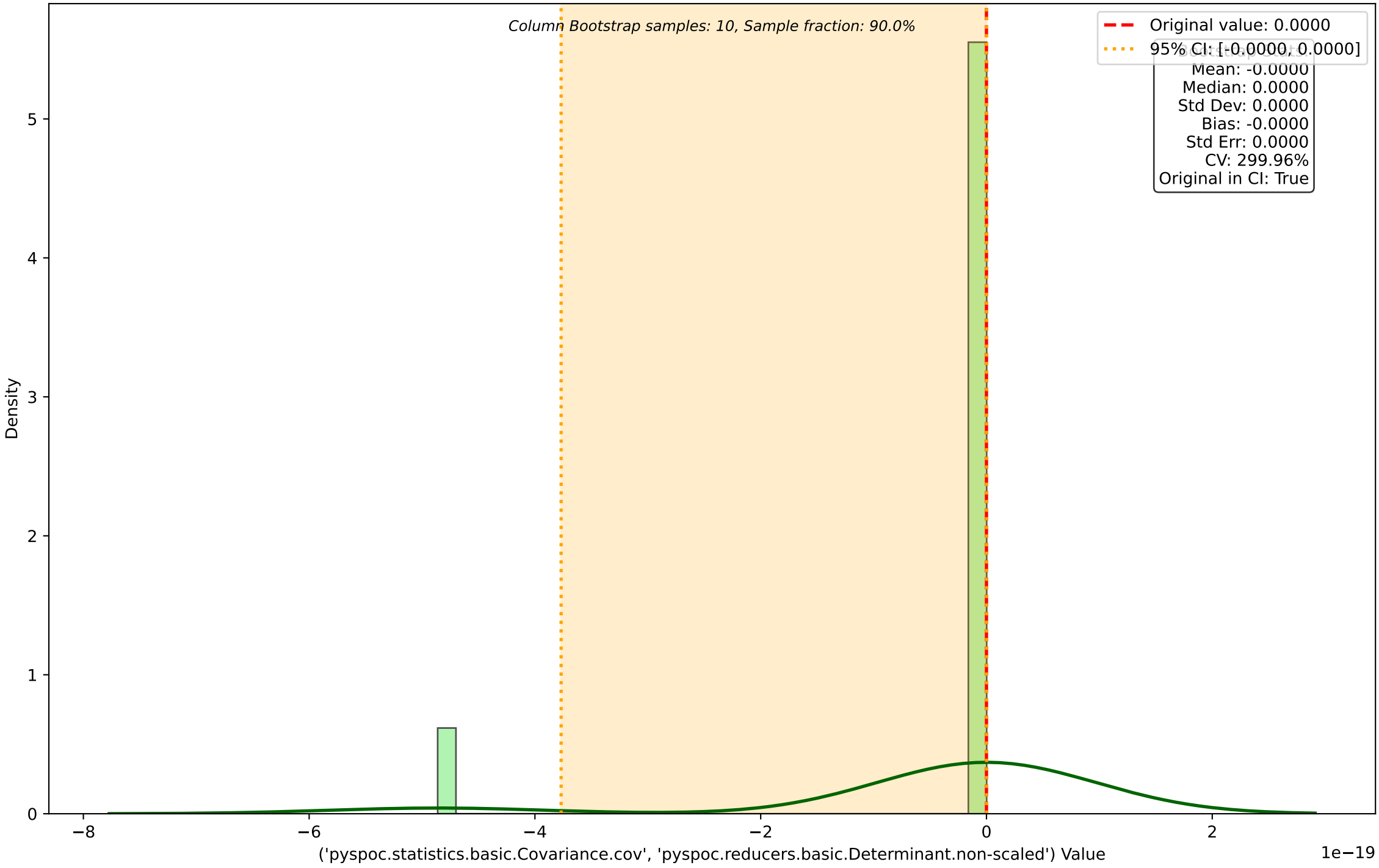
Original value: 0.0001  
95% CI: [0.0000, 0.0000]

Density

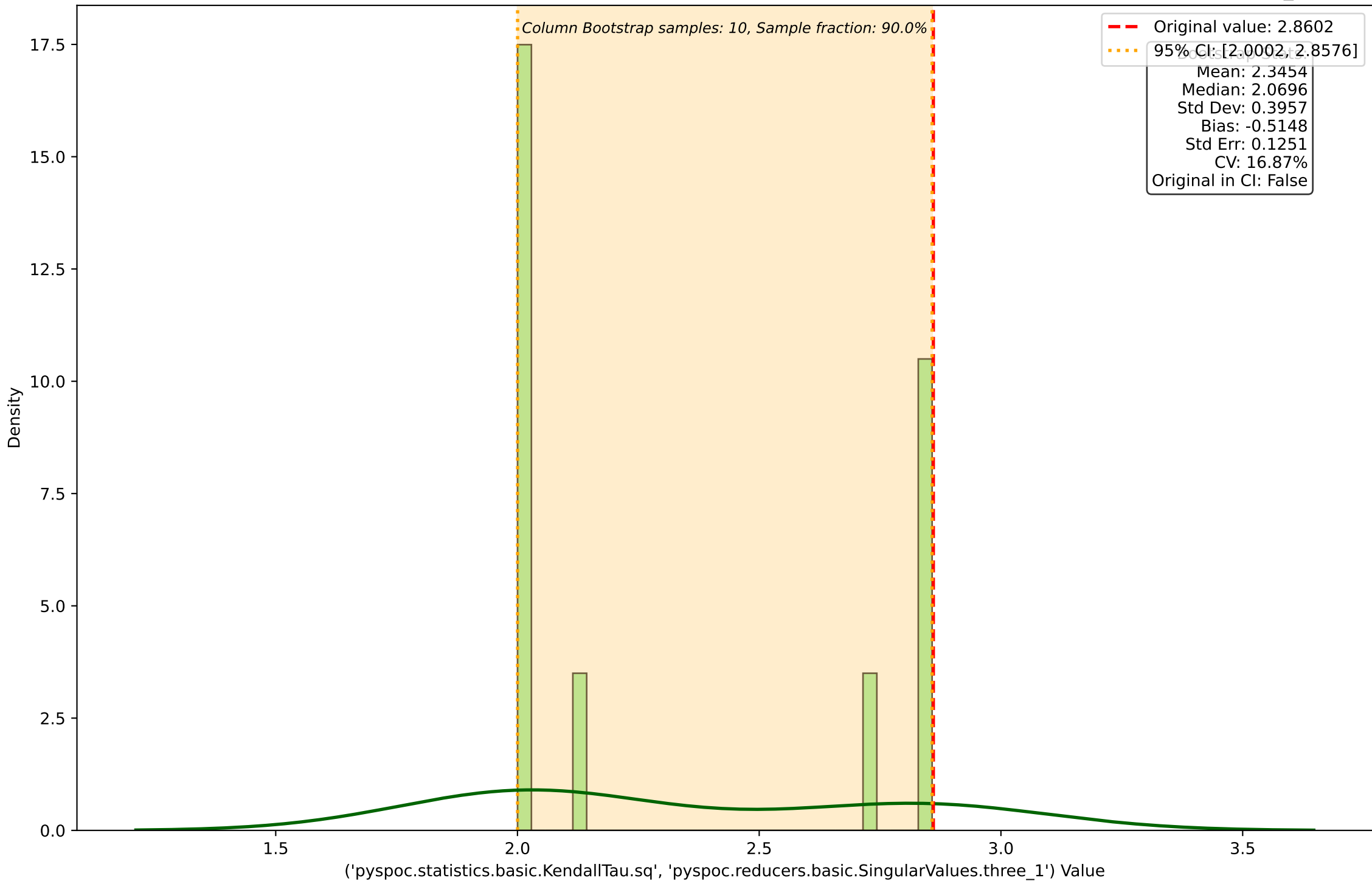
('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_3') Value

