

Resistors - QH series

PRODUCTS CATALOGUE.....	02
Chief Products	03
RIG8B Series High Voltage Resistors	04
RI80A Series High Voltage Resistors	07
RI80P Series Plate High Voltage Resistors	08
RI40A Type High Voltage Metal Glaze Film Resistors.....	09
RY-GDL Series High Frequency Large Power MO Resistors.....	10
Water Cooled High Frequency MO Power Resistors	11
RX20 series tubular wire wound resistors	12
RX21 Flameproof resin coated series wire wound resistors	14
RX24 Aluminum housed wire wound resistors	16
RX27 Series ceramic cased wirewound resistors	18
RX28(A) Aluminum housed wirewound resistors	19
RX28(B)Type Series Aluminum Shell WireWound Resistors	20
RXHG Type Series Painted Wave -Wire Wound Resistors	22
RXG Type Series Large Power Aluminum Shell WireWound Resistors.....	24
RXG1 Type Series Power Glazed Wire Wound Resistors	26
RXG1B Type Series Power Glazed Wire Wound Resistors	27
RXG2 Type Large Power Painted Wire Wound Resistors.....	29
RXGN Series Metal Cap Model Non-Inductance	31
Wire Wound Resistors	31
RXFD Glazed Type Composite No-inductance	33
Wire Wound Resistors	33
BWL Power Type Low Resistance.....	34
FL—A Type Precision Shunts.....	35
Eliminate arc device/Filter Used for The Precision.....	36
Numerical Control Machine Tool	36
High Voltage Resistor Box, Series High Voltage & Large.....	38
Power Resistor Cabinet Introduction	38
Introduction of High Voltage Resistor Reference Material.....	39

Main Products



RIG8B Series High Voltage Resistors



RI80A Series High Voltage Resistors



RY-GDL Series High Frequency Large Power MO Resistors



Water Cooled High Frequency MO Power Resistors



RX20 series tubular wire wound resistors



RXG Type Series Large Power Aluminum Shell Wire Wound Resistors



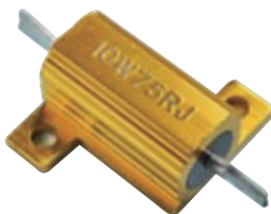
RXG1B Type Series Power Glazed Wire Wound Resistors



RXGN Series Metal Cap Model Non-Inductance Wire Wound Resistors



RXHG Type Series Painted Wave -Wire Wound Resistors



RX24 Aluminum housed wire wound resistors



RX28(A) Aluminum housed wirewound resistors



QH Series large power load box

RIG8B Series High Voltage Resistors

Film materials: Metal Glaze Film

: All covered or part covered

core: ceramic rod (Al₂O₃ content over 95%)

Coating materials: low temperature vitreous enamel

Power Range: 30W-500W

Resistance range: 5 Ohm -100G Ohm

Resistance tolerance: ±1%-±10%

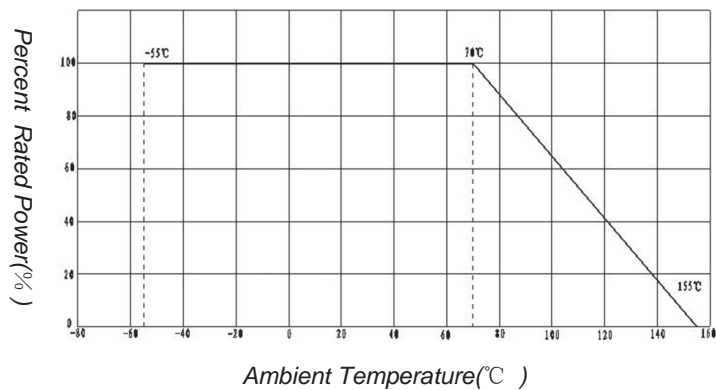
Resistance temperature coefficient: ±50PPM- ±200ppm

Specialty: Good overload and high voltage performance;
High resistance and low inductance; can be widely used in
high voltage load、 voltage divider circuit.

