TABLE I

Simulation Parameters

|  |  |  |  |
| --- | --- | --- | --- |
| Position | Symbol | Description | Value |
| System Parameters | , | Rated active power and reactive power | 30kW, 0 |
| , | Proportional and Integral gain of current loop | 6, 50 |
|  | Peak value of grid voltage | 311V |
|  | Frequency of grid voltage | 50Hz |
|  | Decoupling coefficient | 0.2π |
| , , | RLC Filter | 2mH, 200μF, 0.1Ω |
|  | DC voltage | 800V |
| GFMC | , | Virtual inertia and damping | 0.013, 5 |
| , | Voltage regulation coefficient | 6.5, 320 |
| , | Proportional and Integral gain of voltage loop | 2, 50 |
| GFLC | , | Proportional and Integral gain of voltage loop | 3.14, 1535 |

IEEE 33-bus distribution system single line diagram