1e-5

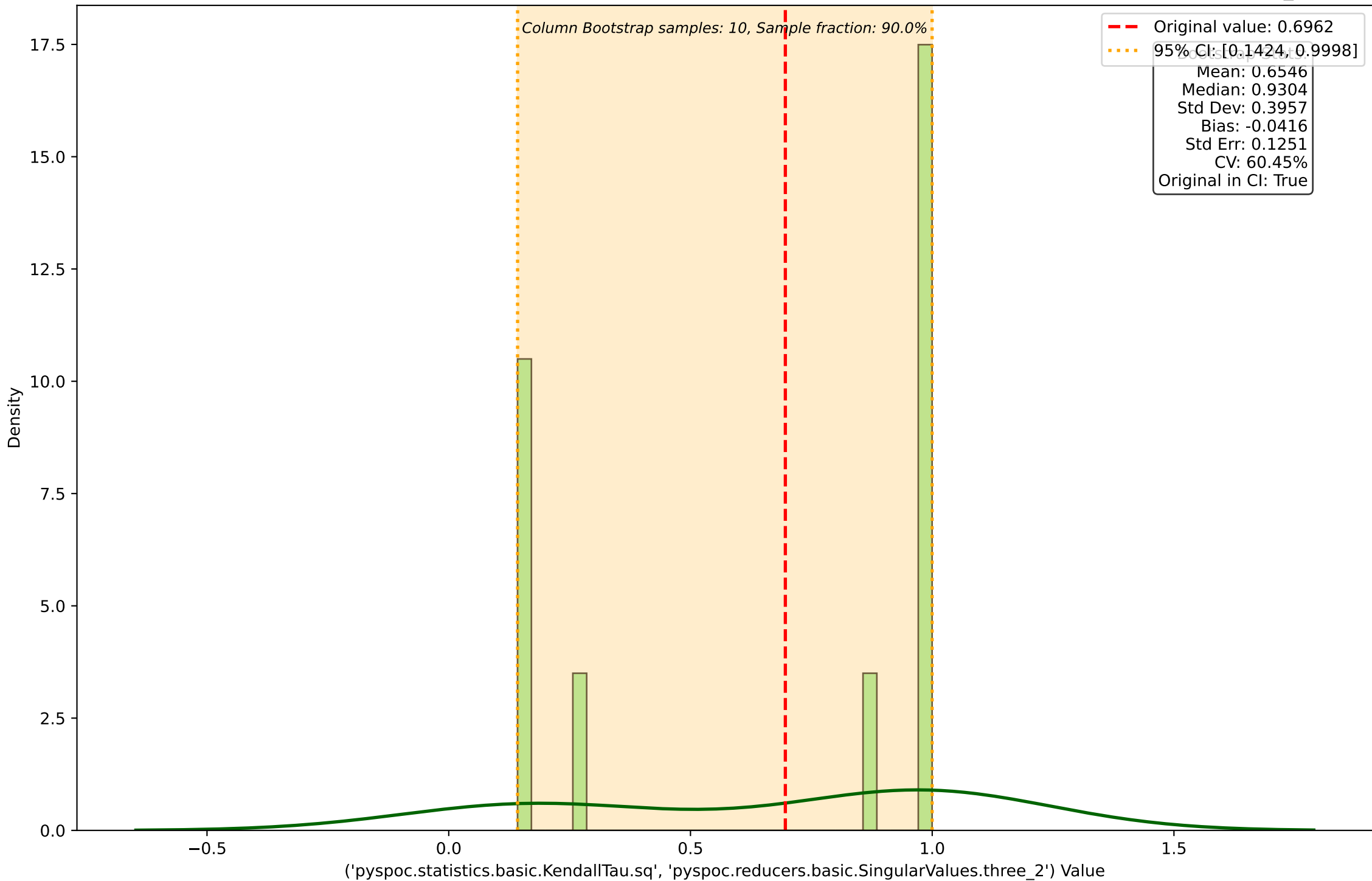
1e19 Column Bootstrap Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.Determinant.non-scaled')

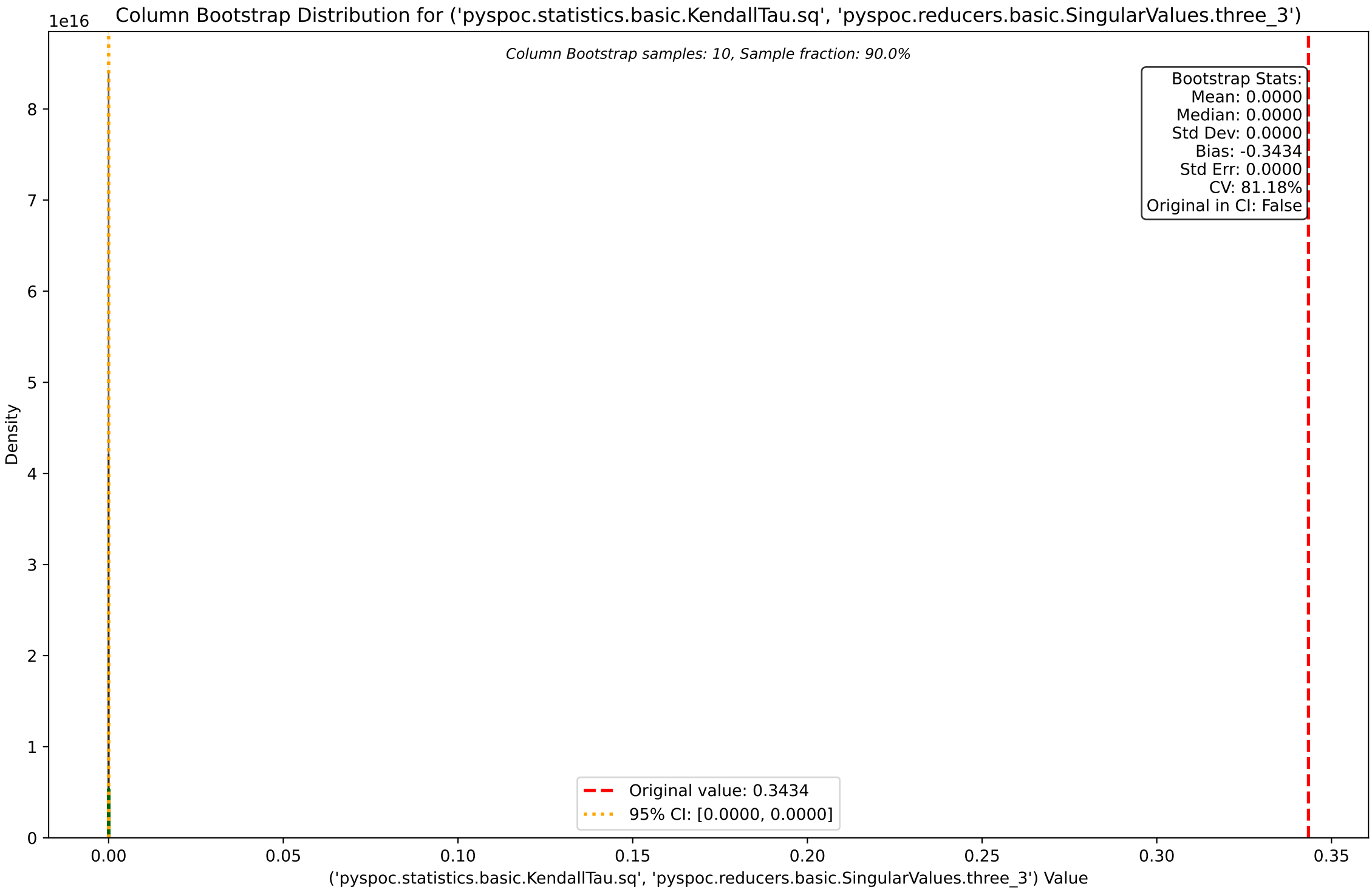


Column Bootstrap Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_1')

