CLAIMS

~~**What is claimed is:**~~

1.~~———~~ A method for wireless communication, comprising:

~~identifying~~ receiving, from a network device, an indication of a dynamic range of a transmission power ratio, wherein the transmission power ratio is a ratio between a first reference signal and a second reference signal of a downlink control channel received from ~~a base station;~~

the network device, wherein the dynamic range is bounded by a maximum value of the transmission power ratio and a minimum value of the transmission power ratio; determining a beam failure status based at least in part on the dynamic range of the transmission power ratio; and communicating with the network device in accordance with the beam failure status.

~~communicating with the base station in accordance with the beam failure status.~~

2.~~———~~ The method of claim 1, wherein the first reference signal is a channel state information reference signal (CSI-RS) and the second reference signal is a demodulation reference signal (DMRS) of a physical downlink control channel (PDCCH).

3.~~———~~ The method of claim ~~2, wherein identifying the dynamic range of the transmission power ratio comprises:~~

~~receiving an indication of the dynamic range of the transmission power ratio from the base station.~~

~~4. The method of claim 3, wherein the indication includes a maximum value associated with the dynamic range of the transmission power ratio and a minimum value associated with the dynamic range of the transmission power ratio.~~

~~5. The method of claim 3~~1, wherein the indication includes a maximum positive offset associated with the dynamic range of the transmission power ratio and a maximum negative offset associated with the dynamic range of the transmission power ratio.

~~6.~~ 4. The method of claim ~~3~~1, wherein the indication includes an offset value that represents both a maximum positive offset associated with the dynamic range of the transmission power ratio and a maximum negative offset associated with the dynamic range of the transmission power ratio.

~~7.~~ 5. The method of claim ~~3~~1, further comprising:

determining the dynamic range of the transmission power ratio based at least in part on a maximum positive offset, a maximum negative offset, and an average transmission power ratio.

~~8.~~ 6. The method of claim ~~3~~1, wherein the indication is received via at least one of radio resource control (RRC), a medium access control (MAC) control element (MAC CE), or downlink control information (DCI).

~~9.~~ 7. The method of claim 2, wherein ~~identifying~~ receiving the indication of the dynamic range of the transmission power ratio comprises:

receiving ~~an indication~~a message indicative of a configuration of the CSI-RS; and

determining the dynamic range of the transmission power ratio based at least in part on the ~~indication of the~~ configuration of the CSI-RS.

~~10.~~ 8. The method of claim ~~9~~7, wherein the configuration includes at least one of quasi-co-location (QCL) information, a measurement quantity related to the CSI-RS, and a CSI report setting associated with the CSI-RS.

~~11.~~ 9. The method of claim ~~9~~7, wherein the indication of the configuration of the CSI-RS is received via radio resource control (RRC) signaling.

~~12.~~ 10. The method of claim ~~9, wherein identifying the dynamic range of the transmission power ratio~~7, further ~~comprises:~~

comprising: identifying a maximum value associated with the dynamic range of the transmission power ratio and a minimum value associated with the dynamic range of the transmission power ratio based at least in part on the configuration of the CSI-RS.

~~13.~~ 11. The method of claim ~~9, wherein identifying the dynamic range of the transmission power ratio~~7, further ~~comprises:~~

comprising: identifying an offset associated with the dynamic range based at least in part on the configuration of the CSI-RS.

~~14.~~ 12. The method of claim ~~9, wherein identifying the dynamic range of the transmission power ratio~~7, further ~~comprises:~~

comprising: identifying a maximum positive offset and a maximum negative offset associated with the dynamic range based at least in part on the configuration of the CSI-RS.

~~15.~~ 13. The method of claim ~~9, wherein identifying the dynamic range of the transmission power ratio~~7, further ~~comprises:~~

comprising: identifying a maximum CSI-RS to DMRS power ratio and a minimum CSI-RS to DMRS power ratio based at least in part on the configuration of the CSI-RS.

16. 14. The method of claim 2, wherein identifyingreceiving the indication of the dynamic range of the transmission power ratio comprises:

receiving an indicationa message indicative of a power ratio between the CSI-RS and a physical downlink shared channel (PDSCH) received from the base stationnetwork device; and

determining the dynamic range of the transmission power ratio based at least in part on the power ratio between the CSI-RS and the PDSCH.

17. 15. The method of claim 2, further comprising:

determining a beam failure has occurred based at least in part on the determined beam failure status; and transmitting a beam failure report to the network device.

transmitting a beam failure report to the base station.

18. 16. The method of claim 2, wherein the dynamic range of the transmission power ratio is identified per CSI-RS resource, per CSI-RS resource set, or per CSI-RS resource setting.

