ZZB

/ 2024

2024- - 2024- -

XXX

GB/T 191
GB/T 1220
GB/T 3077
GB/T 3190
GB 4208 IP
GB/T 7551-2008
GB/T 13992
GB/T 13426-1992
GB/T 15464
GB/T 34068
GB/T 37093-2018

GB/T7551-2008

,

a

b

c

a GB/T 3077 40CrNiMoA GB/T 1220 0Cr17Ni4Cu4Nb GB/T 3190 2A12 40CrNiMoA 0Cr17Ni4Cu4Nb 2A12

b (K) GB/T 13992 A

c AD ADC 17.5 65nV ±8KV

a

b

c

d AD SMT

e AD AOI 100%

a

b

0.01% M_1

-10 +40 ± 6

1 2 5 10^k

1 k

–10 +40

90%

86 106

U

A

1

	A		
	50 000	5 000	3000
		100 000	10 000

6

a) 5.4.2 5.4.6.1

b) 5.4.3 5.4.6.2

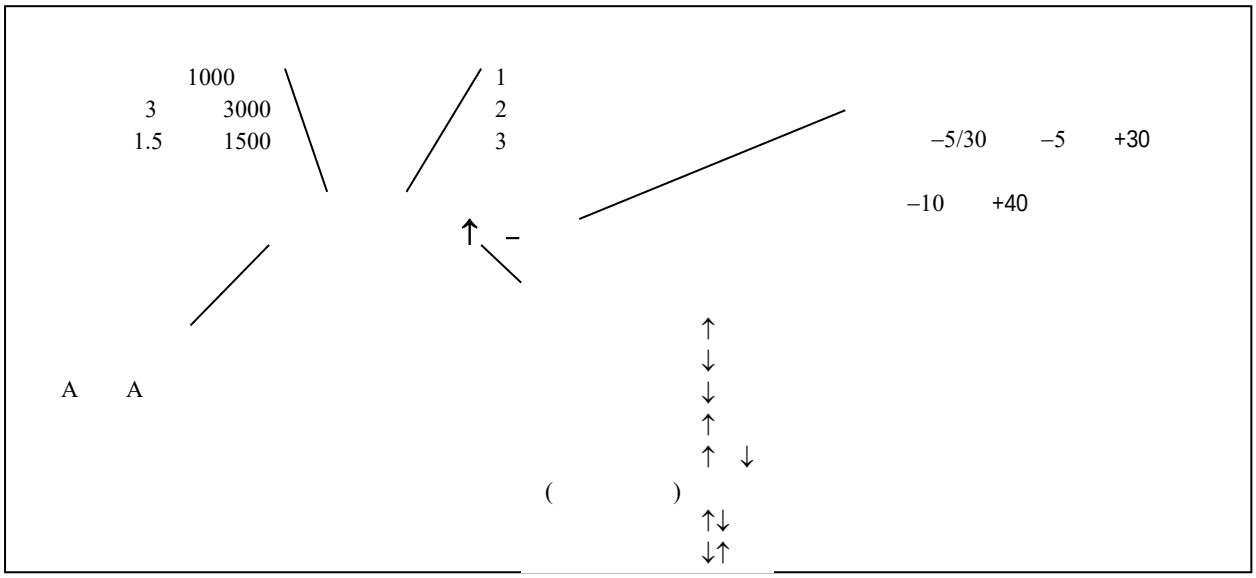
c) 5.4.5 5.4.6.3

d) 5.4.6.4

e) 5.4.6.5

f)

1 7 6



A “ A ” “ ” “ ”

3000

5.4.6.1 5.4.6.7 1000

2

	↑ ↓
	↓ ↑
	↑ ↓
	↑ ↓ ↓ ↑

5.1.1 5.1 5.5 5.1.2

10.2.5

10.2.6

5.4.6.1 5.4.6.5

)
)
)
)
) 0 ?
)

5.4.6.1 5.4.6.6.1

)

.5.2

)
)
)
)
)
)

5.4.6

5.4.7.1

5 0.7

0.3 0.7 0.3 0.7

0.7

0.7

	A		
0.5	0 50 000	0 5 000	0 500
1.0	50 000 < 200 000	5000 < 20 000	500 < 2 000
1.5	200 000 <	20 000 < 100 000	2 000 < 10 000

6.5.1.1 6.5.1.2

20
75%

6

0	10	10
10	100	20
100	1 000	30
1 000	10 000	40
10 000	100 000	50
100 000		60

)

100% 50% 6 100%
150%

)

