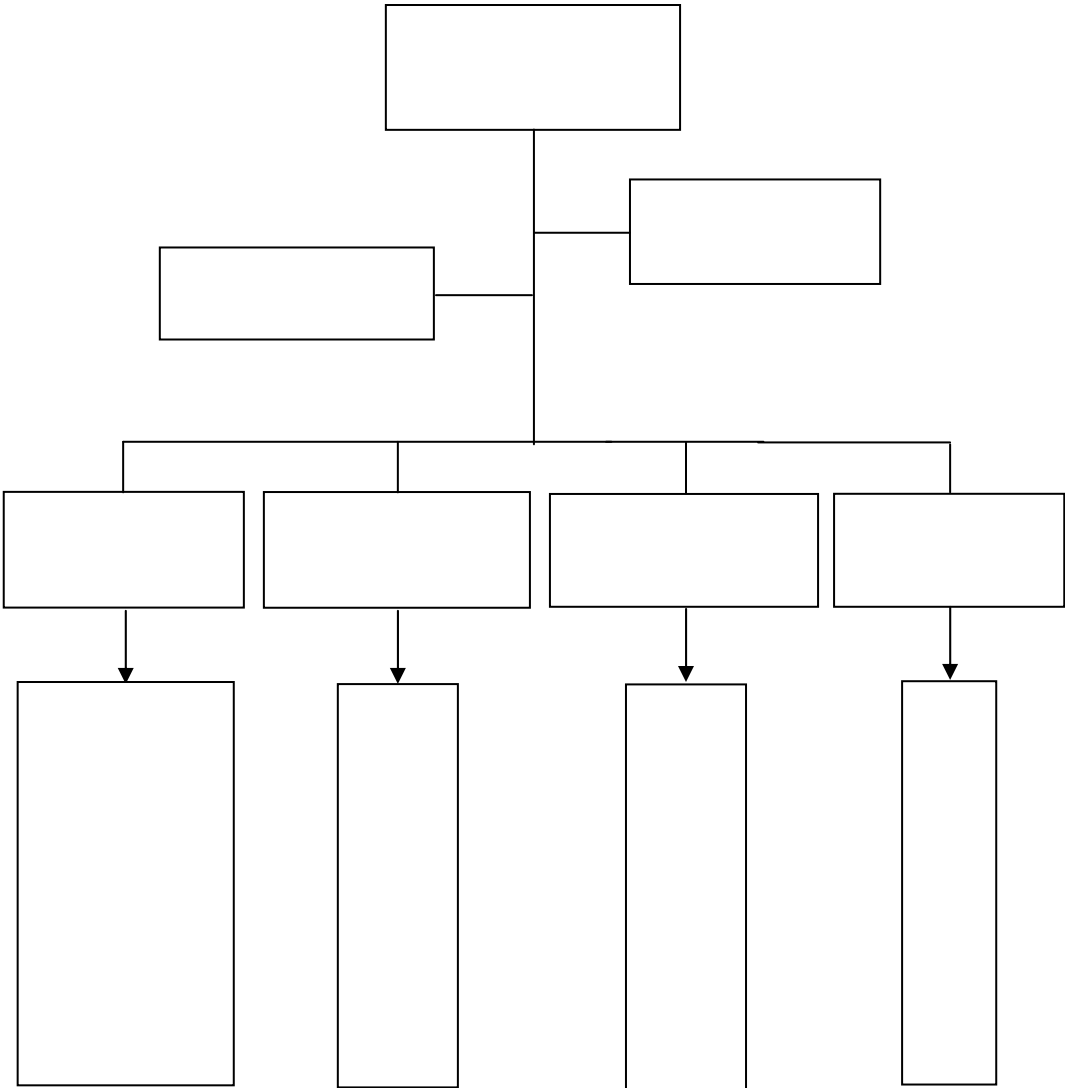


310027

0571-87952706

0571-87951625

E-mail keyanke@zju.edu.cn



(SOC) / CPU / IP (EDA)

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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 11	3
1 12	4
1 13	4
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1 39	11
1 40	11

