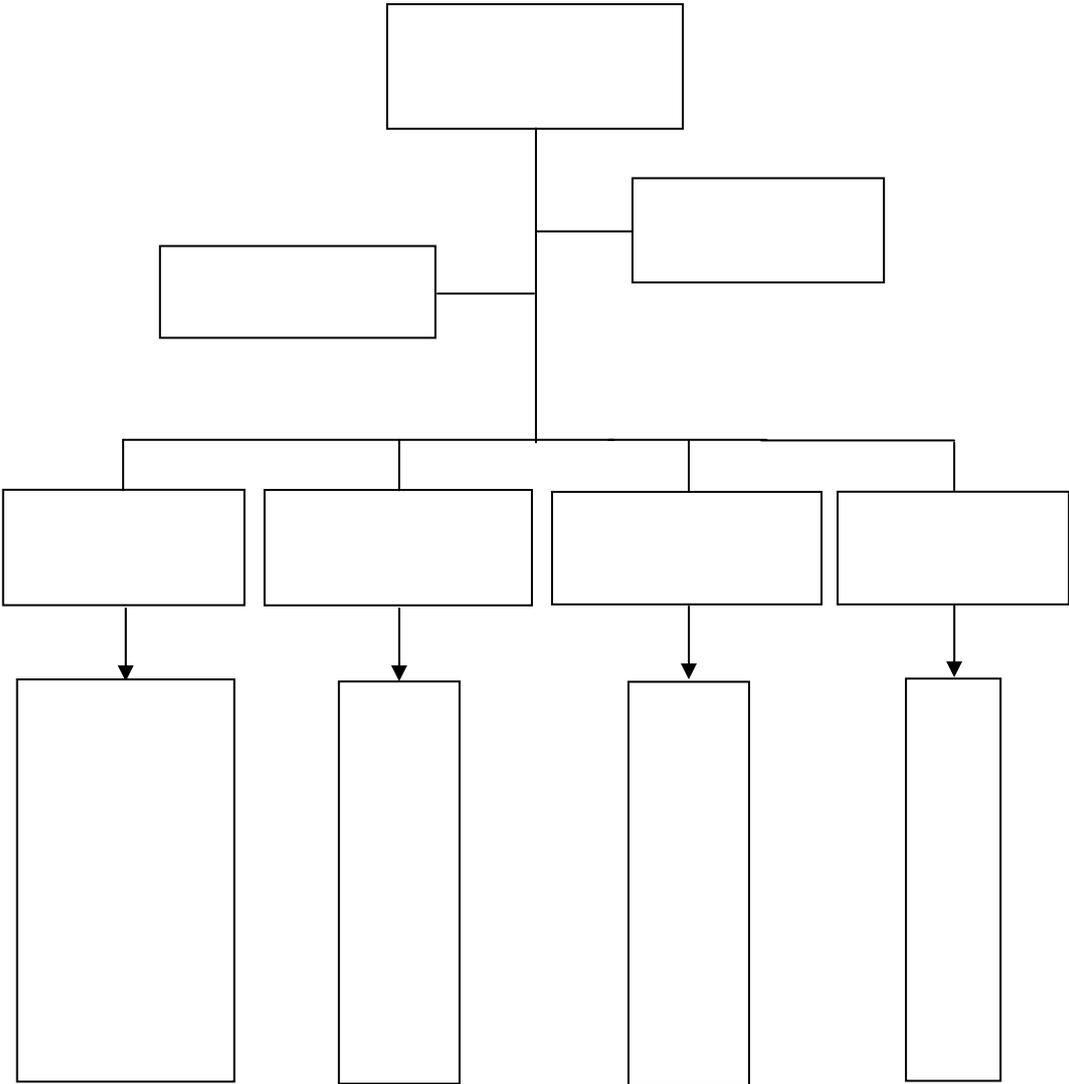


310027

0571-87952706

0571-87951625

E-mail keyanke@zju.edu.cn



(SOC) / CPU / IP (EDA)