19. 17. The method of claim 2, further comprising:

determining an upper hypothetical PDCCH block error rate (BLER) and a lower hypothetical PDCCH BLER based at least in part on the dynamic range; and

determining the beam failure status based at least in part on the upper hypothetical PDCCH BLER, the lower hypothetical PDCCH BLER, or both.

20. 18. The method of claim 1917, further comprising:

performing a CSI-RS measurement; and

determining the beam failure status based at least in part on the upper hypothetical PDCCH BLER, the lower hypothetical PDCCH BLER, the CSI-RS measurement, or some combination thereof.

21. 19. A method for wireless communication, comprising:

identifying a dynamic range of a transmission power ratio between a first reference signal and a second reference signal of a downlink control channel to a user equipment (UE);

), wherein the dynamic range is bounded by a maximum value of the transmission power ratio and a minimum value of the transmission power ratio; transmitting, to the UE, a signal that facilitates identification of the dynamic range of the transmission power ratio by the UE;

, wherein the signal includes an indication of the dynamic range of the transmission power ratio; receiving a beam failure status report based at least in part on the dynamic range of the transmission power ratio; and communicating with the UE in accordance with the beam failure status report.

communicating with the UE in accordance with the beam failure status report.

22. 20. The method of claim 21 19, wherein the first reference signal is a channel state information reference signal (CSI-RS) and the second reference signal is a demodulation reference signal (DMRS) of a physical downlink control channel (PDCCH).

23. 21. The method of claim 22, wherein the signal includes an indication of the dynamic range of the transmission power ratio.

24. The method of claim 23, wherein the indication includes a maximum value associated with the dynamic range of the transmission power ratio and a minimum value associated with the dynamic range of the transmission power ratio.

25. The method of claim 23 19, wherein the indication includes a maximum positive offset associated with the dynamic range of the transmission power ratio and a maximum negative offset associated with the dynamic range of the transmission power ratio.

26. 22. The method of claim 23 19, wherein the indication includes an offset value that represents both a maximum positive offset associated with the dynamic range of the transmission power ratio and a maximum negative offset associated with the dynamic range of the transmission power ratio.

27. 23. The method of claim 23 19, wherein the dynamic range of the transmission power ratio is determined based at least in part on a maximum positive offset, a maximum negative offset, and an average transmission power ratio.

28. 24. The method of claim 23 19, wherein the indication is transmitted via at least one of radio resource control (RRC), a medium access control (MAC) control element (MAC CE), or downlink control information (DCI).

~~29.~~ 25. The method of claim ~~22~~20, further comprising:

transmitting an indication of a configuration of the CSI-RS, wherein the configuration indicates the dynamic range of the transmission power ratio.

~~30.~~ 26. The method of claim ~~29~~25, wherein the configuration includes at least one of quasi-co-location (QCL) information, a measurement quantity related to the CSI-RS, and a CSI report setting associated with the CSI-RS.

~~31.~~ 27. The method of claim ~~29~~25, wherein the indication of the configuration of the CSI-RS is received via radio resource control (RRC) signaling.

~~32.~~ 28. The method of claim ~~29~~25, wherein the indication of the configuration indicates at least one of an offset associated with the dynamic range, a maximum positive offset associated with the dynamic range, a maximum negative offset associated with the dynamic range, a maximum CSI-RS to DMRS power ratio, and a minimum CSI-RS to DMRS power ratio.

~~33.~~ 29. The method of claim ~~22~~20, further comprising:

transmitting an indication of a power ratio between the CSI-RS and a physical downlink shared channel (PDSCH), wherein the dynamic range of the transmission power ratio is based at least in part on the power ratio between the CSI-RS and the PDSCH.

~~34.~~ 30. The method of claim ~~22~~20, further comprising:

identifying that the beam failure status report is based on an upper hypothetical PDCCH block error rate (BLER), a lower hypothetical PDCCH BLER, or both, wherein the upper hypothetical PDCCH BLER and the lower hypothetical PDCCH BLER are derived from the dynamic range of the transmission power ratio; and

determining a beam failure has occurred based at least in part on the received beam failure status report.

~~35.~~ 31. The method of claim ~~22~~20, wherein the dynamic range of the transmission power ratio is identified per CSI-RS resource, per CSI-RS resource set, or per CSI-RS resource setting.

~~36.~~ 32. An apparatus for wireless communication, comprising:

means for ~~identifying~~receiving, from a network device, an indication of a dynamic range of a transmission power ratio, wherein the transmission power ratio is a ratio between a first reference signal and a second reference signal of a downlink control channel received from ~~a base station;~~

the network device, wherein the dynamic range is bounded by a maximum value of the transmission power ratio and a minimum value of the transmission power ratio; means for determining a beam failure status based at least in part on the dynamic range of the transmission power ratio; and means for communicating with the network device in accordance with the beam failure status.