Special Requirements: Negotiate meet



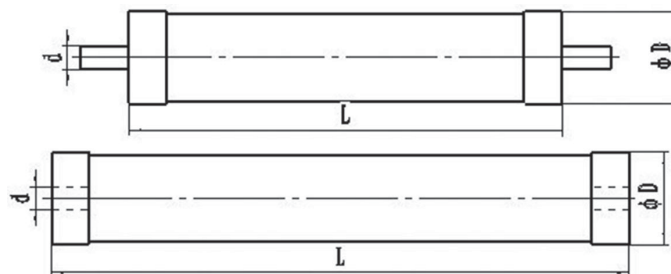
Power Derating Curve



Technology Standard

1. IEC60115-1:2001 /GB/T5729-2003
2. Q/QH1618-2007

Contour Drawing



Chief Technology and Contour Dimensions

Rated Power (w)	Resistance Range (Ω)	Resistance Tolerance (%)	Limiting Voltage (KV)	Temperature Coefficient (PPM)	Contour Dimensions (Φ DxL)(mm)	d (mm)
30	5-5G	$\pm 1 - \pm 10$	25	± 50 PPM- ± 200 ppm(25-125) $^{\circ}$ C	$\Phi 16 \times 90$	M5
40	10-10G		30		$\Phi 27 \times 100$	M6/5
50	10-10G		45		$\Phi 27 \times 133$	M6/5
60	20-10G		58		$\Phi 27 \times 160$	M6/5
70	20-10G		62		$\Phi 27 \times 180$	M6/5
80	50-100G		68		$\Phi 27 \times 200$	M6/5
90	50-100G		82		$\Phi 27 \times 210$	M6/5
100	50-100G		100		$\Phi 27 \times 260$	M6/5
150	50-100G		130		$\Phi 27 \times 310$	M6/5
150	50-100G		55		$\Phi 60 \times 154$	M 8
200	1-100G		82		$\Phi 42 \times 210$	M 8
250			110		$\Phi 42 \times 270$	M 8
250			62		$\Phi 60 \times 180$	M 8
300			130		$\Phi 37 \times 310$	M 8
400		180	$\Phi 42 \times 420$ (in series)	M 8		
500		240	$\Phi 42 \times 540$ (in series)	M 8		

Note:

1. Where OD $\Phi 27$ resistor can be installed according to user requirements outer bolts with M8 cap.
2. We can produce small batch precision sampling non-inductance resistors of the precise voltage divider & the resistors of the high voltage and power divider according to the user's special requirements.

Chief Testing Items & Testing Result of CNAS Laboratory Authentication

Testing item	Test condition and Performance index request	Testing result
Overload	100W: 1.7MΩ-29.10KV; 2.1MΩ-32.40KV; 3.3MΩ-40.62KV; 5.5MΩ-52.40KV; 150W 6.6MΩ-70.36KV $\Delta R \leq (\pm 1\%)R$	100W $\Delta R(0-0.49)\%R$ 150W $\Delta R(0.15-0.20)\%R$
Short time overload	Test condition: Four time working voltage, Duration time: 1min /60S 100W Resistor: 1.7MΩ-13.20KV; 2.1MΩ-16.64KV; 3.3MΩ-26.40KV; 5.5MΩ-44.00KV; 150W Resistor : 6.6MΩ 52.80KV	No burning phenomenon occurred in the resistor, and no breakdown, arcing, carbonization occurred on the surface of the insulating layer. Qualified
Insulation resistance	Test condition: DC500V, Duration time t=60s Foli wrapping method: AC 700V, Duration time t=60s Index requirements: Insulation resistance $RI \geq 10G\Omega$	RI: (40~200)GΩ Foli wrapping method: RI: $\infty\Omega$ Qualified
Temperature coefficient	Test condition: -15℃ ~+25℃ +25℃ ~+125℃ Index requirements: TCR $\leq \pm 400PPM/^\circ C$	(-15℃ ~+25℃) -(48.9~396.5)PPM/℃ (+25℃ ~125℃) (5.7~377)PPM/℃ Qualified
Steadydamp-heat	Test condition: T: (40±2.0)℃, RH: (90~95)% t: 96h Index requirements: $\Delta R \leq (\pm 2\%)R$	ΔR : (0.00-0.38)%R Qualified
Vibration	Test condition : 10Hz--500Hz , A=0.75mm or a=98m/s ² , Duration time 6h 。 10min Cycle once for a total of 36 times. Index requirements : $\Delta R \leq (\pm 2\%)R$	ΔR : (-0.06--0.12)R Qualified
Temperature fast changed	Test condition : resistor at the (-55±3)℃ of the condition Duration 30min, temp rising timely (125±3)℃ , Duration 30min , total of 5 cycles. Index requirements : $\Delta R \leq (\pm 1\%)R$	ΔR : (-0.10 ~ 0.06)%R Qualified
70℃ durability	Test condition : The resistor applies a rated power voltage and remains in the (70±2)° C environment for 96 hours. Index requirements : $\Delta R \leq (\pm 1\%)R$	ΔR : (0 ~ 0.62)%R Qualified