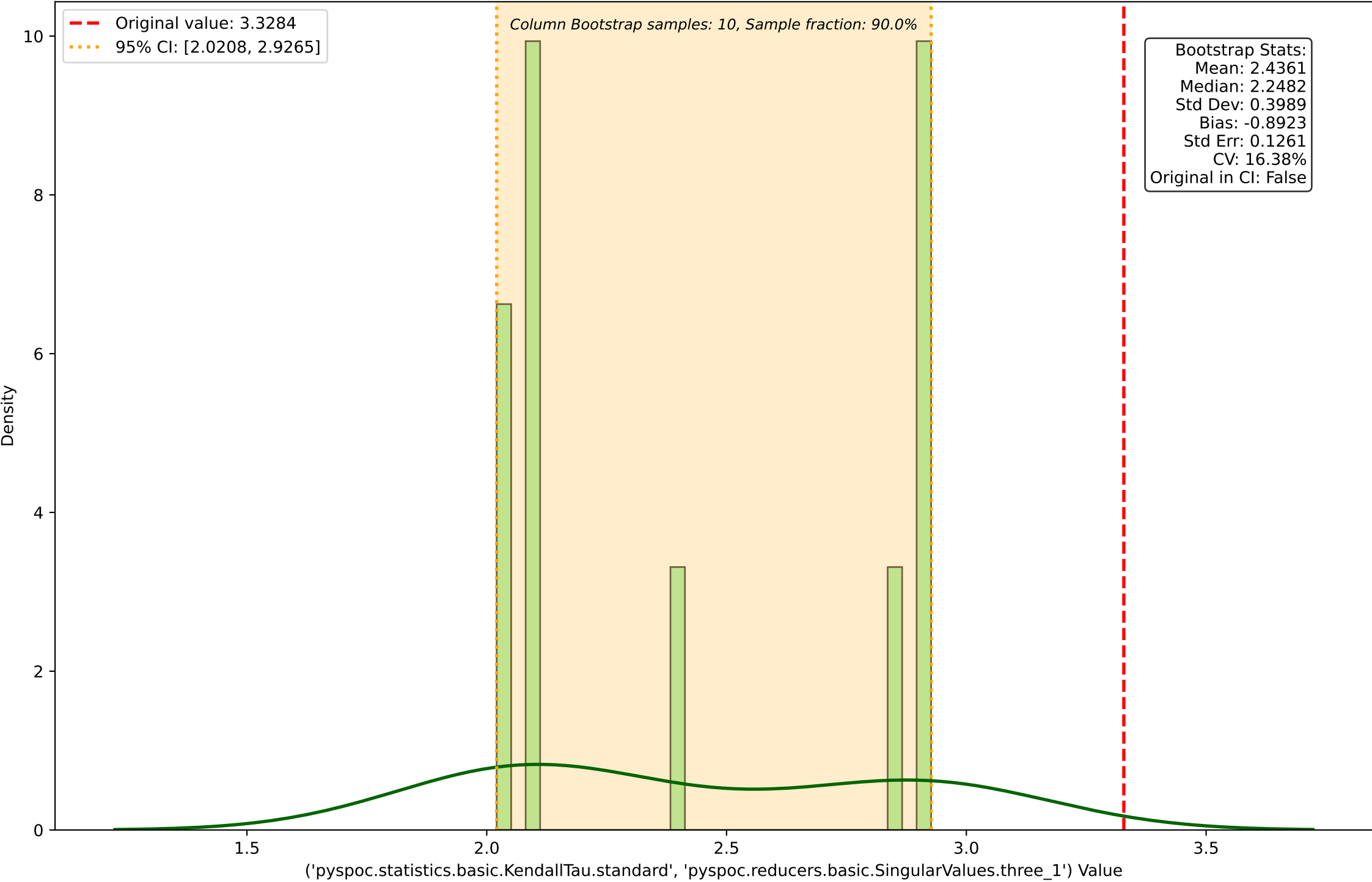


Column Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.sq', 'pypoc.reducers.basic.SingularValues.three\_2')

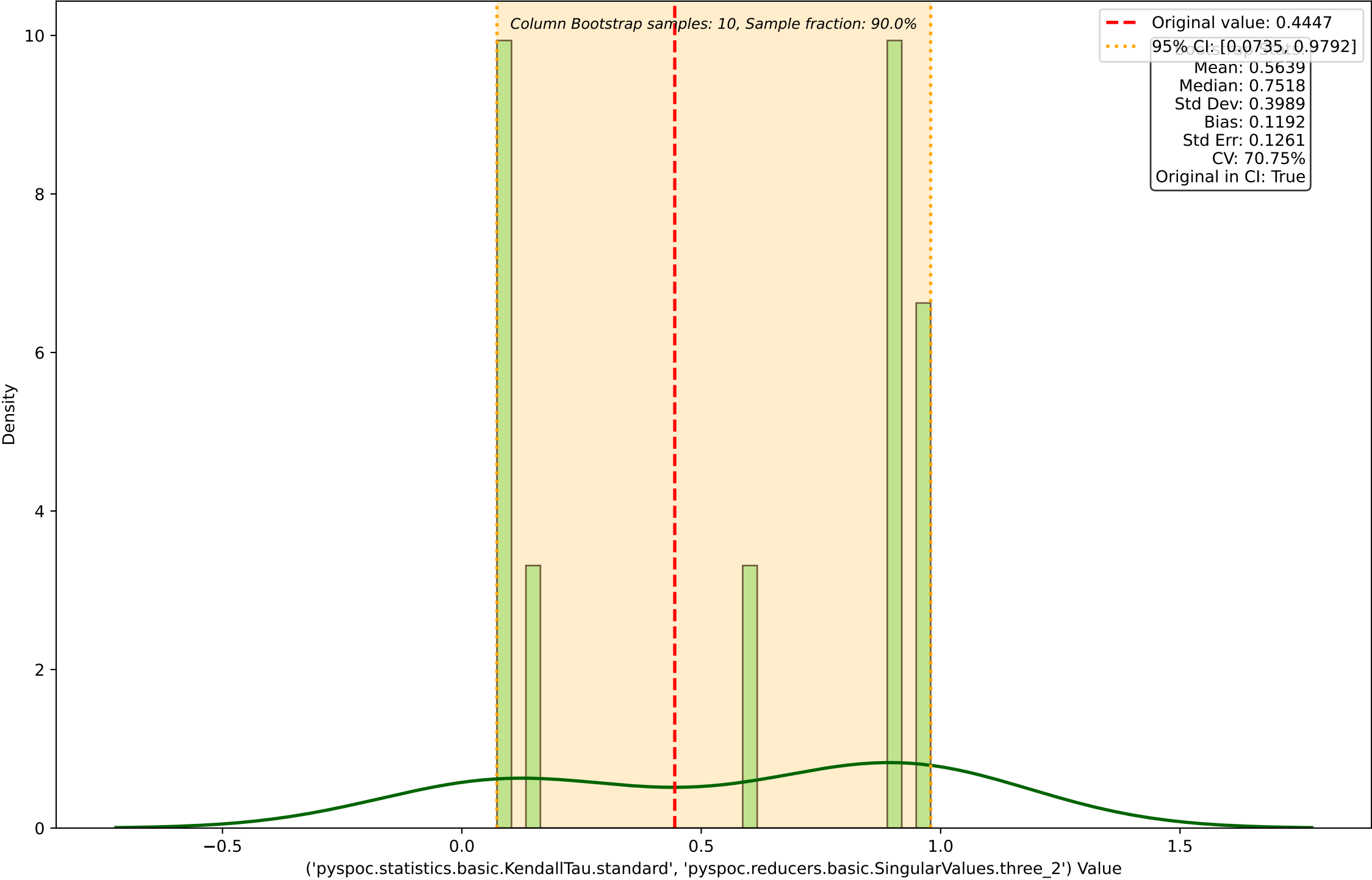




Column Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three\_1')