1	1
1 1	1
1 2	1
1 3	1
1 4	1
1 5	2
1 6	2
1 7	2
1 8	Visual EMCAD	3
1 9	3
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1 38	11
1 39	11
1 40	11

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1	44	12
1	45	12
1	46	MC33092	13
1	47	13
1	48	13
2		16
2	1	16
2	2	16
2	3	16
2	4	16
2	5	PMU	17
2	6	FTU	17
2	7	SSFCL	17
2	8	.....	18
2	9	.....	18
2	10	.....	18
2	11	1000	19
2	12	.....	19
2	13	.....	19
2	14	.....	19
2	15	.....	20
2	16	.....	20
2	17	.....	20
2	18	.....	20
2	19	.....	21
3		.....	22
3	1	.....	22
3	2	IC	22
3	3	.....	22
3	4	.....	22
3	5	.....	23
3	6	.....	23
3	7	.....	23
3	8	.....	23
3	9	.....	24
3	10	IC	24
3	11	DCS	24
3	12	CAD	24
3	13	2000	25
3	14	.....	25
3	15	.....	25

		.....	26
3	17	.....	26
	IC	TM	.....26
3	19	PLC	.....27
3	20	.....	27
3	21	.....	27
3	22	.....	28
3	23	.....	28
3	24	“	MIS .....28
3	25	.....	29
3	26	.....	29
3	27	.....	29
3	28	.....	30
3	29	.....	30
3	30	.....	30
3	31	.....	30
3	32	.....	31
3	33	.....	31
3	34	DSP	.....31
3	35	.....	31
3	36	.....	32
3	37	.....	32
3	38	.....	32
3	39	.....	32
4		.....	33
4	1	400Hz-8KHz	.....33
4	2	10KHz~100KHz IGBT	.....33
4	3	.....	33
4	4	.....	33
4	5	.....	34
4	6	.....	34
4	7	IGBT	.....34
4	8	.....	35
4	9	20kVA DSP	.....35
4	10	.....	35
4	11	DSP	.....35
4	12	.....	35
4	13	APF	.....36
4	14	36
4	15	36
4	16	37
4	17	37
4	18	37
4	19	6kVA---9kVA37

4	20	:	38
4	21		HID	38
4	22		39
4	23		39
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4.25			40
4.26			40
4.27			40
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4.30			41
4.31			42
4.32			42
4.33			42
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4.35			43
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4.38			44
4.39			44
4.40			45
4.41			45
5			46
5	1		46
5	2	/	EDA	46
5	3	usb	46
5	4		46
5	5		47
5	6		47
5	7		47
5	8		48
6			.....	49

1

1 1

30 60 80 100 mm

1 2

1 3

1 4



1 5

1 6

1 7

220 12 24 36 1W~30KW
100r/min~100000r/min 50~85%

1 12

1 220V/50Hz 2 400W 3
400W 4 4~170Hz

1 13

1 220V/50Hz 155V~250V 2
30Hz~100Hz. 3
4 16 ~30 1

1 14

380 1~100 10~2003 Hz

1 15

185mm

70mm 50r/min,12N.m
1.0

5kg

220V/ 380

5r/min~300r/min

~

1 16

1

DOS

Windows

2

3

4

1 17

1 18

1 1~50KN 20~300 /



	1			2
220V				
1 23				
		1000~3000N	10~30kg	3~30m/s
1 24				
	1	380V	220V	1000Kg~100000Kg
	2			50m
1 25				
	1	380V	220V	10mm~500mm
				50g~100000g
1 26				
				CAD