~~means for communicating with the base station in accordance with the beam failure status.~~

~~37.~~ 33. The apparatus of claim ~~36~~32, wherein the first reference signal is a channel state information reference signal (CSI-RS) and the second reference signal is a demodulation reference signal (DMRS) of a physical downlink control channel (PDCCH).

~~38.~~ 34. The apparatus of claim ~~37, wherein the means for identifying the dynamic range of the transmission power ratio comprises:~~

~~means for receiving an indication of the dynamic range of the transmission power ratio from the base station.~~

~~39. The apparatus of claim 38, wherein the indication includes a maximum value associated with the dynamic range of the transmission power ratio and a minimum value associated with the dynamic range of the transmission power ratio.~~

~~40. The apparatus of claim 38~~32, wherein the indication includes a maximum positive offset associated with the dynamic range of the transmission power ratio and a maximum negative offset associated with the dynamic range of the transmission power ratio.

~~41.~~ 35. The apparatus of claim ~~38~~32, wherein the indication includes an offset value that represents both a maximum positive offset associated with the dynamic range of the transmission power ratio and a maximum negative offset associated with the dynamic range of the transmission power ratio.

~~42.~~ 36. The apparatus of claim ~~38~~32, further comprising:

means for determining the dynamic range of the transmission power ratio based at least in part on a maximum positive offset, a maximum negative offset, and an average transmission power ratio.

~~43.~~ 37. The apparatus of claim ~~38~~32, wherein the indication is received via at least one of radio resource control (RRC), a medium access control (MAC) control element (MAC CE), or downlink control information (DCI).

~~44.~~ 38. The apparatus of claim ~~37~~33, wherein the means for ~~identifying~~ receiving the indication of the dynamic range of the transmission power ratio comprises:

means for receiving ~~an indication~~a message indicative of a configuration of the CSI-RS; and

means for determining the dynamic range of the transmission power ratio based at least in part on the ~~indication of the~~ configuration of the CSI-RS.

~~45.~~ 39. The apparatus of claim ~~44~~38, wherein the configuration includes at least one of quasi-co-location (QCL) information, a measurement quantity related to the CSI-RS, and a CSI report setting associated with the CSI-RS.

~~46.~~ 40. The apparatus of claim ~~44~~38, wherein the indication of the configuration of the CSI-RS is received via radio resource control (RRC) signaling.

~~47.~~ 41. The apparatus of claim ~~44, wherein the means for identifying the dynamic range of the transmission power ratio~~38, further ~~comprises:~~

comprising: means for identifying a maximum value associated with the dynamic range of the transmission power ratio and a minimum value associated with the dynamic range of the transmission power ratio based at least in part on the configuration of the CSI-RS.

~~48.~~ 42. The apparatus of claim ~~44, wherein the means for identifying the dynamic range of the transmission power ratio~~38, further ~~comprises:~~

comprising: means for identifying an offset associated with the dynamic range based at least in part on the configuration of the CSI-RS.

~~49.~~ 43. The apparatus of claim ~~44, wherein the means for identifying the dynamic range of the transmission power ratio~~38, further ~~comprises:~~

comprising: means for identifying a maximum positive offset and a maximum negative offset associated with the dynamic range based at least in part on the configuration of the CSI-RS.

~~50.~~ 44. The apparatus of claim ~~44, wherein the means for identifying the dynamic range of the transmission power ratio~~38, further ~~comprises:~~

comprising: means for identifying a maximum CSI-RS to DMRS power ratio and a minimum CSI-RS to DMRS power ratio based at least in part on the configuration of the CSI-RS.

~~51.~~ 45. The apparatus of claim ~~37~~33, wherein the means for ~~identifying~~receiving the indication of the dynamic range of the transmission power ratio comprises:

means for receiving ~~an indication~~a message indicative of a power ratio between the CSI-RS and a physical downlink shared channel (PDSCH) received from the ~~base station~~network device; and

means for determining the dynamic range of the transmission power ratio based at least in part on the power ratio between the CSI-RS and the PDSCH.

~~52.~~ 46. The apparatus of claim ~~37~~33, further comprising:

means for determining a beam failure has occurred based at least in part on the determined beam failure status; and means for transmitting a beam failure report to the network device.

~~means for transmitting a beam failure report to the base station.~~

~~53.~~ 47. The apparatus of claim ~~37~~33, wherein the dynamic range of the transmission power ratio is identified per CSI-RS resource, per CSI-RS resource set, or per CSI-RS resource setting.