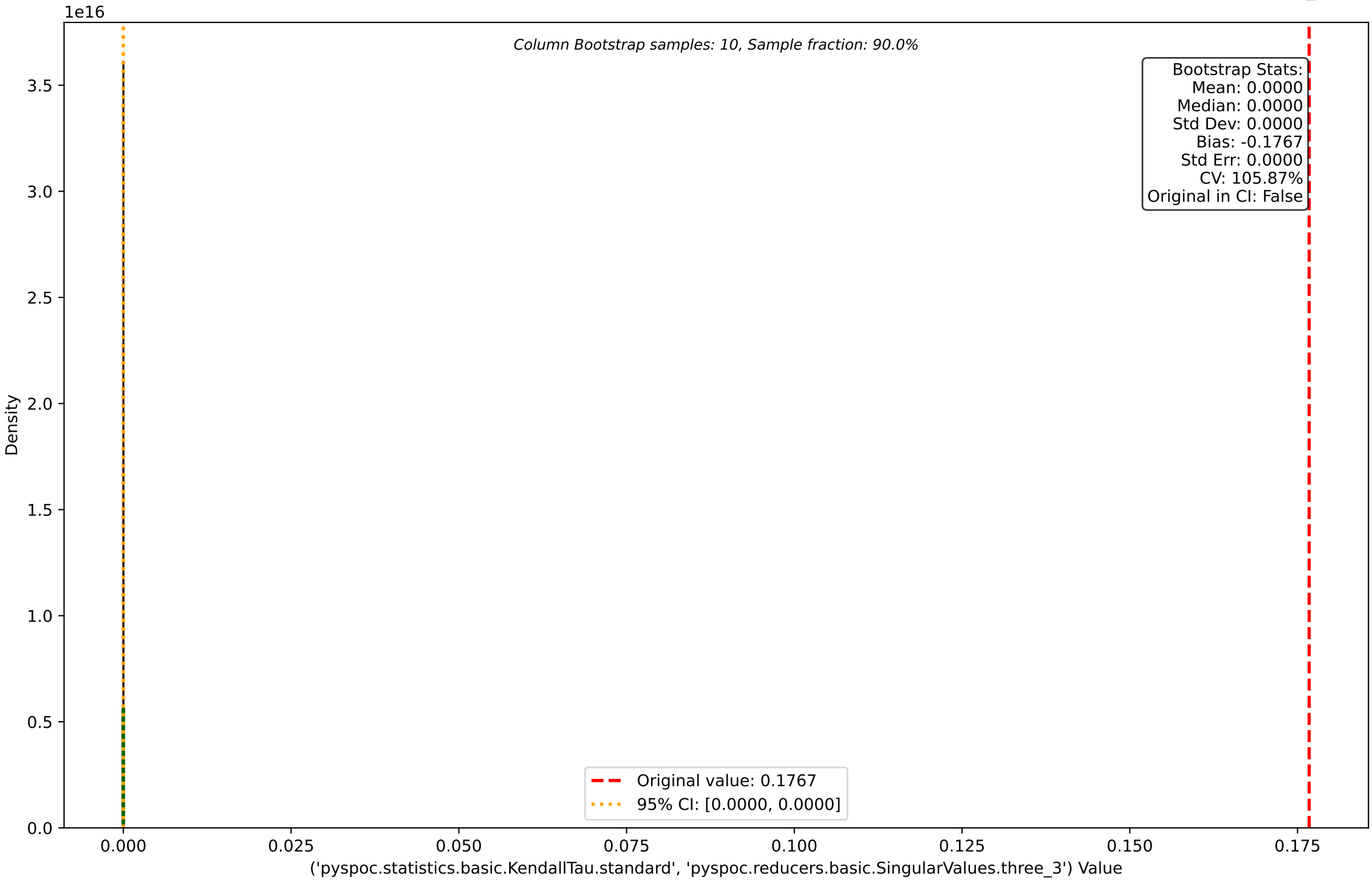


Column Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three\_2')

