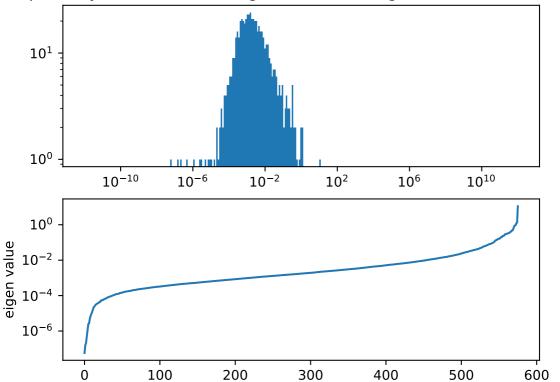
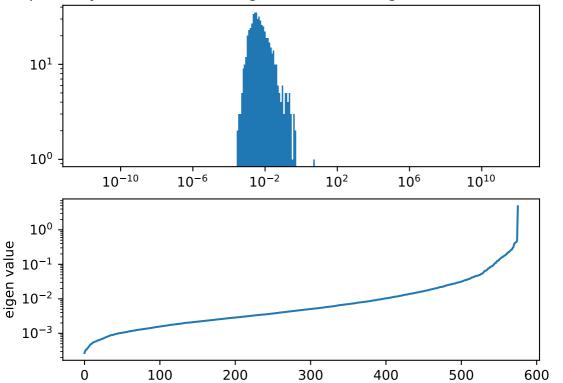
ep: 49 conv1 maxeig: 5.8e+01 mineig: 3.8e-03 con: 1.5e+04  $3 \times 10^{0}$  $2 \times 10^{0}$ 10<sup>0</sup> 1010 10-10 10-6 10-2 10<sup>2</sup> 10<sup>6</sup> 10<sup>1</sup> eigen value 10<sup>-1</sup>  $10^{-2}$ 10 15 25 20

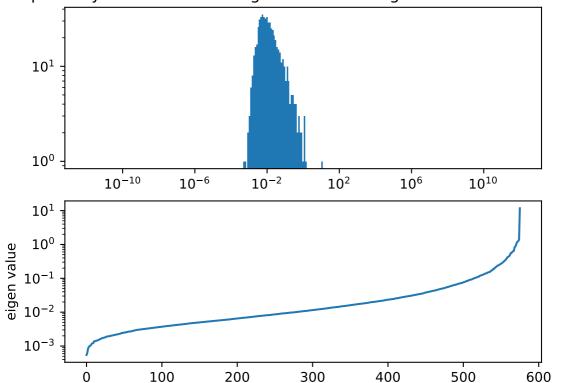
ep: 49 layer1.0.conv1 maxeig: 1.1e+01 mineig: 5.8e-08 con: 1.9e+08



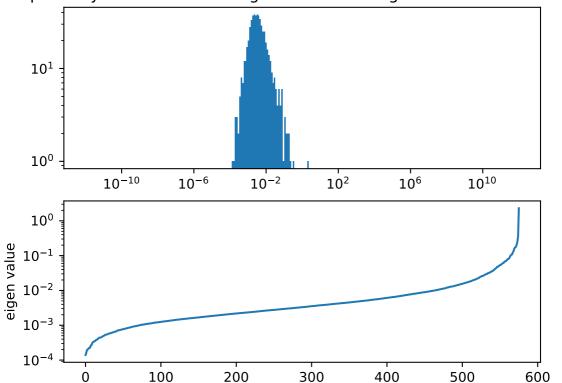
ep: 49 layer1.0.conv2 maxeig: 4.8e+00 mineig: 2.7e-04 con: 1.8e+04



