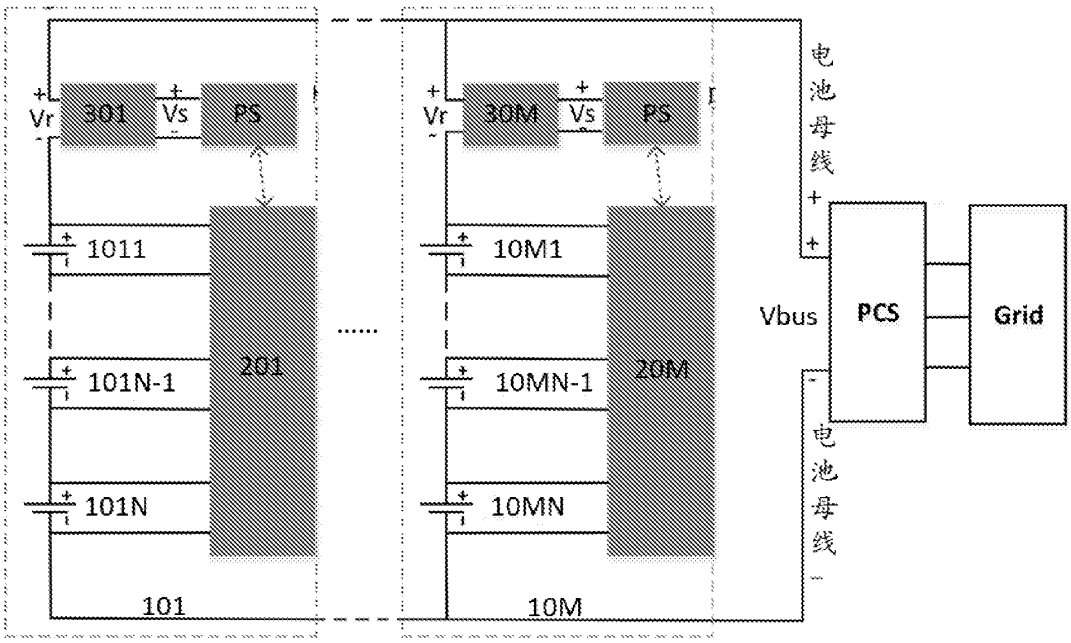

Vr
301
Vs
PS
1011
101N-1
101N
201
101
.....
Vr
30M
Vs
PS
10M1
10MN-1
10MN
20M
10M
电池母线+
Vbus
PCS
Grid
电池母线-

