# Flame Proof Wire Wound Fixed Resistors

(RoHS-compliant products)

# Introduction

This resistor is manufactured in accordance with the JIS-C-6401 standard. It is wound from carefully selected resistive wire and coated with special flame proof coating. Smoke is rarely generated during overload, and there is no danger of fire or melting.

### ■ Features

- 1. Wide range of power····With 18 types manufactured in the range from 5W to 1kW, it is a basic power resistor type.
- 2. Overload safety · · · · Compared to conventional enameled resistors, there is no danger of fire or melting, so safety is ensured.

# ■ Type descriptions











Nominal resistance  $\Omega$ ork $\Omega$  indication

120 Ω

 $J: \pm 5\%$ 

N: non-inductive O: O-attachment

(E-24 series) K: ±10%

■ Characteristic

Test method

Normal - 120°C

DC 500V megger

(AC1000V for flat type)

44N for 30 sec

40°C 90-95%

10 x rated power for 5 sec.

AC2000V for single and S attachment

AC3000V for OS and O attachment

1/10 x rated power for 500 hrs

Rated voltage for 30 min.

Rated power for 500 hrs.

Rated power for 30 min.

-55°C for 15 min

Resistance tolerance

1.5 hrs. ON - 0.5 hrs OFF

Specified value

 $<20\Omega$ :±400ppm/°C  $\ge$ 20 $\Omega$ ±260ppm/°C

±(2%+0.05Ω)

20MΩ or higher

 $\pm (0.1\% + 0.05\Omega)$ 

No breakdown

±(3%+0.05Ω)

350°C or lower

 $\pm (0.5\% + 0.05\Omega)$ 

 $\pm (5\% + 0.05\Omega)$ 

 $\pm (2\% + 0.05\Omega)$ 

No mechanical damage

No mechanical damage

Test items

Resistance temperature charact

Short-time overload

Insulation resistance

Withstanding voltage

Terminal strength

Moisture load life

Heat resistance

Thermal shock

Rated load

Load life

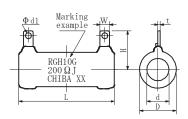


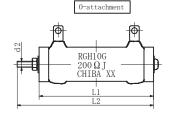
A1: sliding terminal(1pc) AN: sliding terminal (Npcs)

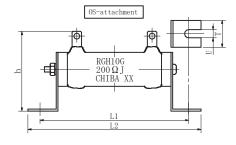
HN: middle terminal(Npcs)

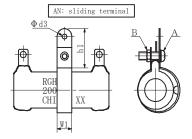
OS: OS-attachment

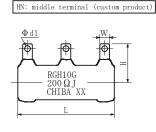
(\*1)All types except A1 are custom products. Please consult manufacturer.