1 30

1 31

F=3000Kg

1 32

1 33

1 34

1 35

1 36

1 37

1 38

1 39

1 40

1 42

10 200 800~5000 / 12~300Vdc

1 43

1 44

1 45

1 , 1024

1 46

MC33092

1 47



1.53

1.54

1.55

2

2 1

2 2

2 3

2 4

2 5

PMU

RS232/485 1 () 0.5% 1.0%
0.5° 0.01Hz 3 64*128 1us 2 4)
(0 70 95%) 5

2 6

FTU

2 7

SSFCL



2 8

8

2 11

1000

2 12

2 13

2 14

1	220KV	110KV	35KV	
	2			16 32
4 9 3		Windows	NT	

2. 15

2. 16

2. 17

220kV

PSEE

220kV

2. 18

110kV

110kV

220kV

35kV

T

110kV

2. 19

4

16

HD-201 HD-202

63

95%

2

3 16

A/D

4

3

3 1

3 2

IC

3 3

3 4

3 5

3 6

3 7

3 8

¹ &I pàcHD ã &• Ä

3 9

3 10

IC

3 11

DCS

3 12

CAD



3 13

2000

3 14

3 15



3 19

PLC

:

Rapyd-D-1250

1

2

2

1 29% 30%
 5000~7000 /min 2 15kW,
 D=15 488m/min
 Rapyd-D-125

3 20

1400~1500

1 2 3
 1-4 4 5 CRT
 1% <±1.5%

3 21

1 0.3 m/s 1.0 m/s
 2 3 45
 3 45 90 0 4

3 22

1

3 23

1

3 24

MIS

1

3 25

1

3 26

4

3 27

ABS

32

16

RF

2

3

3 28

3 29

3 30

3 31

3 32

GPRS CDMA

3 33

3 34

DSP

DSP TI
CDMA

TMS320DM642

internet

DSP

4 CIF 352 288 25fps MPEG-4 SP 2

3 35

3 36

3 37

37

4

4 1

400Hz-8KHz

4 2

10KHz~100KHz IGBT

4 3

4 4

4 5

4 6

6 NM

B

1

2

İ

4 8

4 9 **20kVA DSP**

4 10

4 11 **DSP**

4 12

4 13

APF

4 14

4 15

42V

380V

5kw

4 16

3

4 17

±

Ê17 MÖ ~~ΕΠΙΣΤΡΑΦΗ~~

4 20 :

4 21

HID

4 22

4 23

4 24

4.25

ZL2001145559.4

4.28

ZL200410025285.0

20%

50%.

4.29

ZL2002112007.2

20kVA

4.30

ZL2002265208.6

PYC

10kV

10

1

220kV

4.31

ZL2002112006.4

50kVA

4.32

ZL2000127456.2

PWM A/D 2 5

4.33

ZL200410015754.0

10kV dq dq 10 220kV 1

4.34

200410016336.3

1kVA DC/DC 50% 3%

4.35

200510060357.X

1kVA DC/DC 97% 50%

4.36

03150858.8

1kVA DC/DC 97% 50%

4.37

200510050642.3

4.38

200510050641.9

PWM



4.39



4.40

,

4.41

4.42

5

5 1



5 5

Φ

5 6

3Dq, \dot{U}

0 3000V

0 1000A

5 8

V_F I_F

V_W

t_{rr}

50KV

30KV

I_R

V_F I_F

t_{rr}

20ns 50KV

30KV

1%

6

1	
2	
3	
4	100kW ZJY440
5	TRW
6	24V
7	
8	
9	
10	
11	
12	
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15	IPM
16	
17	
18	
19	
20	--
21	
22	
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24	
25	
26	“ ”
27	
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36	
37	
38	-

39	
40	
41	
42	
43	
44	
45	
46	--
47	
48	1kW
49	
50	
51	
52	1780
53	950
54	E2R2
55	
56	
57	
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60	
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63	
64	
65	
66	
67	
68	
69	BD
70	BD
71	BD
72	
73	
74	YN
75	
76	
77	20kW
78	8MW
79	GAM1010
80	
81	

82	
83	
84	halbach
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114	
115	
116	
117	0.75KW
118	1.5KW
119	1.5W
120	10W
121	14kw80v
122	1kW
123	350W
124	3kW