RI80A Series High Voltage Resistors

Film materials: Metal Glaze Film

: All covered or part covered

core: ceramic rod (Al₂O₃ content over 95%)

Coating materials: low temperature vitreous enamel

Power Range: 5W-25W

Resistance range: 100 Ohm-100G Ohm

Resistance tolerance: ±1%-±10%

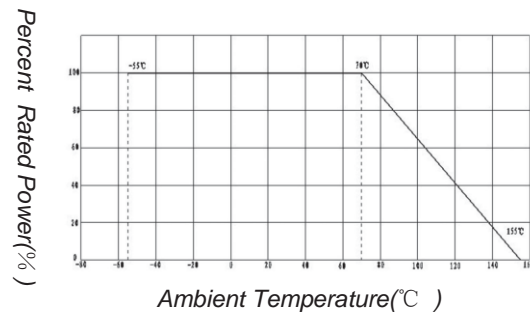
Resistance temperature coefficient: ±25PPM-±200ppm

Specialty: Good overload and high voltage performance; High resistance and low inductance; can be widely used in high voltage load、 voltage divider circuit.

Special Requirements: Negotiate meet



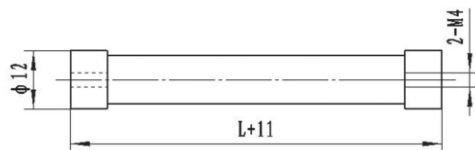
Power Derating Curve



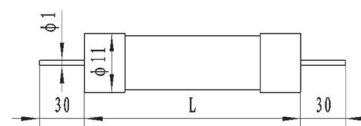
Technology Standard

1. GB T5729-2003/IEC60115-1:2001
2. Q/QH1618-2007

product picture and Outline Dimension



A Mould-Cap Mould



B Mould-Lead Mould

Chief Technology Parameters & Contour Dimensions

Power (W)	Resistance Range (Ω)	Tolerance (%)	Limiting Voltage (KV)	TCR (PPM)	Dimensions(mm)
5	100-5.1G	±1-±10	8.0/10.0	±25PPM- ±200ppm (25-125)°C	11×42/ 12×53
10	5K-10G		25.0/32.0		11×71 / 12×84
20	5K-100G		40.0/45.0		11×103/ 12×114
25	5K-100G		50.0/55.0		11×126/ 12×138

RI80P Series Plate High Voltage Resistors

Film materials: Metal Glaze Film

: All covered or part covered

Ceramic substrate: Al₂O₃ content over 95%

Coating materials: low temperature vitreous enamel

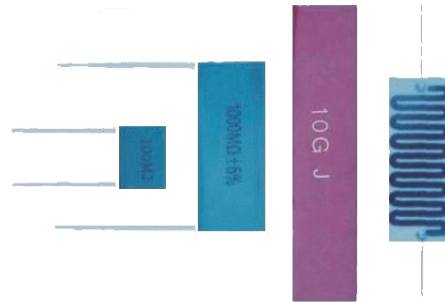
Power Range: 0.5W-12W

Resistance range: 10 Ohm-20G Ohm

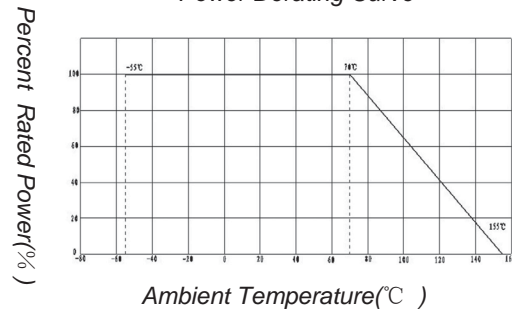
Resistance tolerance: ±1%-±10%

Resistance temperature coefficient: ±25PPM-±200PPM

Specialty: Good overload and high voltage performance;
High resistance and low inductance; can be widely used in
high voltage load、voltage divider circuit.