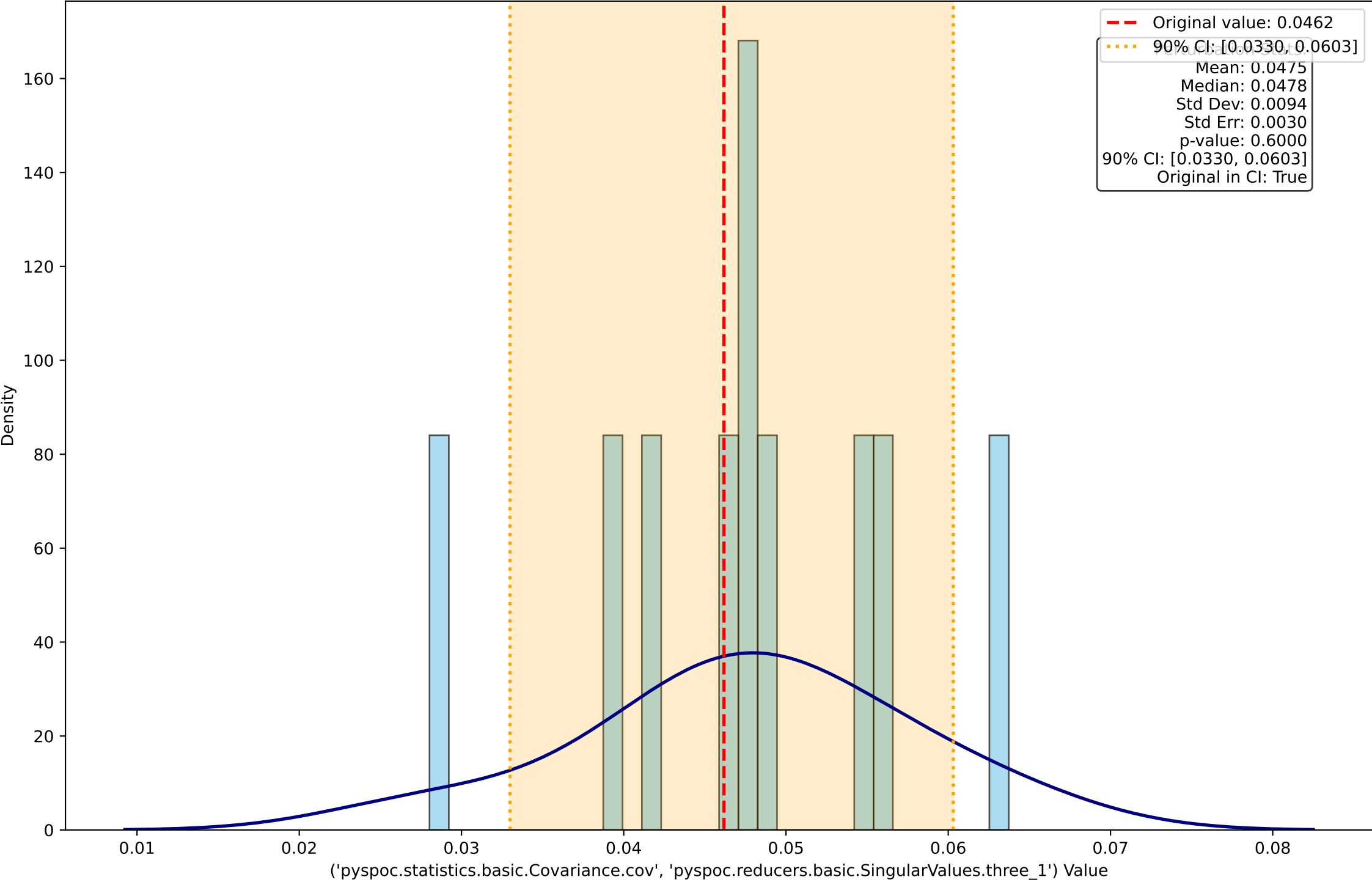




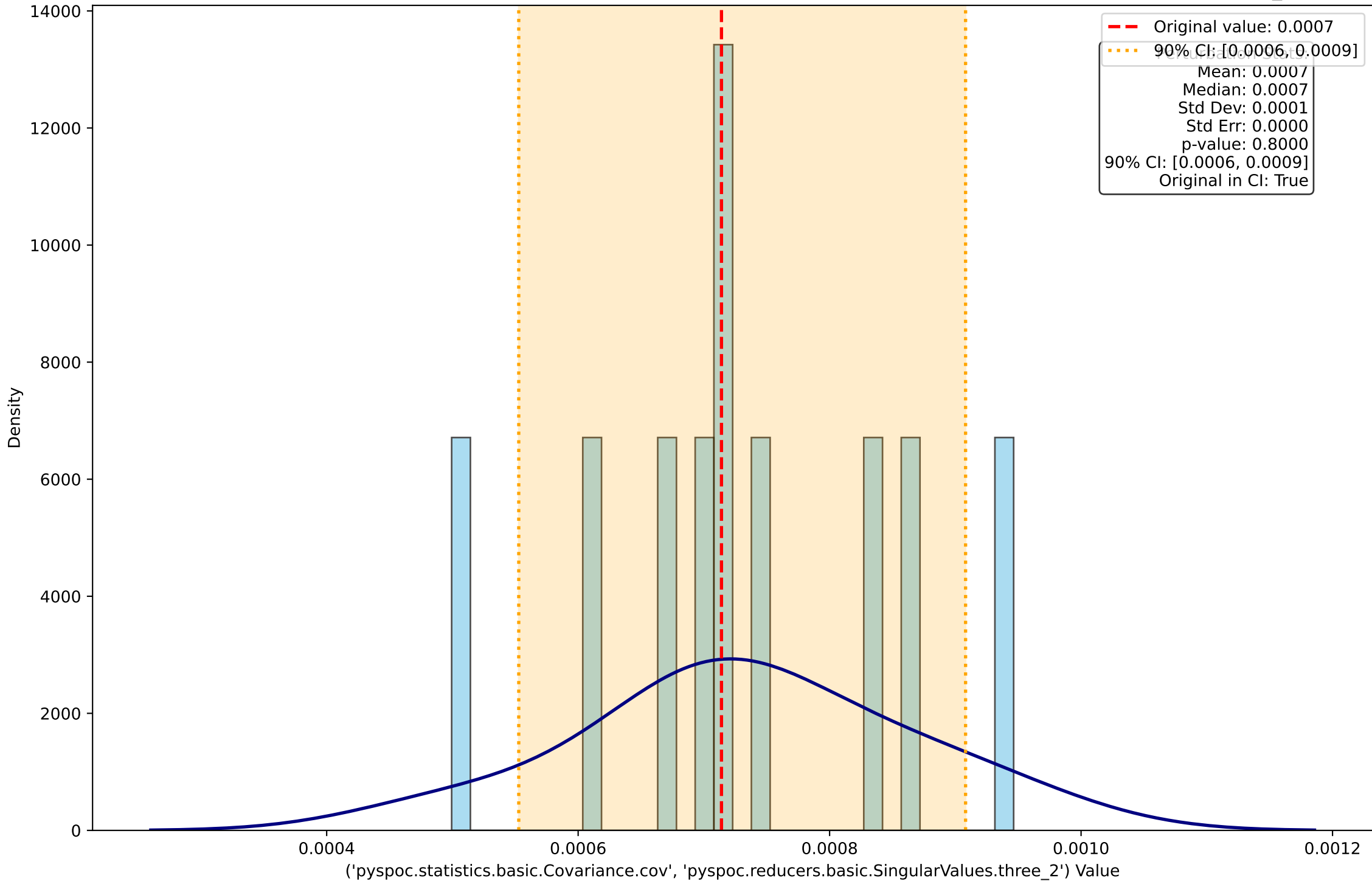
Column Bootstrap Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three\_3')



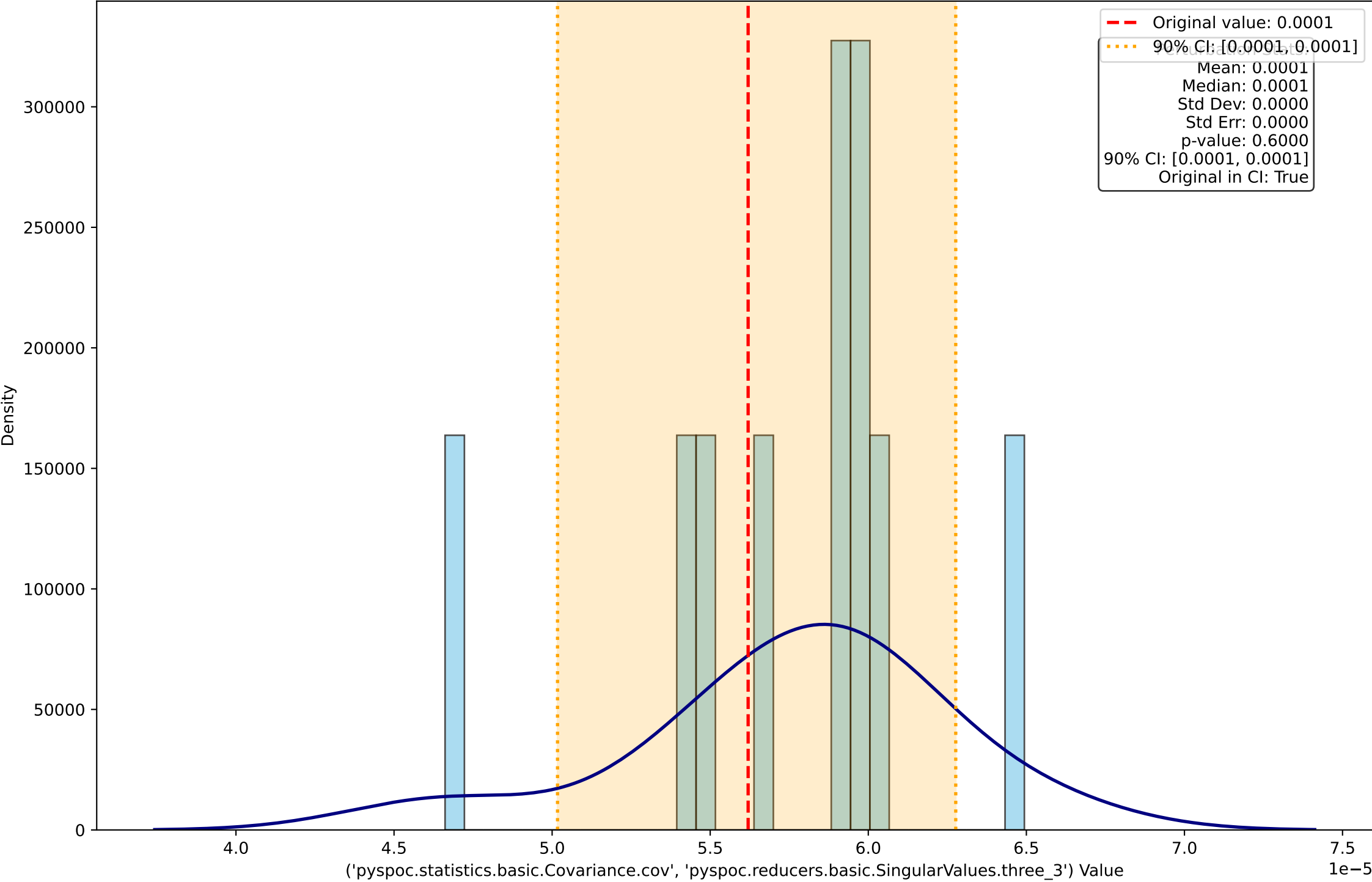
Perturbation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_1')



Perturbation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_2')



Perturbation Distribution for ('pyspoc.statistics.basic.Covariance.cov', 'pyspoc.reducers.basic.SingularValues.three\_3')



Perturbation Distribution for ('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.Determinant.scaled')

1e-53

Original value: 12789715011599597642031564456549211415196339424722944.0000  
90% CI: [2402366967188951966420583163719619179128444956966912.0000, 859661392637027966788240808314876944661919714720612352.0000]  
Mean: 224131241135402675707313915996847830512184873870950400.0000  
Median: 46593454627837351414254972480894000811112108518277120.0000  
Std Dev: 366907709403575035456373672335708476926056054063628288.0000  
Std Err: 116026405279047692866002473957227946610651608322670592.0000  
p-value: 0.8000  
Original in CI: True  
90% CI: [2402366967188951966420583163719619179128444956966912.0000, 859661392637027966788240808314876944661919714720612352.0000]