125	550W
126	8kc
127	YC7114
128	YD132M-4/2
129	YSK-140
130	
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145	CAD
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158	3KW
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181	1.2-6.0kw
182	PSOC
183	Crowbar
184	
185	DSP
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188	1KW
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14	
15	EMS
16	SCED
17	PJM
18	
19	
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21	110kV
22	PDAS100
23	agent
24	CIM SOA
25	E3CS
26	
27	()
28	
29	-
30	
31	
32	DMS
33	
34	IEC61850
35	
36	
37	
38	()
39	
40	VR
41	220kV
42	

43	
44	AVC
45	AVC
46	
47	CIM
48	PI
49	SVG
50	
51	AVC
52	
53	VK
54	
55	AVQC
56	(AVC)
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62	
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64	
65	1000kV
66	10
67	110kV
68	110kV
69	PSSE
70	
71	GCB
72	
73	2030
74	110
75	
76	
77	“ ”
78	“ ”
79	
80	
81	“ ”
82	2030
83	
84	
85	“ ”

86	2030
87	SVC
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89	
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97	WAMS
98	1000kV
99	2008
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111	EMS
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114	CIM
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121	EMS IEC61970 SVG
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123	IEC61970
124	GDA
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137	ARM
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146	SPSSN
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152	NSR890
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155	(200410084764.X)
156	
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158	
159	ZL200410016284.X
160	
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162	
163	-
164	
165	/ 660kV
166	2009 800KV
167	800kV
168	800kV
169	MMC
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180	SVC
181	SVC SSR
182	PSCAD/EMTDC
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202	“ ”
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204	SVG
205	
206	DigSILENT
207	
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209	
210	
211	
212	10kv
213	PLC
214	