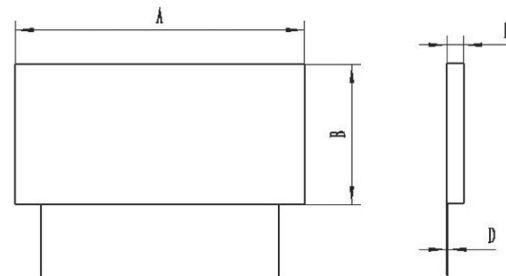
Power Derating Curve



Technology Standard

1. GB T5729-2003/IEC60115-1:2001
2. Q/QH1618-2007

product picture and Outline Dimension



Rated Power (W)	Resistance Range (Ω)	Resistance Tolerance (%)	Limiting Voltage (KV)	Temperature Coefficient ×10 /K(PPM) (25 -125)°C	Dimension (mm)			
					A	B	H	D/Φ
0.5	10-1G	±1-±10	3	±25PPM-±200PPM (25 -125)°C	20	10.5	1.5	0.6
1	10-1G		5		20	15	1.5	0.6
2	10-2G		8		45	6	1.5	0.6
3	10-2G		10		45	12	1.5	0.8
4	10-10G		12		52	22	1.5	0.8
5	10-20G		20		92	22	1.5	0.8
12	10-20G		30		120	22	1.5	0.8

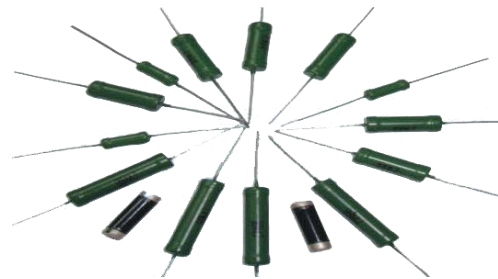
RI40A Type High Voltage Metal Glaze Film Resistors

Chief Characteristic

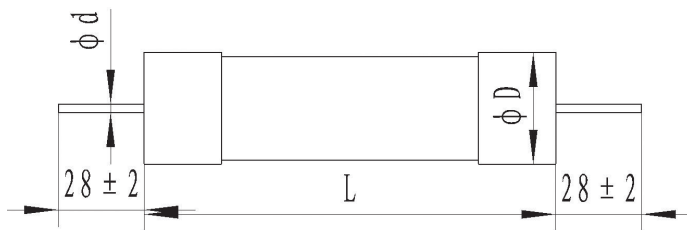
Small volume, High resistance, They possess the merits of the high reliable and endure excessive load. Therefore, extensively used to the high voltage equipment and load resistances of the AC or DC.

Technology Standard

1. GB T5729-2003/IEC60115-1:2001
2. Q/QH1618-2007

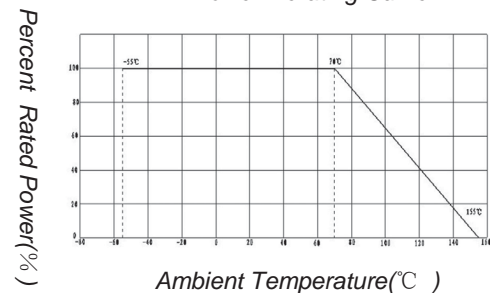


Contour Drawing



Permit the length of the painted $\leq 1.5\text{mm}$ on the lead root

Power Derating Curve



Chief Technology Parameters & Contour Dimensions

Rated Power (W)	Resistance Range (Ω)	Resistance Tolerance (%)	Limiting Voltage (KV)	Temperature Coefficient $\times 10^{-6}/K$ (PPM)	Contour Dimension (mm)		
					L	ΦD	$\Phi d \pm 0.05$
0.5	10-50M	$\pm 1 - \pm 10$	0.35	$\pm 50\text{ppm} - \pm 200\text{ppm}$ (25-125) $^{\circ}\text{C}$	7.0	7.0	0.6
1	10-100M		2.5		13	13	0.8
2	10-100M		4.0		17	17	
3	10-1G		4.8		25	25	
4	10-1G		10.0		35	35	

Note:

Go beyond the afore cited scope, we can provide the products according to the user's requirements.

Film materials: Metal Oxide Film

Film: All covered

Core: ceramic rod (Al₂O₃ content over 95%)

Power Range: 20W-500W

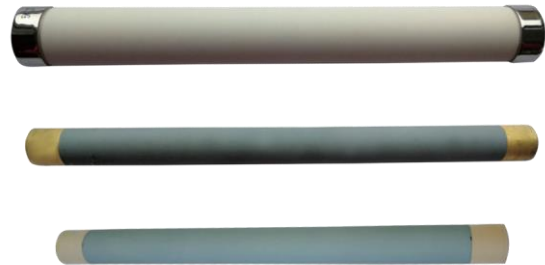
Resistance range: 1 Ohm -5K Ohm

Resistance tolerance: ±1%-±10%

Resistance temperature coefficient: ±50PPM-±400PPM

Specialty: Good overload 、 low inductance and high frequency performance; can be widely used in high frequency circuit.