图1

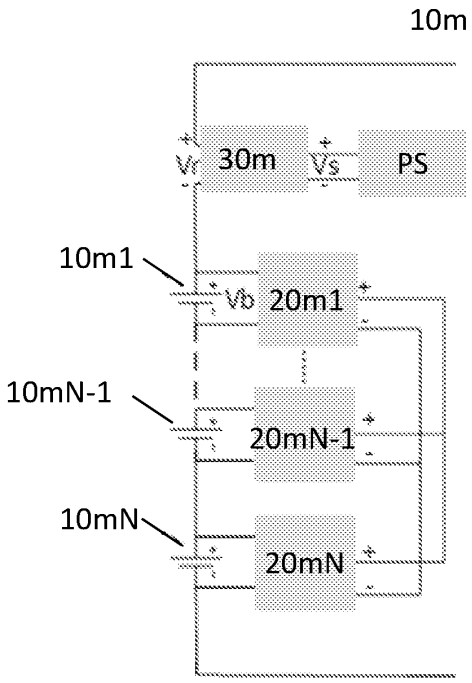

10m
Vr
30m
Vs
PS
10m1
Vb
20m1
10mN-1
20mN-1
10mN
20mN

图2a

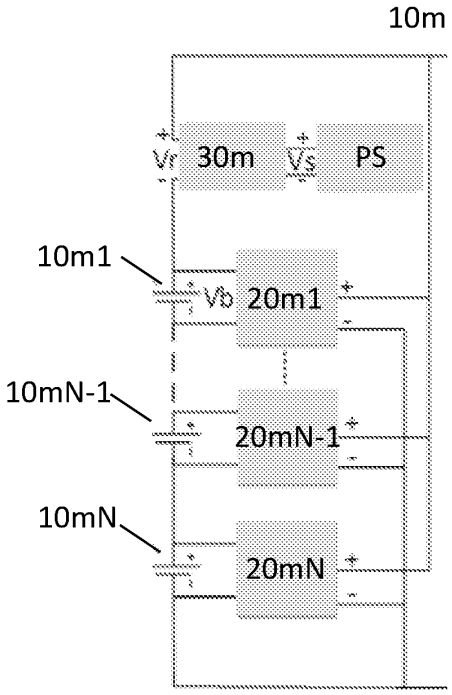

10m
Vr
30m
Vs
PS
10m1
Vb
20m1
10mN-1
20mN-1
10mN
20mN

图2b

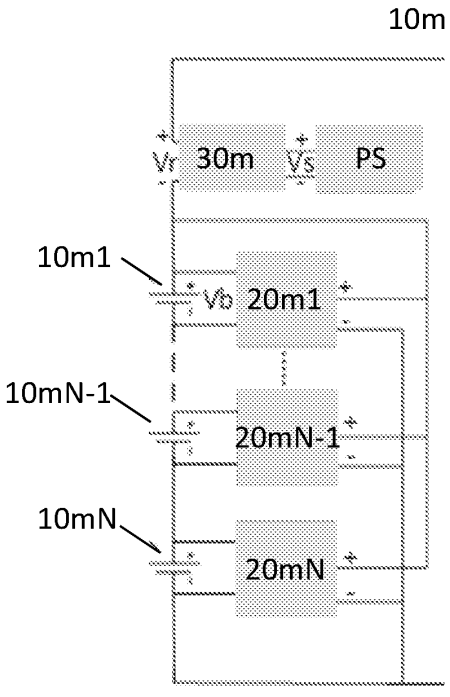

10m
Vr
30m
Vs
PS
10m1
Vb
20m1
10mN-1
20mN-1
10mN
20mN

图2c

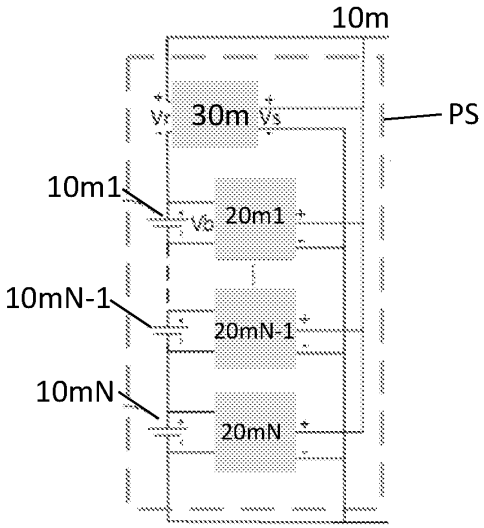

10m
30m
PS
10m1
20m1
10mN-1
20mN-1
10mN
20mN

图2d

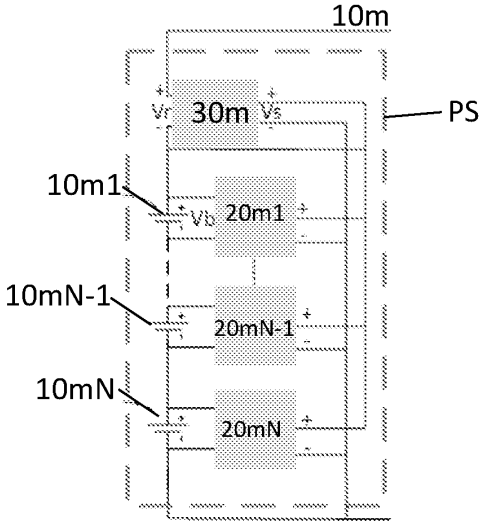

10m
30m
PS