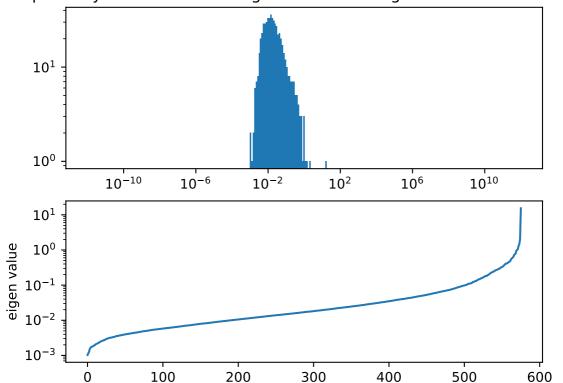
ep: 49 layer1.1.conv1 maxeig: 1.2e+01 mineig: 5.5e-04 con: 2.2e+04



ep: 49 layer1.1.conv2 maxeig: 2.3e+00 mineig: 1.4e-04 con: 1.6e+04

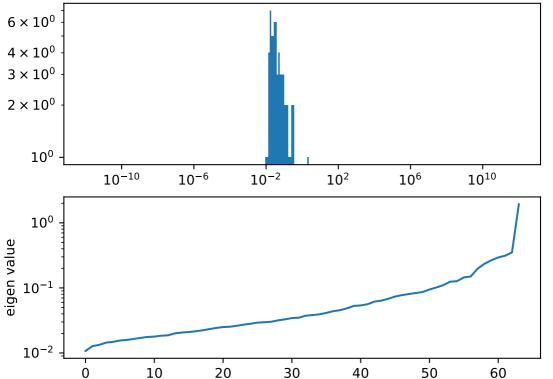


ep: 49 layer2.0.conv1 maxeig: 1.5e+01 mineig: 1.0e-03 con: 1.5e+04

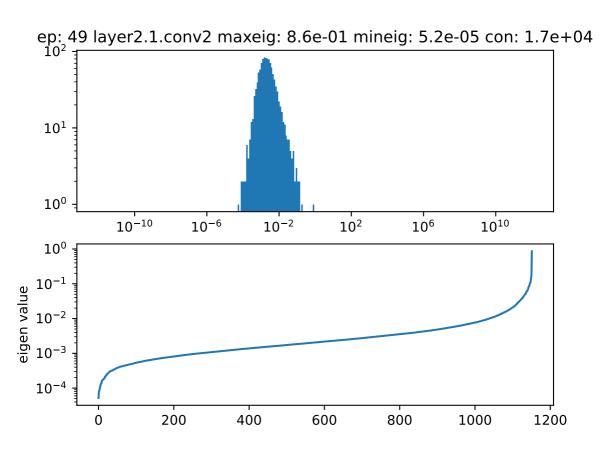


ep: 49 layer2.0.conv2 maxeig: 4.3e+00 mineig: 7.0e-04 con: 6.1e+03  $10^{2}$  $10^{1}$ 10<sup>0</sup> 1010 10<sup>-10</sup> 10<sup>6</sup>  $10^{-6}$  $10^{-2}$ 10<sup>2</sup> 10° en lo-1 en lo-2 en lo-2  $10^{-3}$ 200 400 600 800 1000 1200

ep: 49 layer2.0.shortcut.0 maxeig: 1.9e+00 mineig: 1.1e-02 con: 1.8e+02

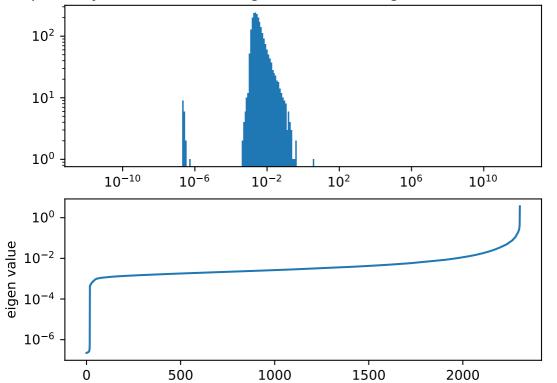


ep: 49 layer2.1.conv1 maxeig: 1.2e+01 mineig: 1.8e-04 con: 6.4e+04  $10^{2}$  $10^{1}$ 10<sup>0</sup> 1010 10-10 10-2 10<sup>6</sup>  $10^{-6}$ 10<sup>2</sup>  $10^{1}$ 10<sup>0</sup> eigen value  $10^{-1}$  $10^{-2}$  $10^{-3}$ 200 400 600 800 1000 1200