90% 100% 30
0.7 20 30
0.15

= 0.7 5

90% 100% 30
0.5

A 5 3

6.5.1.2 –10 +40

6.1.1

6.1.1

A 5

15

30

6.5.1.1 6.5.1.2

2

5

1

10

=0.7

)

7.3 7.4 7.1.1 7.1.2

7.1.1 7.1.1) 7.1.1)

) −15% +10%

) −2% +2%

7.4.1

7.4.1 10.2.7.9

0.5

0.5

10.2.7 7

	10.2.7.2	0.7	
	10.2.7.3	0.7	
	10.2.7.4	0.7	
	10.2.7.5	0.7	
	10.2.7.6	0.7	
	10.2.7.7	0.7	
	10.2.7.8	0.7	
	10.2.7.9	0.7	
	10.2.7.9	0.7	

GB/T 34068

a) RS-232 RS-485 USB
b) GPRS ZigBee WiFi LORA NB-IOT

ID ID

a) -30 ° +30 °

b) ±0.5°

a) -10 +40
) ±0.5

GB/T 37093-2018 8.1

— -

2000

— —

8 1min ,

/	/	/
≤60	500	60
60 ≤250	2000	60 50
250 ≤650	2500	50

9

A	±1%

GB/T4208 IP67

≥ 80kA GB/T 18802.11-2020 3.1.21 ≥ 1

GB/T 6461 7

1.5 ≤ 0.1% F.S

4.6.7.1

GB/T7551-2008 8.1

“ ”

/ 7551-2008 10.3 3 4

GB/T7551-2008 8.2.1

GB/T7551-2008 8.2.2

GB/T7551-2008 8.2.3

GB/T7551-2008 8.2.4

GB/T7551-2008 8.2.5

GB/T7551-2008 8.2.6

GB/T7551-2008 8.2.7.1

GB/T7551-2008 8.2.7.2

GB/T7551-2008 8.2.7.3

GB/T7551-2008 8.2.7.4

GB/T7551-2008 8.2.7.5

GB/T7551-2008 8.2.7.6

GB/T7551-2008 8.2.7.7

GB/T7551-2008 8.2.7.8

GB/T7551-2008 8.2.7.9

GB/T7551-2008 8.2.7.10

8.1

-30 ° 0 ° 30 °

A

$A=A_1-A_0$

A_0——

A_1——

-10 20 40 1

,

$=$ $_1$- $_0$

T_0——

T_1——

GB/T7551-2008 8.2.8.1

GB/T7551-2008 8.2.8.2

GB/T7551-2008 8.2.8.3

9.5 GB/T 4208

9.5

9.6 GB/T 6461

1.5 3

Z % (5)

$$\Delta = \frac{\theta_1 - \theta_0}{\theta_0} \times 100$$

θ_0——

θ_1——

9.8

GB/T7551-2008 10.3

10

10

a)
b)
c)
d)
e)
f)

	•)	•	6.1	10.2.1
	•	•	6.4	10.2.1

		●	6.5.1.3	10.2.1
	●)	●	6.3.1	10.2.2
		●	6.3.2	10.2.3
		●	6.5.2	10.2.4
		●	6.5.3.1	10.2.5
		●	6.5.3.1	10.2.5
		●	6.5.3.2	10.2.6
		●	7.3.2	10.2.7.2
		●	7.3.3; 7.3.4	10.2.7.3
		●	7.3.5	10.2.7.4
		●	7.3.5	10.2.7.5
		●	7.3.5	10.2.7.6
		●	7.3.5	10.2.7.7
		●	7.3.5	10.2.7.8
		●	7.3.5	10.2.7.9
		●	7.3.6	10.2.7.10
	●	●	8.1	10.2.8.1
	●	●	8.2	10.2.8.2
	●	●	8.3	10.2.8.3
	●	●	8.4	10.2.8.4
		●	8.5	10.2.8.5
		●	8.6	10.2.8.6
		●	8.7	10.2.8.7
		●	8.8	10.2.8.8
	●	●	9.1	10.2.9.1
	●	●	9.2	10.2.9.2
	●)	●	9.3	10.2.9.3
		●	9.4	10.2.9.4
		●	9.5	10.2.9.5
		●	9.6	10.2.9.6
		●	9.7	10.2.9.7
	●	●	9.8	10.2.9.8

“ ● ”

) / 7551-2008 8.2.1.13

)

)

5.4.7.1

/ 191

/ 15464

–10 +40 85%

a , 2

b

c 24