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1	45	12
1	46	MC33092	13
1	47	13
1	48	13
		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
		.....	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	“	MIS28
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
	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---9kVA	.....37

4	20	:	.....	38
4	21		HID	38
4	22		39
4	23		39
4	24		39
4.25			40
4.26			40
4.27			40
4.28			41
4.29			41
4.30			41
4.31			42
4.32			42
4.33			42
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4.35			43
4.36			43
4.37			44
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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



1 8

Visual EMCAD

1 9

50-4000rpm	20000.:1 2000rpm	10~30kw() >80~85%()	~220v;)
------------	---------------------	--------------------------	-------------

1 10

4~5

3600 /	1	24	36	120
			>75%	70
	5	2	24	36
3600 /		75%		750

1 11

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

80%

1100V	39A	86.42%	64.2kW 0.835	3000r/min 2.68
-------	-----	--------	-----------------	-------------------

1 27

CAD

68	71.5mm	7Ah	12V	Y30	0.4KW	11.5V
	30A	8000V/min	5 v		250A	2Nm

1 28

2.2KW	1.5KW					
415V		FS4T		2.2KW		380 400
	S1	5.4 5.5 5.6A	2800 2820	2840r/min,		50Hz
		F		3		

1 29

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 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

2 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

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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

4

400Hz-8KHz

4 2

10KHz~100KHz IGBT

4 3

4 4

4 5

4 6

6 NM~~6~~

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

±

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 8

V_F I_F

V_W

t_{rr}

50KV

30KV

I_R

V_F I_F

t_{rr}

20ns 50KV

30KV

1%

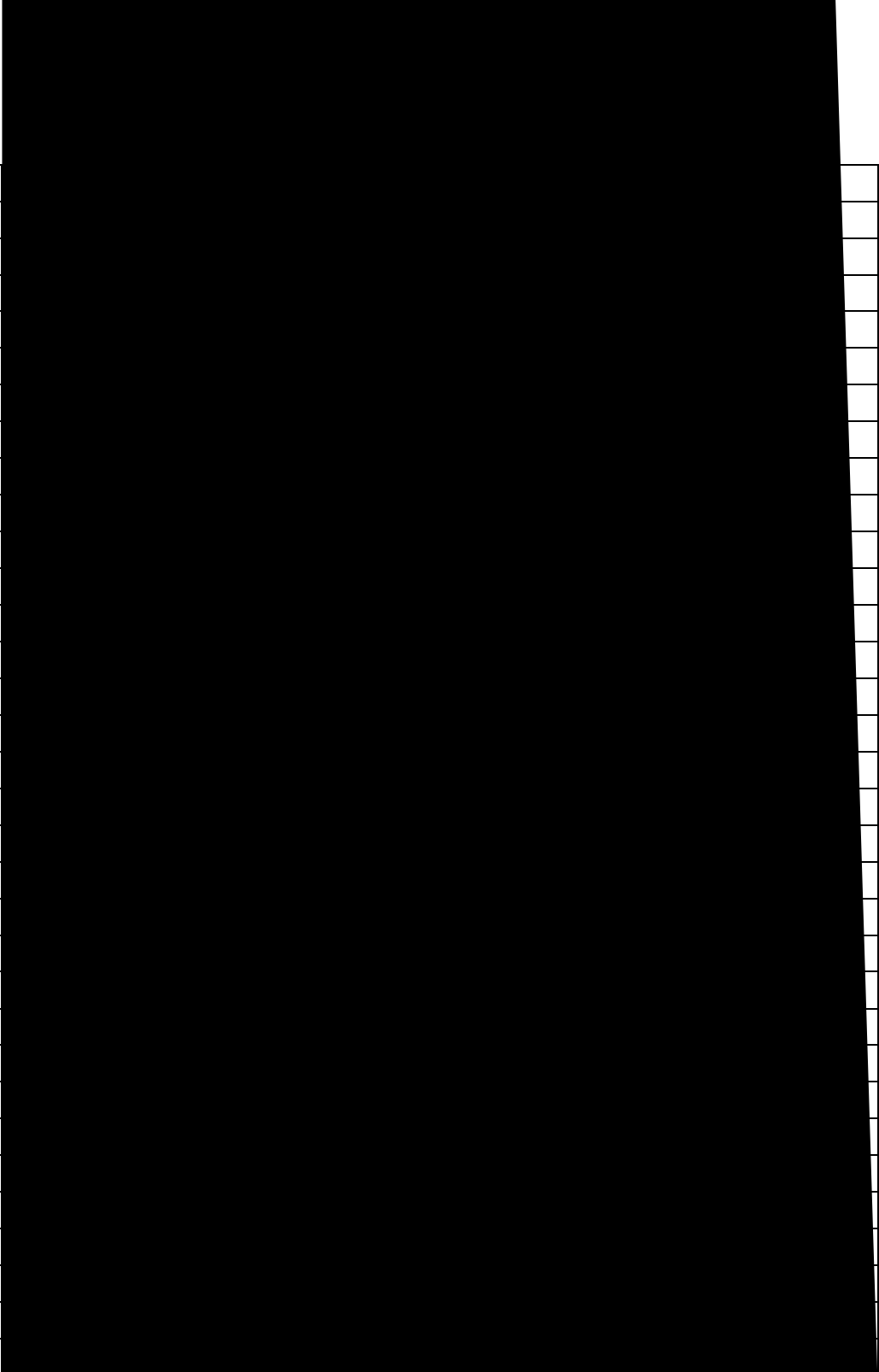
6

1	
2	
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4	100kW ZJY440
5	TRW
6	24V
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15	IPM
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26	“ ”
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46	--
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48	1kW
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52	1780
53	950
54	E2R2
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69	BD
70	BD
71	BD
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73	
74	YN
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76	
77	20kW
78	8MW
79	GAM1010
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84	halbach
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116	
117	0.75KW
118	1.5KW
119	1.5W
120	10W
121	14kw80v
122	1kW
123	350W
124	3kW

125	
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158	3KW			
159	ÖTÖ	5	ECU78P42E6A6G7HVSb"bHn00yTAdUAÀA9J	

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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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15	EMS
16	SCED
17	PJM
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21	110kV
22	PDAS100
23	agent
24	CIM SOA
25	E3CS
26	
27	()
28	
29	-
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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
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51	AVC
52	
53	VK
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55	AVQC
56	(AVC)
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65	1000kV
66	10
67	110kV
68	110kV
69	PSSE
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71	GCB