10m1
20m1
10mN-1
20mN-1
10mN
20mN

图2e

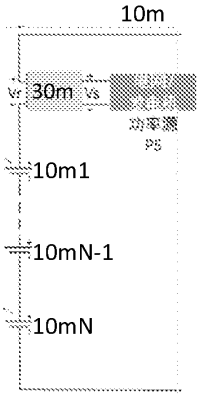

10m
30m
10m1
10mN-1
10mN

图3a

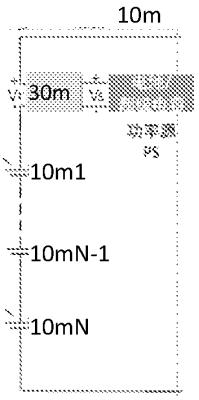

10m
30m
10m1
10mN-1
10mN

图3b

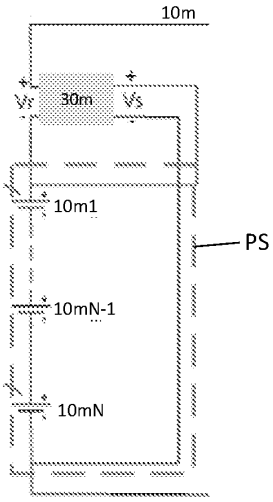

10m
30m
10m1
PS
10mN-1
10mN

图3c

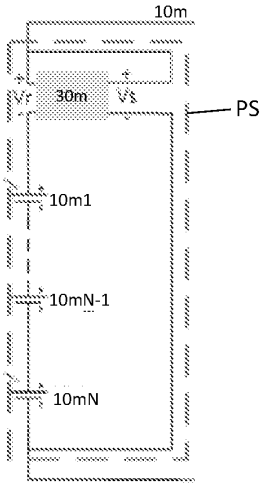


图3d

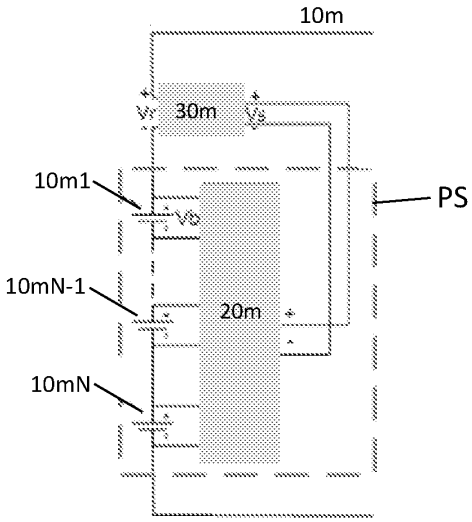


图3e

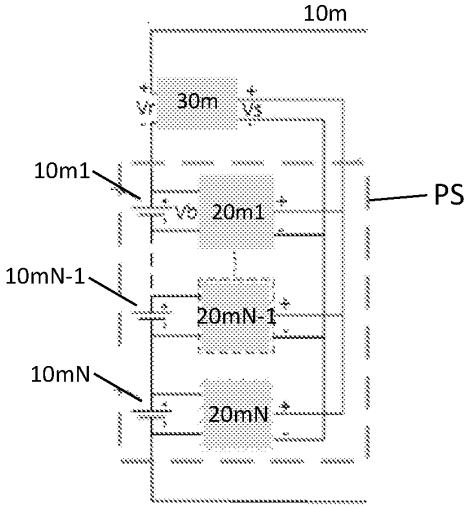

10m
30m
Vf
Vs
10m1
Vb
20m1
PS
10mN-1
20mN-1
10mN
20mN