Density

0.0

0.2

0.4

0.6

0.8

1.0

-0.5

0.0

0.5

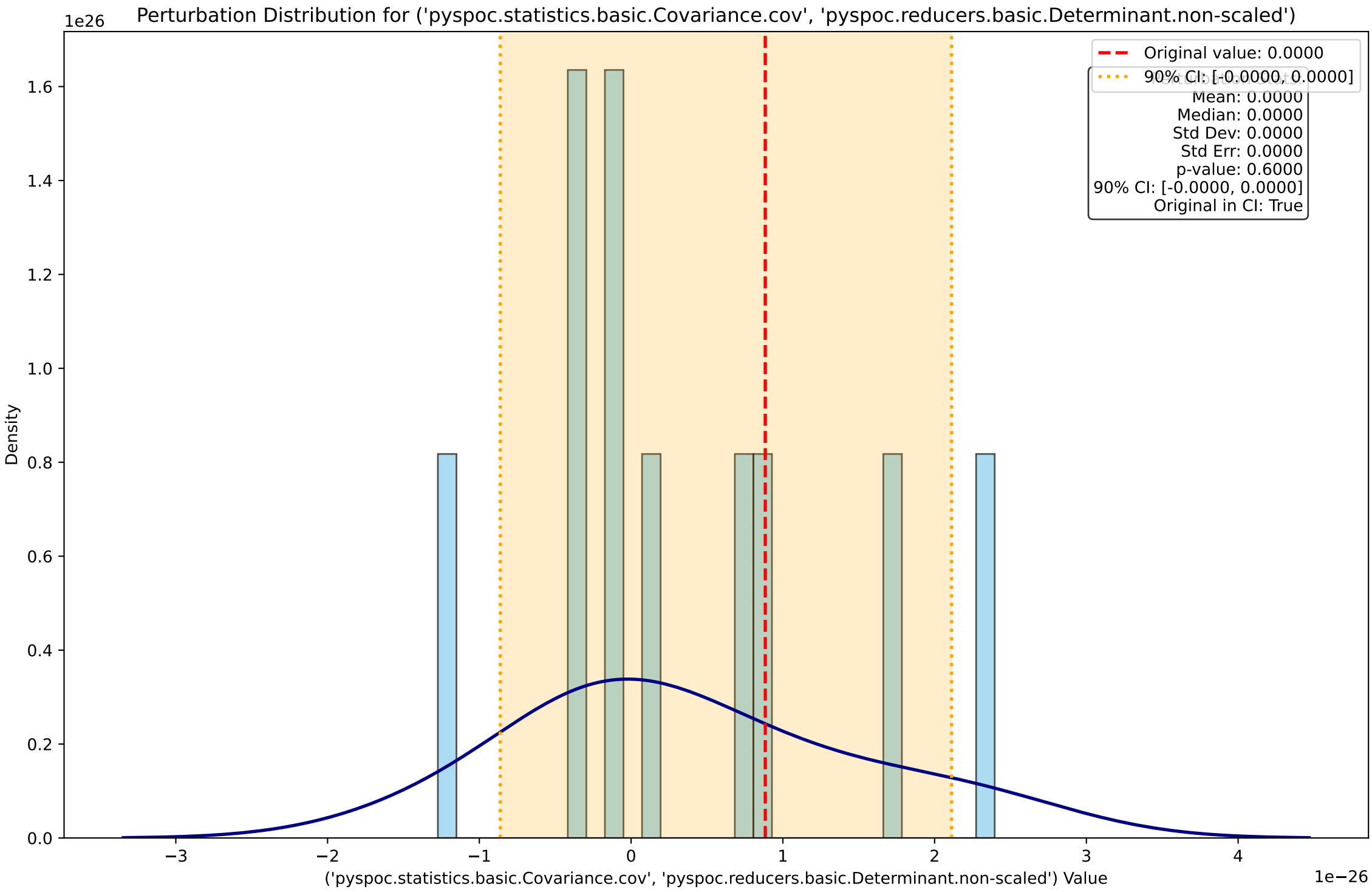
1.0

1.5

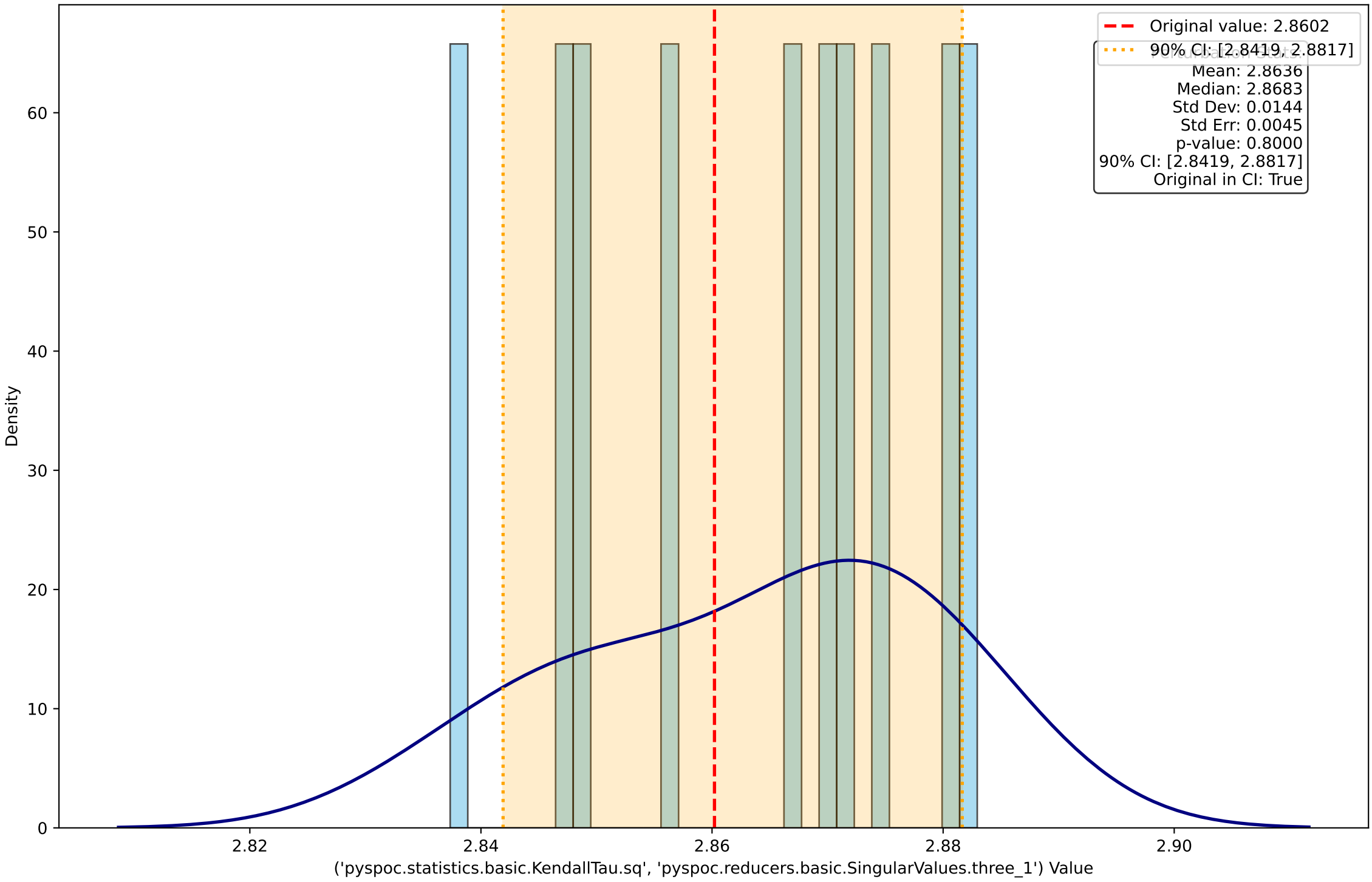
2.0

('pypoc.statistics.basic.Covariance.cov', 'pypoc.reducers.basic.Determinant.scaled') Value

