CLAIMS

1. A method for receiving a signal, performed by a user equipment (UE), comprising:

sending capability information to a base station, wherein the capability information is configured to indicate whether the UE supports a capability of receiving signals corresponding to different sub-carrier spacings (SCSs) simultaneously; and

obtaining a scheduling instruction sent by the base station based on the capability information, and receiving the signals based on the scheduling instruction.

2. The method according to claim 1, wherein the capability information is configured to indicate at least one of:

whether the UE supports a capability 1, wherein the capability 1 comprises: when a positioning reference signal (PRS) to be measured and a data signal of a current serving cell correspond to different SCSs, the UE being capable of receiving the PRS to be measured and the data signal of the current serving cell simultaneously; or

whether the UE supports a capability 2, wherein the capability 2 comprises: when the positioning reference signal (PRS) to be measured and a reference signal of the current serving cell correspond to different SCSs, the UE being capable of receiving the PRS to be measured and the reference signal of the current serving cell simultaneously.

3. The method according to claim 1 or 2, wherein sending the capability information to the base station comprises one of:

sending the capability information to the base station via an IE MeasAndMobParameters signaling; or

sending the capability information to the base station via an IE MeasAndMobParametersMRDC signaling.

4. The method according to claim 2, wherein the PRS to be measured comprises a PRS to be measured of a neighbor cell.

5. The method according to claim 2, wherein the reference signal of the current serving cell comprises at least one of:

a synchronous signal block (SSB) of the current serving cell;

a channel state information reference signal (CSI-RS) of the current serving cell; or

a PRS of the current serving cell.

6. The method according to claim 2, wherein sending the capability information to the base station comprises one of:

sending capability information indicating whether the UE supports the capability 1 to the

base station;

sending capability information indicating whether the UE supports the capability 2 to the base station; or

sending capability information indicating whether the UE supports a capability 1 and whether the UE supports the capability 2 to the base station.

7. The method according to claim 6, wherein in a case of sending the capability information indicating whether the UE supports the capability 1 to the base station, obtaining the scheduling instruction sent by the base station based on the capability information, and receiving the signals based on the scheduling instruction comprises:

determining capability information indicating that the UE supports the capability 1, obtaining a scheduling instruction for indicating that the PRS to be measured and the data signal of the current serving cell are scheduled simultaneously on a target bandwidth part (BWP) which is sent by the base station, and receiving the PRS to be measured and the data signal of the current serving cell simultaneously on the target BWP; and

determining capability information indicating that the UE does not support the capability 1, obtaining a scheduling instruction for indicating that the PRS to be measured is scheduled on the target BWP which is sent by the base station, and receiving the PRS to be measured on the target BWP, and being incapable of receiving the data signal of the current serving cell during a period of measuring the PRS to be measured by the UE.

8. The method according to claim 6, wherein in a case of sending the capability information indicating whether the UE supports the capability 2 to the base station, obtaining the scheduling instruction sent by the base station based on the capability information, and receiving the signals based on the scheduling instruction comprises:

determining the capability information indicating that the UE supports the capability 2, obtaining a scheduling instruction for indicating that the PRS to be measured and the reference signal of the current serving cell are scheduled simultaneously on a target bandwidth part (BWP) which is sent by the base station, and receiving the PRS to be measured and the reference signal of the current serving cell simultaneously on the target BWP; and

determining the capability information indicating that the UE does not support the capability 2, obtaining a scheduling instruction for indicating that the PRS to be measured is scheduled on the target BWP from the base station, and receiving the PRS to be measured on the target BWP, and being incapable of measuring the reference signal of the current serving cell during a period of measuring the PRS to be measured by the UE.