Special Requirements: Negotiate meet

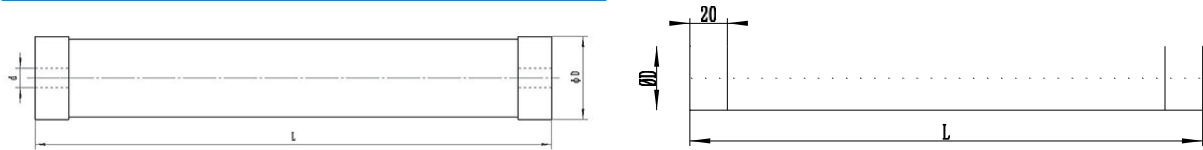


Technology Standard

1. The People's Republic of China Military Standard FL5905 GJB3017-97 《 Resistance Film High Voltage General Specialized for》

2. Xianyang Qin Hua Specialized Electronic Components CO.,LTD Military Standard QJB/QH1619-2007 《Detail Specification for RY-GDL Type High Frequency Larger Power Oxide Film Resistance 》

product picture and Outline Dimension



Rated Power (W)	Resistance Range (Ω)	Resistance tolerance (%)	Limiting Voltage (KV)	TCR (PPM)	Dimensions (mm)
20	1-5K	±1-±10	0.5	±50PPM- ±400PPM	Φ 25×50
30			25		Φ 25×70
50			40		Φ 25×125
60			52		Φ 25×150
70			60		Φ 25×172
80			78		Φ 25×200
100			100		Φ 25×250
150			125	Φ 25×300	
170			55	Φ 58×144	
200			82	Φ 58×170	
250			180	Φ 28.6×443	
300			125	Φ 35×300	
500			200	Φ 25×500	

RY-GDL Series High Frequency Large Power MO Resistors

Water Cooled High Frequency MO Power Resistors

Film materials: Metal Oxide Film

Film: All covered

core: ceramic rod (Al₂O₃ content over 95%)

Power Range: 5KW-33KW

Resistance range: 5 Ohm-10K Ohm

Resistance tolerance: ±5%-±10%

Resistance temperature coefficient: ±100PPM-±400PPM

Specialty: Small size、Good overload、low inductance and high frequency performance; Can be widely used in high frequency circuit.

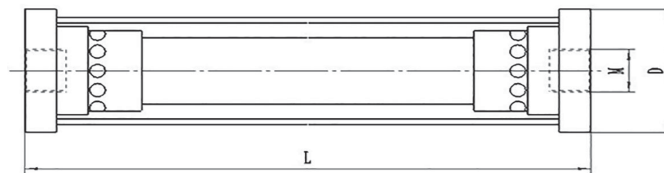
Special Requirements: Negotiate meet



Technology Standard

1. GJB3017--97
2. QJB/QH1619--2007

product picture and Outline Dimension



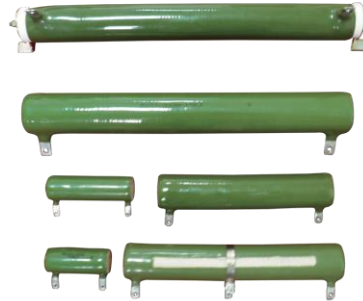
Type	Power (W)	Resistance Range (Ω)	Tolerance (%)	TCR	Dimensions (mm)
RSL-I	5000	5-1000	±5-±10	±100PPM- ±400PPM (25-125)°C	46×(182±1)
RSL-II	10000	10-3000			46×(400±2)
RSL-III	33000	10-10000			90×(860±3)

Remarks:

1. The resistor only allowed the vertical installation, water inlet, outlet in.
2. Resistor per 1kw power consumption, water should not be less than 1liter per minute. But reduced power use, in terms of its water: 5kw resistor not less than 5 liters per minute; 10-20kw resistor not less than 10 liters per minute; 25kw resistor not less than 15 liters per minute.
3. If using circulating water cooling system, the water must be treated with cooling before use.
4. Go beyond the afore cited scope, we can provide the products according to the user's requirements.