72	
73	2030
74	110
75	
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77	“ ”
78	“ ”
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81	“ ”
82	2030
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85	“ ”

86	2030
87	SVC
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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
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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)
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159	ZL200410016284.X
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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
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206	DigSILENT
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212	10kv
213	PLC
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215	
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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	
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234	
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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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32	SOE
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37	BGA
38	()
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40	GPRS
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46	LED
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53	TTCN GFT
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64	537-Y
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76	GG705
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80	1.5MW
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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
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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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30	16 Microchip
31	(LED)
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33	LED
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59	HID
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63	PWM
64	Wind Energy Power Conversion Control Platform
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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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100	UPS
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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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145	AC/DCLED
146	LED
147	150W AC/DC LED
148	100kW
149	2MW
150	40KW PFC
151	PV
152	UPS
153	UPS
154	
155	EMI
156	SFC
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159	
160	DC-DC
161	PFC
162	
163	DC/DC
164	

IP81G33N8A 8A HB1 G33 n366u5 PtcgRGVLE FF/AS wydm3 "06

2	LDO DC DC
3	li
4	sigma-delta
5	USB2 0
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11	Li
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14	IP
15	SoC
16	CPU-DSP SOC
17	
18	/IP
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20	45
21	65 SOC
22	OPC
23	EDA
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25	SoC
26	SOC
27	
28	Verilog
29	SOC
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33	0.09
34	Hifn
35	SoC
36	SoC
37	SOC EDA
38	CPU
39	CMOS
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41	cpu vlx
42	CMOS
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45	SoC
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37	NI
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