9. The method according to claim 6, wherein in a case of sending the capability information indicating whether the UE supports a capability 1 and whether the UE supports the capability 2 to the base station, obtaining the scheduling instruction sent by the base station based on the capability information, and receiving the signals based on the scheduling instruction comprises:

determining the capability information indicating that the UE supports the capability 1 and the capability 2, obtaining a scheduling instruction for indicating that the PRS to be measured, the reference signal of the current serving cell and the data signal of the current serving cell are scheduled simultaneously on a target bandwidth part (BWP) which is sent by the base station, and receiving the PRS to be measured, the reference signal of the current serving cell and the data signal of the current serving cell simultaneously on the target BWP;

determining the capability information indicating that the UE supports the capability 1, and does not support the capability 2, obtaining a scheduling instruction for indicating that the PRS to be measured and the data signal of the current serving cell are scheduled simultaneously on the target BWP which is sent by the base station, and receiving the PRS to be measured and the data signal of the current serving cell simultaneously on the target BWP, and being incapable of measuring the reference signal of the current serving cell during a period of measuring the PRS to be measured by the UE;

determining the capability information indicating that the UE supports the capability 2, and does not support the capability 1, obtaining a scheduling instruction for indicating that the PRS to be measured and the reference signal of the current serving cell are scheduled on the target BWP which is sent by the base station, and receiving the PRS to be measured and the reference signal of the current serving cell simultaneously on the target BWP, and being incapable of receiving the data signal of the current serving cell during a period of measuring the PRS to be measured by the UE; and

determining the capability information indicating that the UE does not support the capability 1, and does not support the capability 2, obtaining a scheduling instruction for indicating that the PRS to be measured is scheduled on the target BWP which is sent by the base station, and receiving the PRS to be measured on the target BWP, and being incapable of receiving the data signal of the current serving cell and being incapable of measuring the reference signal of the current serving cell during a period of measuring the PRS to be measured by the UE.

10. A method for receiving a signal, performed by a base station, comprising:

receiving capability information sent by a user equipment (UE), wherein the capability information is configured to indicate whether the UE supports a capability of receiving signals corresponding to different sub-carrier spacings (SCSs) simultaneously; and

sending a scheduling instruction to the UE based on the capability information, and sending the signals to the UE based on the scheduling instruction.

11. The method according to claim 10, wherein the capability information is configured to indicate at least one of:

whether the UE supports a capability 1, wherein the capability 1 comprises: when a positioning reference signal (PRS) to be measured and a data signal of a current serving cell correspond to different SCSs, the UE being capable of receiving the PRS to be measured and the data signal of the current serving cell simultaneously; or

whether the UE supports a capability 2, wherein the capability 2 comprises: when a positioning reference signal (PRS) to be measured and a reference signal of a current serving cell correspond to different SCSs, the UE being capable of receiving the PRS to be measured and the reference signal of the current serving cell simultaneously.

12. The method according to claim 10 or 11, wherein receiving the capability information from the UE comprises one of:

receiving the capability information sent by the UE via an IE MeasAndMobParameters signaling; or

receiving the capability information sent by the UE via an IE MeasAndMobParametersMRDC signaling.

13. The method according to claim 11, wherein the PRS to be measured comprises a PRS to be measured of a neighbor cell.

14. The method according to claim 11, wherein the reference signal of the current serving cell comprises at least one of:

a synchronous signal block (SSB) of the current serving cell;

a channel state information reference signal (CSI- RS) of the current serving cell; or

a PRS of the current serving cell.

15. The method according to claim 11, wherein receiving the capability information sent by the UE comprises one of:

receiving capability information indicating whether the UE supports the capability 1 which is sent by the UE;

receiving capability information indicating whether the UE supports the capability 2

which is sent by the UE; or

receiving capability information indicating whether the UE supports the capability 1 and whether the UE supports the capability 2 which is sent by the UE.