图3f

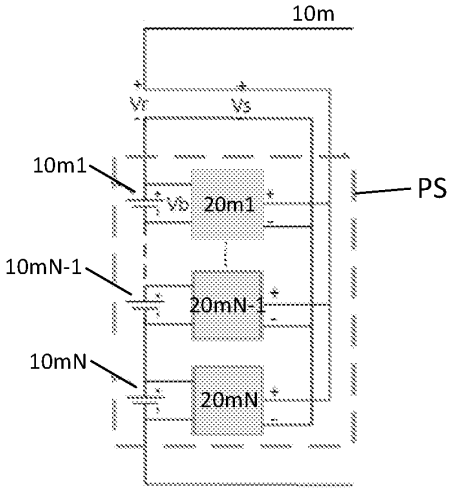

10m
Vf
Vs
10m1
Vb
20m1
PS
10mN-1
20mN-1
10mN
20mN

图3g

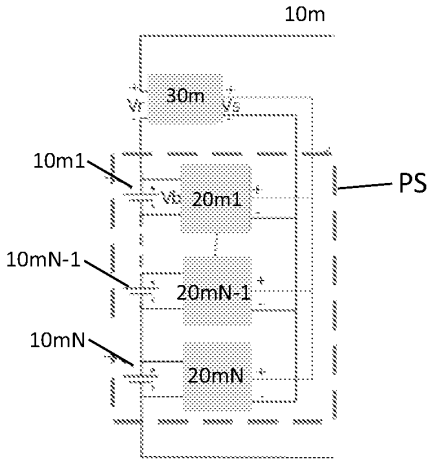

10m
30m
Vr
Vs
10m1
Vr
20m1
PS
10mN-1
20mN-1
10mN
20mN

图4

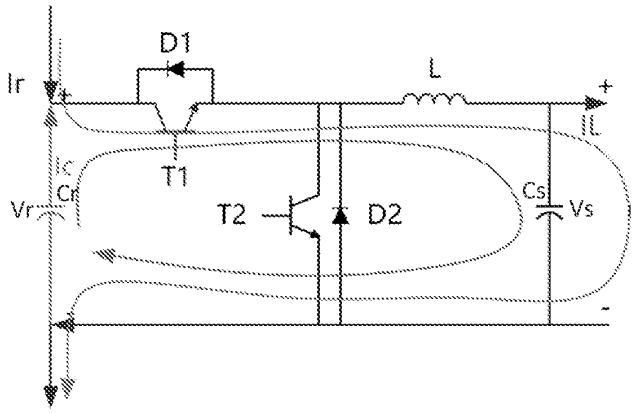

D1
L
Ir
+
IL
Ic
T1
Cr
Vr
T2
D2
Cs
Vs
-

图5a

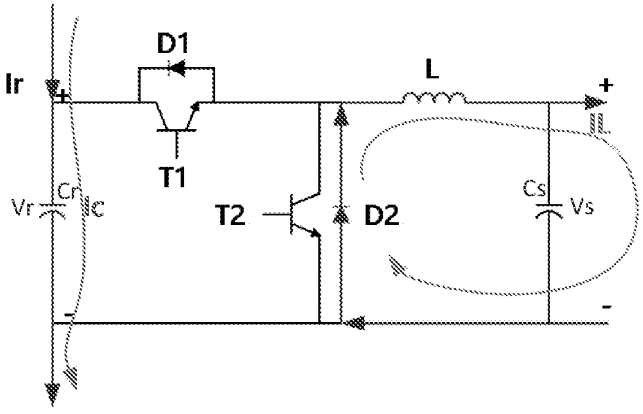

D1
L
Ir
+
IL
T1
Cr
Vr
Ic
T2
D2
Cs
Vs
-

图5b

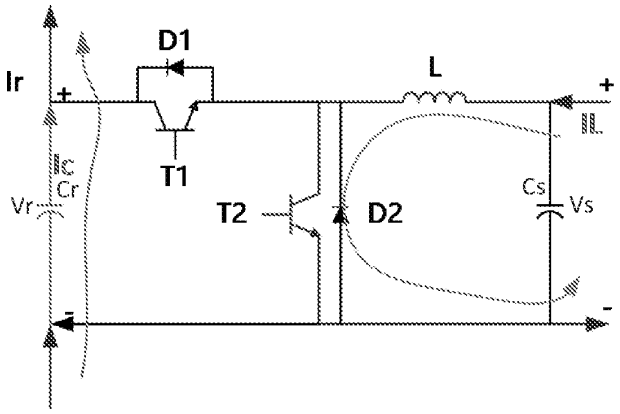

D1
Ir
L
+
+
IL
Ic
Cr
Vr
T1
T2
D2
Cs