RX20 series tubular wire wound resistors

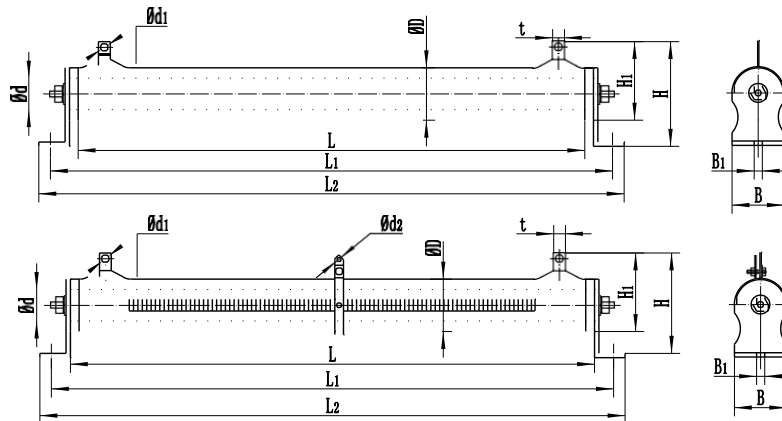
Coating: Lead free vitreous enamel
Core: Ceramic Tube(75%Al₂O₃)
 Non inductive products are available.
Power range: 8W-500W.



Chief Characteristic

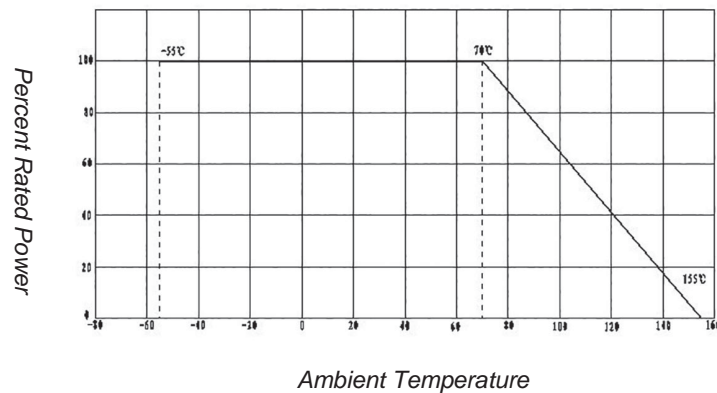
Non-lead glazed on the surface. Anti-pollution. Enduring high temperature. It can be used to the severe environment. They are used extensively distribute voltage, distribute current and load resistors in the DC or low frequency AC circuit.

Contour Drawing



Power Derating Curve

Power Derating Curve



Technology Standard

1. GB/T5729-2003
2. Q/QH1630-2014

Chief Technology Parameters & Contour Dimensions

Resistance Range (Ω)		power (W)	Contour Dimensions (mm)											
Fixed	Variable		L	L ₁	L ₂	D	d	H	H ₁	D ₁	t	d2	B	B ₁
5.1-3.3k	-	8	35±1.5	-	-	14±2	5.5±0.7	-	28.5±2.5	2	5	-	-	-
5.1-10k	5.1-200	10	41±1.5	-	-			-				-		
5.1-15k	5.1-220	16	45±1.5	66±2	82±2	17±2	8±0.7	41±2	31±2.5	2	5	2	15	4.5
5.1-20k	5.1-430	20	51±2.0	72±2	88±2.2									
10-24k	10-510	25	51±2.0	77±3	88±3	21±2.5	8±0.7	51±2	35±2.5	2	5	2	20	5.5
10-30k	10-1.0k	30	71±2.2	97±3	108±3									
20-51k	20-1.2k	40	87±2.2	113±3	124±3	29±3	20±1.5	59±2	43±3	3.5	6	2	30	5.5
20-51k	20-1.5k	50	91±2.4	120±3	135±3									
24-56k	24-2.0k	75	140±3.2	170±4	184±4	29±3	20±1.5	59±2	43±3	3.5	6	2	30	5.5
24-62k	24-2.7k	100	170±3.5	200±4	214±4									
20-91k	20-4.3k	150	215±4	244±4	259±4	38±3	25±1.5	84±3	58±2	4	9	2	35	6.5
4.7-12K	5.1-3K	200	215±4	247±4	259±4							30±2	16±0.8	
4.7-12K	5.1-3K	250	266±4	296±4	308±4	30±2	16±0.8	71±2	50±2	4	9	2	26	6.5
4.7-12K	5.1-3K	300		298±4	310±4	36±2	22±1.2	82±3	58±2			2	35	
5.1-10K	6.2-3K	400	250±4	280±3	298±4	54±2	30±2	98±3	79±3	8	16	2	50	6.5
5.1-10K	6.2-3K	500	300±4	330±3	348±4									

Note:

Go beyond the afore cited scope, we can provide the products according to the user's requirements.