16. The method according to claim 15, wherein in a case of receiving capability information indicating whether the UE supports the capability 1 which is sent by the UE, sending the scheduling instruction to the UE based on the capability information, and sending the signals to the UE based on the scheduling instruction comprises:

determining the capability information indicating that the UE supports the capability 1, sending to the UE a scheduling instruction for indicating that the PRS to be measured and the data signal of the current serving cell are scheduled simultaneously on a target bandwidth part (BWP), and sending the PRS to be measured and the data signal of the current serving cell simultaneously on the target BWP; and

determining the capability information indicating the UE does not support the capability 1, sending to the UE a scheduling instruction for indicating that the PRS to be measured is scheduled on the target BWP, and sending the PRS to be measured on the target BWP, and being incapable of scheduling the data signal of the current serving cell during a period of measuring the PRS to be measured by the UE.

17. The method according to claim 15, wherein in a case of receiving capability information indicating whether the UE supports the capability 2 which is sent by the UE, sending the scheduling instruction to the UE based on the capability information, and sending the signals to the UE based on the scheduling instruction comprises:

determining the capability information indicating that the UE supports the capability 2, sending to the UE a scheduling instruction for indicating that the PRS to be measured and the reference signal of the current serving cell are scheduled simultaneously on a target bandwidth part (BWP), and sending the PRS to be measured and the reference signal of the current serving cell simultaneously on the target BWP; and

determining the capability information indicating that the UE does not support the capability 2, sending to the UE a scheduling instruction for indicating that the PRS to be measured is scheduled on the target BWP, and sending the PRS to be measured on the target BWP, and being incapable of scheduling the reference signal of the current serving cell during a period of measuring the PRS to be measured by the UE.

18. The method according to claim 15, wherein in a case of receiving capability information indicating whether the UE supports the capability 1 and whether the UE supports

the capability 2 which is sent by the UE, sending the scheduling instruction to the UE based on the capability information, and sending the signals to the UE based on the scheduling instruction comprises:

determining the capability information indicating that the UE supports the capability 1 and the capability 2, sending to the UE a scheduling instruction for indicating that the PRS to be measured, the reference signal of the current serving cell and the data signal of the current serving cell are scheduled simultaneously on a target bandwidth part (BWP), and sending the PRS to be measured, the reference signal of the current serving cell and the data signal of the current serving cell simultaneously on the target BWP;

determining the capability information indicating that the UE supports the capability 1, and does not support the capability 2, sending to the UE a scheduling instruction for indicating that the PRS to be measured and the data signal of the current serving cell is scheduled simultaneously on the target BWP, and sending the PRS to be measured and the data signal of the current serving cell simultaneously on the target BWP, and being incapable of measuring the reference signal of the current serving cell during a period of measuring the PRS to be measured by the UE;

determining the capability information indicating that the UE supports the capability 2, and does not support the capability 1, sending to the UE a scheduling instruction for indicating that the PRS to be measured and the reference signal of the current serving cell are scheduled on the target BWP, and sending the PRS to be measured and the reference signal of the current serving cell simultaneously on the target BWP, and being incapable of scheduling the data signal of the current serving cell during a period of measuring the PRS to be measured by the UE; and

determining the capability information indicating that the UE does not support the capability 1, and does not support the capability 2, sending to the UE a scheduling instruction for indicating that the PRS to be measured is scheduled on the target BWP, and sending the PRS to be measured on the target BWP, and being incapable of scheduling the data signal of the current serving cell and the reference signal of the current serving cell during a period of measuring the PRS to be measured by the UE.

19. An apparatus for receiving a signal, comprising:

a sending module, configured to send capability information to a base station, wherein the capability information is configured to indicate whether a user equipment (UE) supports a capability of receiving signals corresponding to different sub-carrier spacings (SCSs)

simultaneously; and

a receiving module, configured to obtain a scheduling instruction sent by the base station based on the capability information, and receive the signals based on the scheduling instruction.

20. An apparatus for receiving a signal, comprising:

a receiving module, configured to receive capability information sent by a user equipment (UE), wherein the capability information is configured to indicate whether the UE supports a capability of receiving signals corresponding to different sub-carrier spacings (SCSs) simultaneously; and

a sending module, configured to send a scheduling instruction to the UE based on the capability information, and send the signals to the UE based on the scheduling instruction.