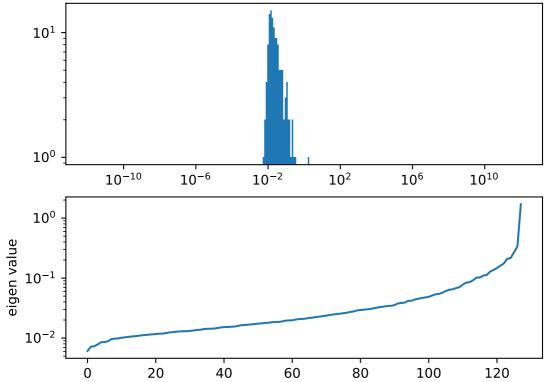


ep: 49 layer3.0.conv1 maxeig: 1.3e+01 mineig: 9.6e-04 con: 1.3e+04  $10^{2}$  $10^{1}$ 10<sup>0</sup> 1010 10-10 10<sup>6</sup>  $10^{-6}$  $10^{-2}$ 10<sup>2</sup>  $10^1$ eigen value 10 10<sup>-2</sup> 10<sup>-3</sup> 200 400 600 800 1000 1200

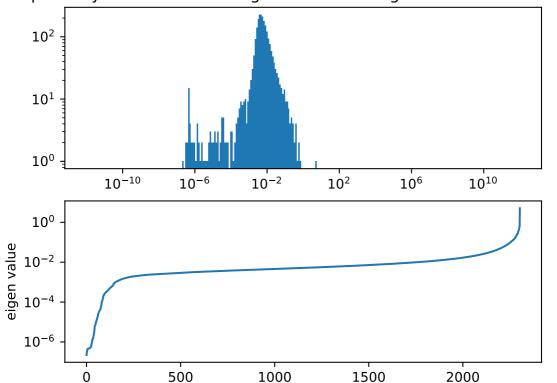
ep: 49 layer3.0.conv2 maxeig: 3.7e+00 mineig: 2.2e-07 con: 1.6e+07



ep: 49 layer3.0.shortcut.0 maxeig: 1.7e+00 mineig: 6.1e-03 con: 2.8e+02



ep: 49 layer3.1.conv1 maxeig: 5.1e+00 mineig: 2.2e-07 con: 2.3e+07



ep: 49 layer3.1.conv2 maxeig: 9.8e-01 mineig: 7.6e-08 con: 1.3e+07  $10^{2}$ 10<sup>1</sup> 10<sup>0</sup> 10<sup>10</sup> 10-10  $10^{-6}$ 10-2 10<sup>2</sup> 10<sup>6</sup> 10<sup>0</sup>  $10^{-2}$  $10^{-4}$  $10^{-6}$ 