We can provide the non-inductance products according to the use's requirements. and add the character "N" before the mark.

User can select freely the assist units of the resistors.

Chief Testing & Testing Requirements for the Authentication Testing

Testing item	Test condition and Performance index request	Testing result
Wire bondability	HiSnPb39,75W Soldering iron method,Fused coating.	Uniform wetting
Insulation Resistance	500V±50V direct-current test voltage,Package foil method,Time of duration:1 min.	Insulation Resistance $\geq 20M\Omega$
Insulation and voltage resistance	2000V DC voltage or peak value of 50Hz AC voltage is equality,Time of duration:1 min.	Without breakdown, fox and the flicker phenomenon
Main body strength	GB/T5729-2003 4.15.2 Power $\leq 40W$ Load 30N;Power $\leq 50W$ Load 100N.	$\Delta R \leq \pm(1\%R+0.05\Omega)$
Vibration	Frequency:10-500Hz;Accelerated:10g(a=98/S2 A=0.75mm);Primary circulation per 5min,Time of duration:1h.	$\Delta R \leq \pm(1\%R+0.05\Omega)$
Temperature rise	Apply the rated power,Time of duration is 30min.	$\Delta T=(T-T) \leq 325^{\circ}C$
Temperature fast changed	Keep 30min in (-55±3) $^{\circ}C$, then warming to (200±3) $^{\circ}C$, keep 30 min, 5 cycles.Be up to the mustard GB/T5729-2003 4.19	$\Delta R \leq \pm(2\%R+0.1\Omega)$
Steady damp-heat	T:(40±2) $^{\circ}C$,RH=(93±3)%,Time of duration:96h.	$\Delta R \leq \pm(2\%R+0.1\Omega)$
Overload	Apply 10 times rated power,Time of duration:5s.	$\Delta R \leq \pm(2\%R+0.1\Omega)$
Indoor temperature durability	In indoor temperature, apply the rated power, Time of duration: 1000h.	$\Delta R \leq \pm(5\%R+0.1\Omega)$

RX21 Flameproof resin coated series wire wound resistors

Coating: Flameproof silicon resin

Core: Ceramic rod (75% Al₂O₃)

Tolerances: ±5%-±10%

Resistance range: R02-39K Ohm

Non inductive products are available.

Power range: 1W-12W.

Special Requirements: Negotiate meet



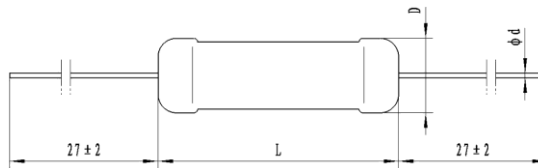
Chief Characteristic

The resistance is high precision. May be provide products of the precision: ±1%, ±2%. On the surface they are painted or glazed. And the retardation flame conform to the national standard. They are used extensively printed circuit board installation. Used in DC or low frequency AC circuits. If used in high frequency circuit, it shall order non-inductive resistor, need to declare when you order it. Non-inductive resistor with "N" in front of the product logo.

Technology Standard

1. GB/T5729-2003
2. Q/QH1630-2014

Contour Drawing



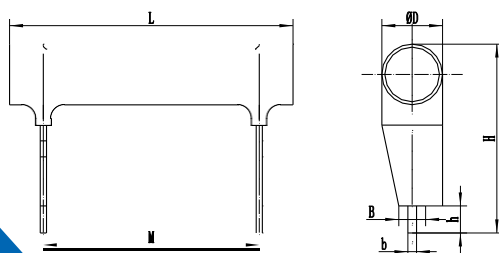
Chief Technology Parameters & Contour Dimensions

Power (W)	Resistance Range (Ω)	Resistance Tolerance (%)	Temperature Coefficient (×10 /K)(PPM)	Contour Dimension(mm)		
				L max	D max	d
1	0.02-2.7K	± 5-±10	±50PPM-± 400PPM	11.5	3.8	0.6
2	0.051-5.1K			15.5	5.5	0.8
3	0.051-5.1K			16.5	7.0	0.8
4	0.051-18K			26.5	9.5	0.8
8	0.15-33K			34.5	9.5	1.0
10	0.15-36K			34.5	9.5	1.0
12	0.15-39K			52.5	9.5	1.0
12	0.15-39K			52.5	7.0	1.0