Vs
-
-

图5c

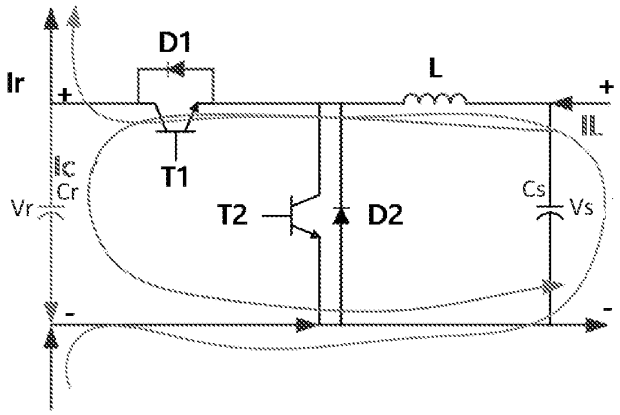

D1
Ir
L
+
+
IL
Ic
Cr
Vr
T1
T2
D2
Cs
Vs
-
-

图5d

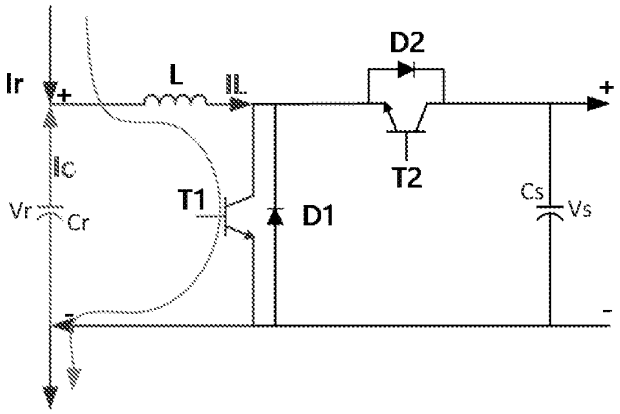

D2
Ir
L
IL
+
+
Ic
Cr
Vr
T1
T2
D1
Cs
Vs
-
-

图6a

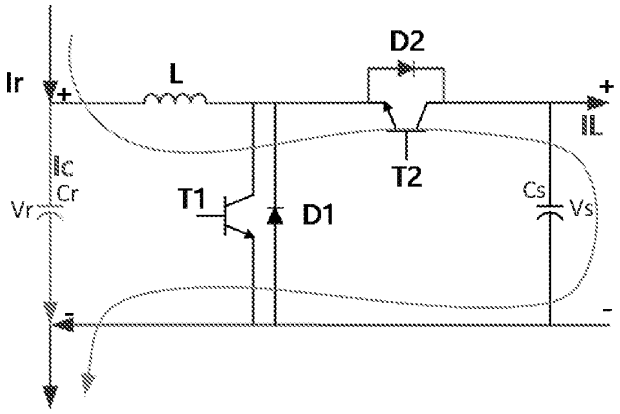

Ir
L
D2
+
IL
Ic
Cr
Vr
T1
D1
T2
Cs
Vs
-

图6b

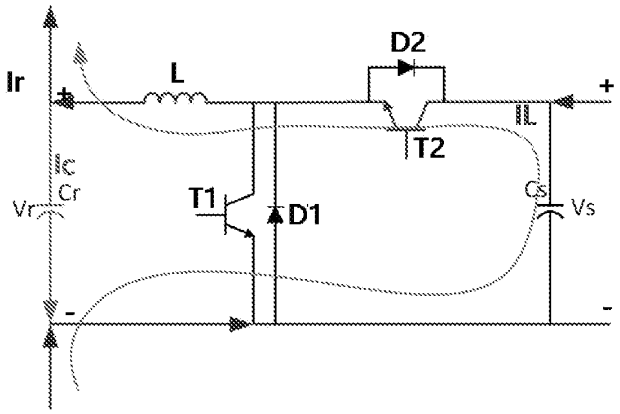

Ir
L
D2
+
IL
Ic
Cr
Vr
T1
D1
T2
Cs
Vs
-

图6c

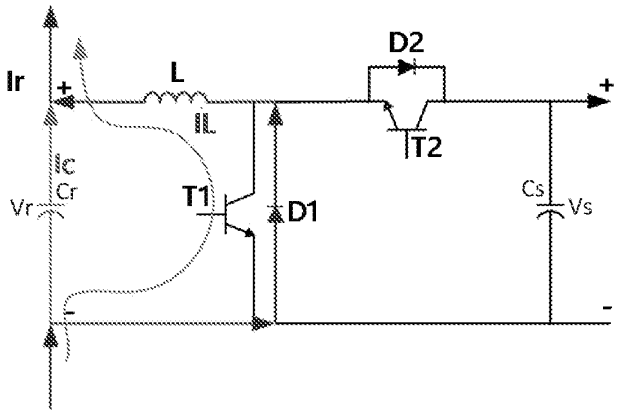

Ir
L
D2
+
IL
Ic
Cr
Vr
T1
D1
T2
Cs
Vs
-

图6d