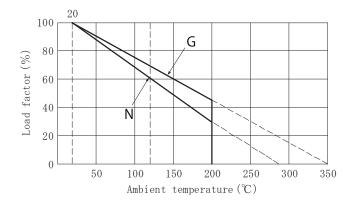




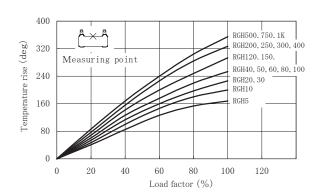




## ■ Load derating curve



### ■ Temperature rise curve (reference)



# ■ Dimensions & Resistance range

Style	Power rating (W)		Resistance Range $(\Omega)$			Dimensions (mm)								
	Wire wound	Non- inductive	Wire wound(*1)	Non-inductive(*2)	Sliding terminal	L	D	Н	d	W ±0.5	d 1	t	d 2	
RGH5	5	3	0.10~ 3.9K	0.10~ 1.8K	0.10~ 270	30±1.2	15MAX	17.5±1.5	6.0 +1	5	3.2±0.3	1. 0	M3	
RGH10	10	5	0.12~ 6.8K	0.12~ 4.7K	0.12~ 560	45±1.2	"	"	"	"	"	"	"	
RGH20	20	10	0. 22~ 15. 0K	0. 22~ 8. 2K	0. 22~ 1. 0K	50±1.2	22MAX	21.0±1.5	11.5 +1	"	"	"	"	
RGH30	30	15	0.33~ 22.0K	0. 33~15. 0K	0. 33~ 1. 5K	75±1.5	"	"	"	"	"	"	"	
RGH40	40	20	0.39~ 27.0K	0. 39~18. OK	0.39~ 2.4K	90±1.5	"	"	"	"	"	"	"	
RGH50	50	22	"	0.39~18.0K	0. 39~ 2. 7K	75±1.5	32MAX	32.0±1.5	16.0 +1	8	4.2±0.3	1. 6	M4	
RGH60	60	25	0.56~ 43.0K	0. 56~22. 0K	0.56~ 3.3K	90±1.5	"	"	"	"	"	"	"	
RGH80	80	35	0. 68~ 56. 0K	0. 68~33. 0K	0. 68~ 4. 7K	115±1.5	"	"	"	"	"	"	"	
RGH100	100	43	1.00~ 62.0K	1.00~39.0K	1.00~ 5.6K	140±2.0	"	"	"	"	"	"	"	
RGH120	120	50	1. 20~ 82. 0K	1. 20~47. 0K	1. 20~ 6. 8K	165±2.0	"	"	"	"	"	"	"	
RGH150	150	66	1.50~ 82.0K	1.50~56.0K	1.50~ 7.5K	195±2.0	"	"	"	"	"	"	"	
RGH200	200	88	2. 20~100. 0K	2. 20~82. OK	2. 20~ 9. 1K	254±2.0	"	"	"	"	"	"	"	
RGH250	250	108	3. 30~100. 0K	3. 30~82. 0K	3. 30~10. 0K	305±2.0	"	"	"	"	"	"	"	
RGH300	300	130	4. 70~100. 0K	4. 70~82. 0K	4. 70~10. 0K	254±2.0	46MAX	44.0±3.0	25.0 ±1.5	13	6.0±0.5	2. 0	_	
RGH400	400	168	"	"	"	330±2.0	"	"	"	"	"	"		
RGH500	500	210	10.00~100.0K	10. 00~82. 0K	10. 00~10. 0K	300±2.0	57MAX	49.0±3.0	30.0 ±1.5	"	"	"	_	
RGH750	750	315	"	"	_	300±2.0	82MAX	62.0±3.0	50.0 ±1.5	"	"	"		
RGH1000	1000	420	"	"	_	300±2.0	110MAX	75.0±3.0	70.0 ±1.5	"	"	"	_	

	Dimensions (mm)			O (*4)		os		Sliding terminal(*5)			Screw	Nut	Weight	
Style	h	U	Т	L1	<b>L2</b> +0 −1.5	L1	L2	W 1 ±0.5	d3 ±0.3	h 1 ±1	А	В	(g) (*3)	
RGH5	29.5±3	3.5±0.3	12±0.3	38±1.5	50	48±1.5	58±1.5	6	2. 8	15	M3*10	1種	7	
RGH10	"	"	"	53±1.5	65	63±1.5	73±1.5	"	"	"	"	"	11	
RGH20	36.0±3	4.5±0.3	18±0.3	60±1.5	70	74±1.5	86±1.5	"	3. 2	"	M3*12	"	24	
RGH30	"	"	"	85±2.0	95	99±2.0	111±2.0	"	"	"	"	"	37	
RGH40	"	"	"	100±2.0	110	114±2.0	126±2.0	"	"	"	"	"	40	
RGH50	56.0±3	6.0±0.3	27±0.4	87±2.0	100	103±2.0	125±2.0	8	4. 2	16	M3*15	"	71	
RGH60	"	"	"	102±2.0	115	118±2.0	140±2.0	11	"	"	"	"	90	
RGH80	"	"	"	127±2.0	140	143±2.0	165±2.0	"	"	"	"	"	110	
RGH100	"	"	"	152±2.5	165	168±2.5	190±2.5	"	"	"	"	"	125	
RGH120	"	"	"	177±2.5	190	193±2.5	215±2.5	"	"	"	"	"	150	
RGH150	"	"	"	207±2.5	220	223±2.5	245±2.5	"	"	"	"	"	190	
RGH200	"	"	"	266±2.5	280	282±2.5	304±2.5	"	"	"	"	"	250	
RGH250	"	"	"	317±2.5	330	333±2.5	355±2.5	"	"	"	"	"	300	
RGH300	84.0±4	10.0±0.5	40±0.5	_	_	304±3.0	334±3.0	11	4. 3	20	M4*20	"	530	
RGH400	"	"	"	_	_	380±3.0	410±3.0	"	"	"	"	"	630	
RGH500	99.0±5	"	58±0.5	_	_	350±3.0	380±3.0	"	4. 5	25	"	"	1000	
RGH750	112.0±5	"	"	_	_	358±3.0	388±3.0	_	_	_	_	-	1500	
RGH1000	160.0±5	8.5±0.5	100±1.0	_	_	389±3.0	440±3.0	_	_	_	_	_	3100	

<sup>(\*1)</sup> General wire wound resistors below  $10\Omega$  may not support J(±5%) specification.

<sup>(\*2)</sup> Please consult about resistance tolerance of non-inductive resistors.
(\*3) The weight is given for resistors without assembly.
(\*4) O-attachment can not be used on types from RGH300 and above.
(\*5) Non-inductive resistors are not provided with sliding terminal.