215	
216	
217	
218	±500kV 27DCL)
219	1000kV
220	10kV
221	20kV
222	20
223	220kV
224	220kV
225	500/220kV 4
226	500/220kV 4
227	500kV
228	500kV VFTO
229	500kV
230	1679
231	
232	
233	
234	
235	
236	
237	CDEGS
238	
239	
240	1000KV
241	
242	4
243	20kV
244	220/110kV
245	
246	“ ” LCC
247	
1	
2	CAD
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4	16 DTM2830-1
5	10KV
6	MIS
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16	GG705
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25	ICA PWV
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27	SVM
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37	BGA
38	()
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46	LED
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53	TTCN GFT
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64	537-Y
65	LD-801
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69	B/S
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76	GG705
77	LMI
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80	1.5MW
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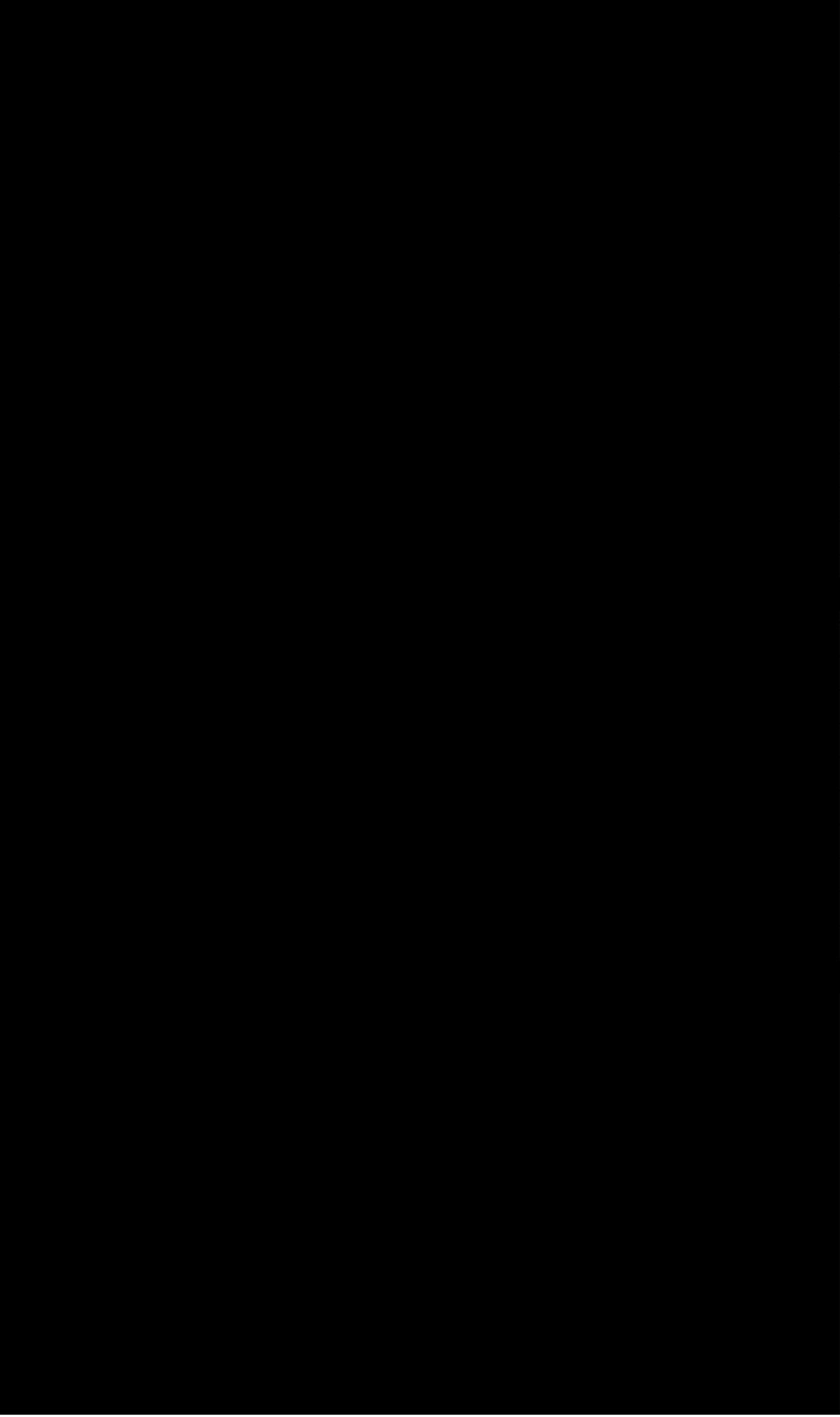
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107	650KVA
108	1-SVM
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114	"
115	MRI
116	PLC
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1	380V 6kV
2	6 10kV/MVA DSTATCOM
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10	ZL200710068347.X
11	
12	AC-DC
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16	3 380V20KW
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21	400V/600W 20kW
22	70W
23	UPS
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29	
30	16 Microchip
31	(LED)
32	
33	LED
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59	HID
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63	PWM
64	Wind Energy Power Conversion Control Platform
65	
66	2 5KW
67	50kW
68	5kVA
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71	APF
72	HID DSP
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79	AC/DC
80	AC/DC BMP
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84	HID
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86	TZQ-50
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90	19V90W PFC
91	CM80A
92	35W HID
93	220v/300w
94	
95	HID

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98	30
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100	UPS
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104	70W
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107	EMI
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116	DSP
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119	IGBT
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126	30KVA
127	LED
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137	PSMS
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2	LDO DC DC
3	li
4	sigma-delta
5	USB2 0
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10	
11	Li
12	
13	
14	IP
15	SoC
16	CPU-DSP SOC
17	
18	/IP
19	
20	45
21	65 SOC
22	OPC
23	EDA
24	
25	SoC
26	SOC
27	
28	Verilog
29	SOC
30	
31	
32	
33	0.09
34	Hifn
35	SoC
36	SoC
37	SOC EDA
38	CPU
39	CMOS
40	
41	cpu vlx
42	CMOS
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45	SoC
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1	PM
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3	VF IF
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16	PWM
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37	NI
38	PWM
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