~~54.~~ 48. The apparatus of claim ~~37~~33, further comprising:

means for determining an upper hypothetical PDCCH block error rate (BLER) and a lower hypothetical PDCCH BLER based at least in part on the dynamic range; and

means for determining the beam failure status based at least in part on the upper hypothetical PDCCH BLER, the lower hypothetical PDCCH BLER, or both.

~~55.~~ 49. The apparatus of claim ~~54~~48, further comprising:

means for performing a CSI-RS measurement; and

means for determining the beam failure status based at least in part on the upper hypothetical PDCCH BLER, the lower hypothetical PDCCH BLER, the CSI-RS measurement, or some combination thereof.

~~56.~~ 50. An apparatus for wireless communication, comprising:

means for identifying a dynamic range of a transmission power ratio between a first reference signal and a second reference signal of a downlink control channel to a user equipment (UE~~);~~), wherein the dynamic range is bounded by a maximum value of the transmission power ratio and a minimum value of the transmission power ratio; means for transmitting, to the UE, a signal that facilitates identification of the dynamic range of the transmission power ratio by the UE~~;~~

, wherein the signal includes an indication of the dynamic range of the transmission power ratio; means for receiving a beam failure status report based at least in part on the dynamic range of the transmission power ratio; and means for communicating with the UE in accordance with the beam failure status report.

~~means for communicating with the UE in accordance with the beam failure status report.~~

~~57.~~ 51. The apparatus of claim ~~56~~50, wherein the first reference signal is a channel state information reference signal (CSI-RS) and the second reference signal is a demodulation reference signal (DMRS) of a physical downlink control channel (PDCCH).

~~58.~~ 52. The apparatus of claim ~~57, wherein the signal includes an indication of the dynamic range of the transmission power ratio.~~

~~59. The apparatus of claim 58, wherein the indication includes a maximum value associated with the dynamic range of the transmission power ratio and a minimum value associated with the dynamic range of the transmission power ratio.~~

~~60. The apparatus of claim 58~~50, wherein the indication includes a maximum positive offset associated with the dynamic range of the transmission power ratio and a maximum negative offset associated with the dynamic range of the transmission power ratio.

~~61.~~ 53. The apparatus of claim ~~58~~50, wherein the indication includes an offset value that represents both a maximum positive offset associated with the dynamic range of the transmission power ratio and a maximum negative offset associated with the dynamic range of the transmission power ratio.

~~62.~~ 54. The apparatus of claim ~~58~~50, wherein the dynamic range of the transmission power ratio is determined based at least in part on a maximum positive offset, a maximum negative offset, and an average transmission power ratio.

~~63.~~ 55. The apparatus of claim ~~58~~50, wherein the indication is transmitted via at least one of radio resource control (RRC), a medium access control (MAC) control element (MAC CE), or downlink control information (DCI).

~~64.~~ 56. The apparatus of claim ~~57~~51, further comprising:

means for transmitting an indication of a configuration of the CSI-RS, wherein the configuration indicates the dynamic range of the transmission power ratio.

~~65.~~ 57. The apparatus of claim ~~64~~56, wherein the configuration includes at least one of quasi-co-location (QCL) information, a measurement link configuration related to the CSI-RS, and a CSI report setting associated with the CSI-RS.

~~66.~~ 58. The apparatus of claim ~~64~~56, wherein the indication of the configuration of the CSI-RS is received via radio resource control (RRC) signaling.

~~67.~~ 59. The apparatus of claim ~~64~~56, wherein the indication of the configuration indicates at least one of an offset associated with the dynamic range, a maximum positive offset associated with the dynamic range, a maximum negative offset associated with the dynamic

range, a maximum CSI-RS to DMRS power ratio, and a minimum CSI-RS to DMRS power ratio.

~~68.~~ 60. The apparatus of claim ~~57~~51, further comprising:

means for transmitting an indication of a power ratio between the CSI-RS and a physical downlink shared channel (PDSCH), wherein the dynamic range of the transmission power ratio is based at least in part on the power ratio between the CSI-RS and the PDSCH.

~~69.~~ 61. The apparatus of claim ~~57~~51, further comprising:

means for identifying that the beam failure status report is based on an upper hypothetical PDCCH block error rate (BLER), a lower hypothetical PDCCH BLER, or both, wherein the upper hypothetical PDCCH BLER and the lower hypothetical PDCCH BLER are derived from the dynamic range of the transmission power ratio; and

means for determining a beam failure has occurred based at least in part on the received beam failure status report.

~~70.~~ 62. The apparatus of claim ~~57~~51, wherein the dynamic range of the transmission power ratio is identified per CSI-RS resource, per CSI-RS resource set, or per CSI-RS resource setting.