1000

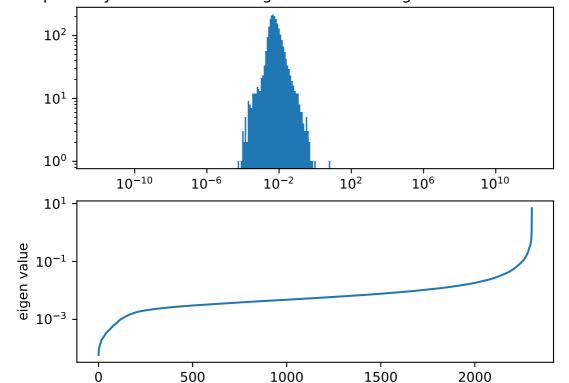
1500

2000

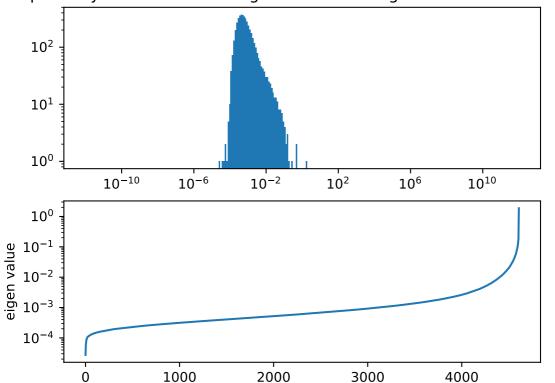
500

eigen value

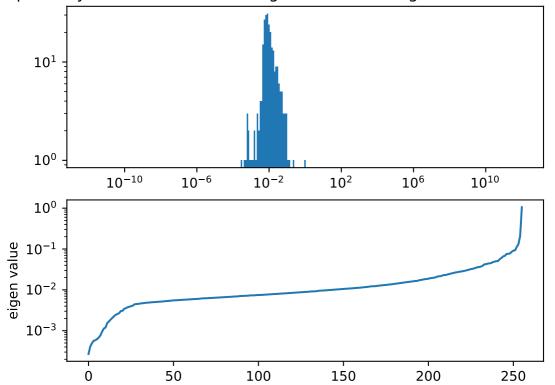
ep: 49 layer4.0.conv1 maxeig: 6.9e+00 mineig: 5.9e-05 con: 1.2e+05



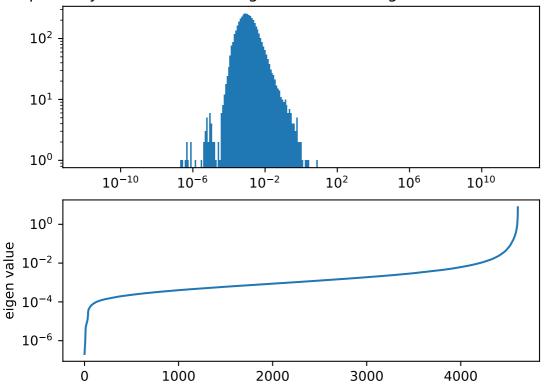
ep: 49 layer4.0.conv2 maxeig: 1.9e+00 mineig: 2.7e-05 con: 6.8e+04



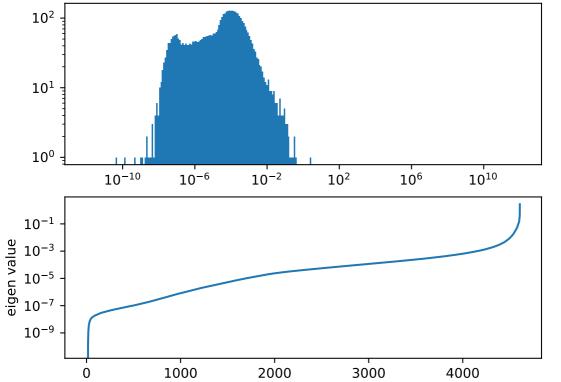
ep: 49 layer4.0.shortcut.0 maxeig: 1.1e+00 mineig: 2.7e-04 con: 3.9e+03



ep: 49 layer4.1.conv1 maxeig: 7.6e+00 mineig: 2.1e-07 con: 3.7e+07



ep: 49 layer4.1.conv2 maxeig: 2.8e+00 mineig: -3.8e-08 con: 5.8e+10



ep: 49 linear maxeig: 1.6e+00 mineig: 1.8e-06 con: 8.8e+05  $10^{1}$ 10<sup>0</sup> 10<sup>10</sup> 10-10  $10^{-6}$ 10<sup>2</sup> 10<sup>6</sup>  $10^{-2}$  $10^{-1}$ eigen value 10<sup>-3</sup>  $10^{-5}$ 100 400 500 200 300