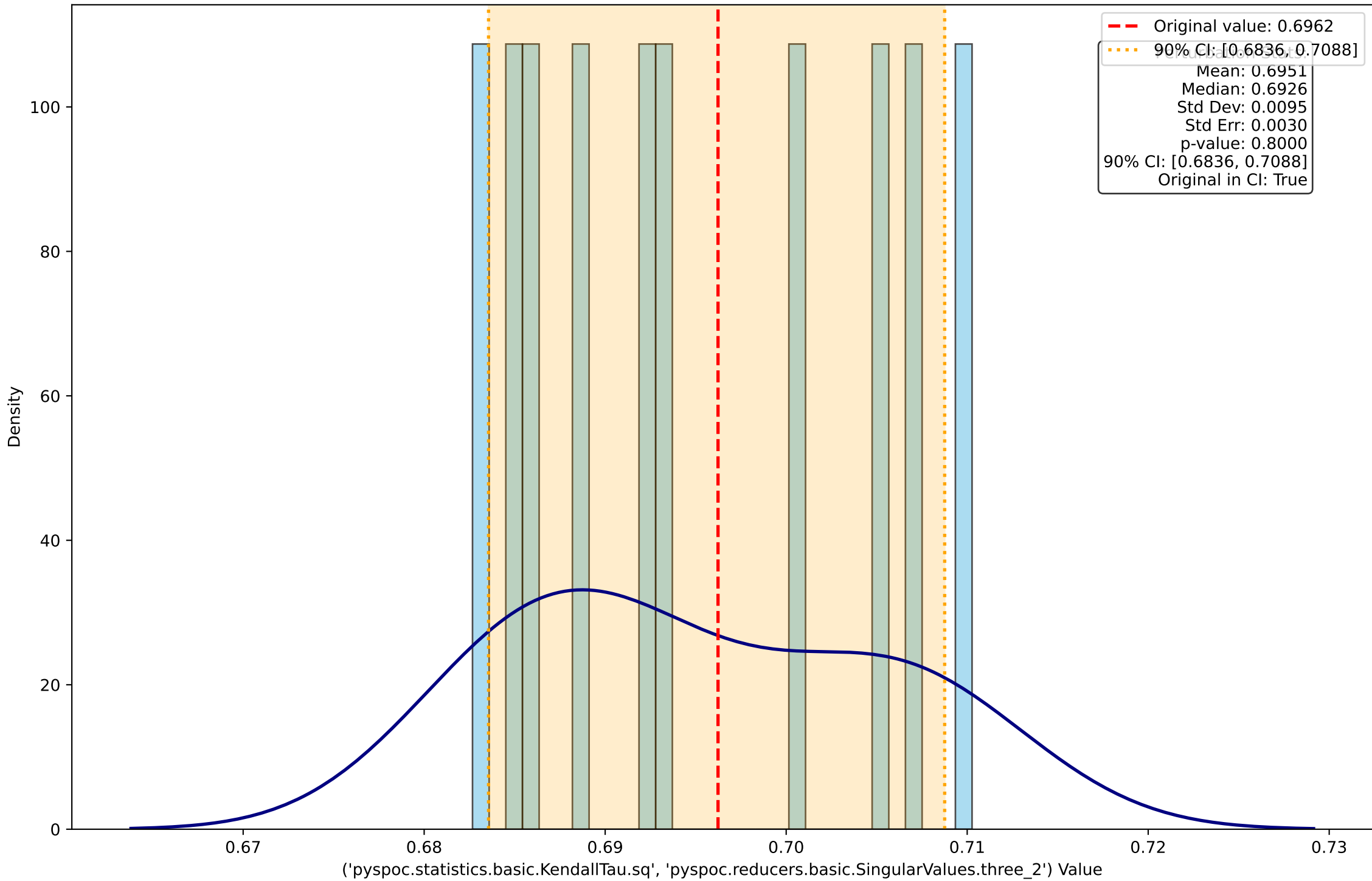
1e54



Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.sq', 'pyspoc.reducers.basic.SingularValues.three\_1')

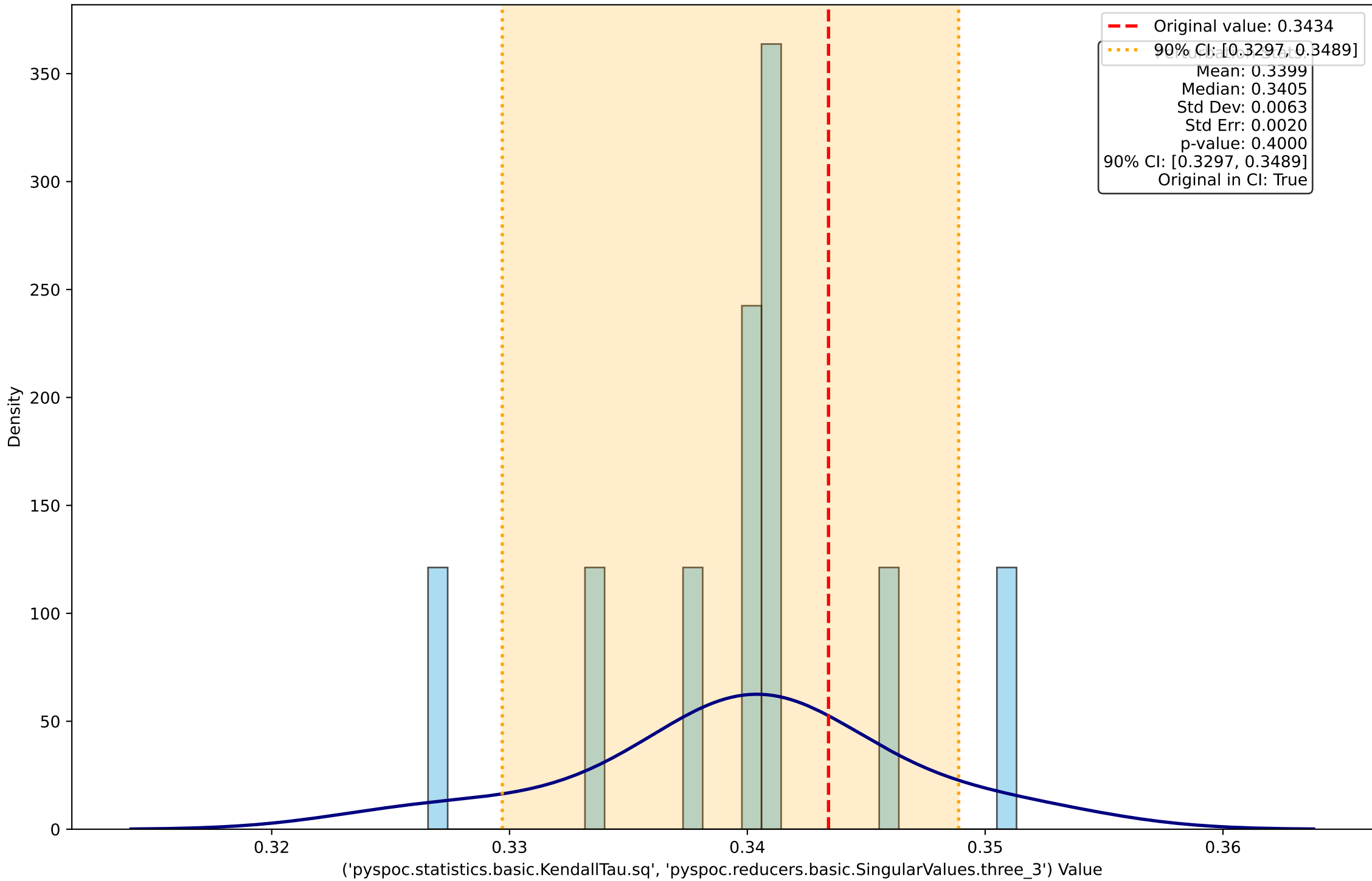


Perturbation Distribution for ('pypoc.statistics.basic.KendallTau.sq', 'pypoc.reducers.basic.SingularValues.three\_2')

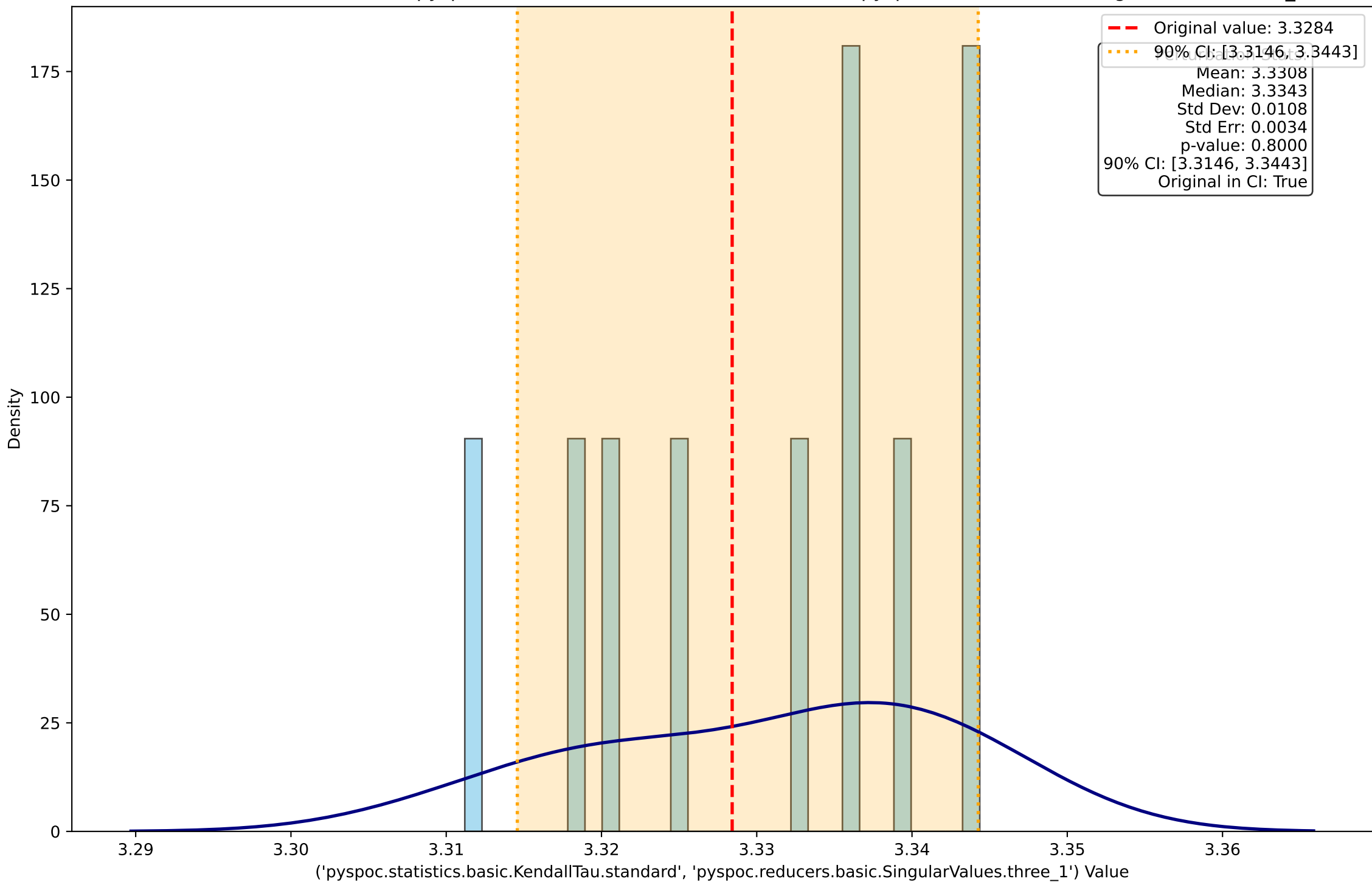




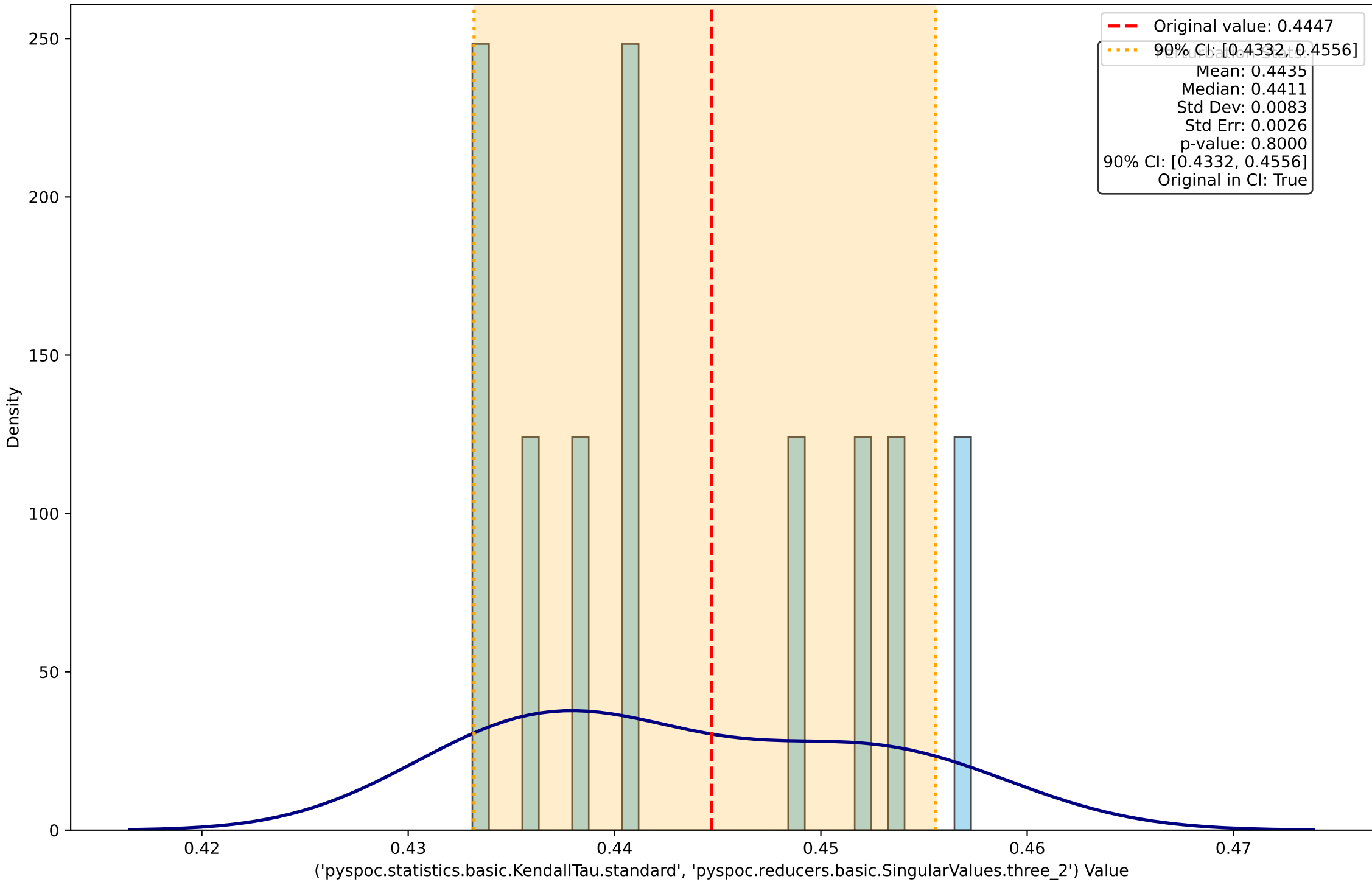
Perturbation Distribution for ('pypoc.statistics.basic.KendallTau.sq', 'pypoc.reducers.basic.SingularValues.three\_3')



Perturbation Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three\_1')



Perturbation Distribution for ('pypoc.statistics.basic.KendallTau.standard', 'pypoc.reducers.basic.SingularValues.three\_2')



Perturbation Distribution for ('pyspoc.statistics.basic.KendallTau.standard', 'pyspoc.reducers.basic.SingularValues.three\_3')