Note:

Go beyond the afore cited scope, we can provide the products according to the user's requirements

Contour Drawing of RXG4



Technology Standard

1. GB/T 5729-2003
2. Q/QH1632-2014

Chief Technology Parameters & Contour Dimensions

70°C Rated Power (W)	25°C Rated Power (W)							
		L±2	D±1.5	M±2	H±1.5	B±1.5	b±1.5	h±1.5
3	3.7	20	6.5	12.5	23.5	4.5	1	4.5
6	7.3	25	8.5	15.0	26.0	5.5	3	
9	10	53	8.5	43.0	26.0	5.5	3	

Chief Testing & Testing Requirements for the Authentication Testing

Test item	Test conditions/test methods	Test requirements
Solderability	235±5°C , 2s Solder welding method.	Solder Wet Out Leads and Free Flow
Over Load	Apply 10 times rated power load voltage; Duration: 5S.	$\Delta R \leq \pm(1\%R+0.05\Omega)$
Lead-out strength	The outlet can withstand 10N pull.	$\Delta R \leq \pm(1\%R+0.05\Omega)$
Vibration	Frequency: 10-500Hz Acceleration: 10g (a=98m/S ² or A = 0.75mm) 10min cycle, duration: 6h	$\Delta R \leq \pm(1\%R+0.05\Omega)$
Crash	50g (500m/s ²) , 11ms , 18 times .	$\Delta R \leq \pm(1\%R+0.05\Omega)$
Temperature rise	Apply rated power load voltage; maintain time 30min.	$\Delta T=(T-T) \leq 205^{\circ}\text{C}$
Temperature Rapid change	The resistor is held at (-55±3) ° C for 30min and then placed in (155±3)° C environment for 30min; 5 cycles in a row. Meet the GB/T5729-2003 4.19 requirements.	$\Delta R \leq \pm(1\%R+0.05\Omega)$
Upper limit type temperature durability	Temperature: 155±5° C, resistor applies 58.5% of rated power voltage: $V = \sqrt{58.5\%P_R}$ 1000h.	$\Delta R \leq \pm(5\%R+0.1\Omega)$
Fire resistance	Resistor application: 5 times, 10 times, 16 times rated power voltage. Maintenance time: 5s.	No opened fire in the resistor
Room temperature Durability	At room temperature, the resistor applies a rated power load voltage, Last 1000h.	$\Delta R \leq \pm(5\%R+0.1\Omega)$

Upper limit type temperature durability

RX24 Aluminum housed wire wound resistors

Structure: Aluminum housed

Fillings: epoxy

Core: ceramic rod (Al₂O₃ content over 75%)

Power Range: 5W-50W

Resistance range: 1 Ohm-20K Ohm

Resistance tolerance: ±1%-±10%

Resistance temperature coefficient: ±100PPM-±400PPM

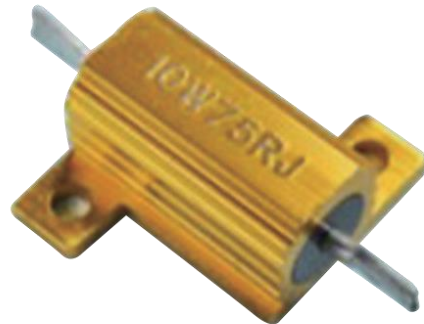
Specialty: With aluminum-housed heat sink, small size, high power, good stability.

Non-inductive products are available.

suitable for installation in heat diffusing plates

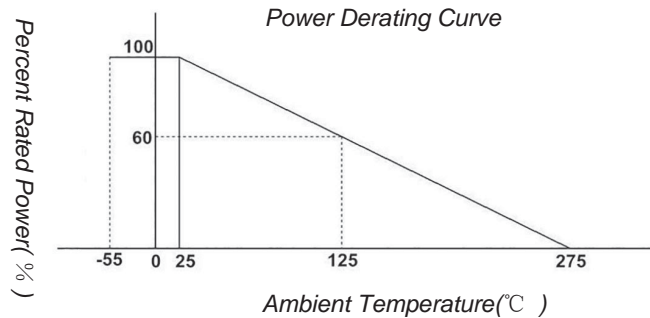
No heat diffusing plates installation, the power must be cut off 1/2

Special Requirements: Negotiate meet

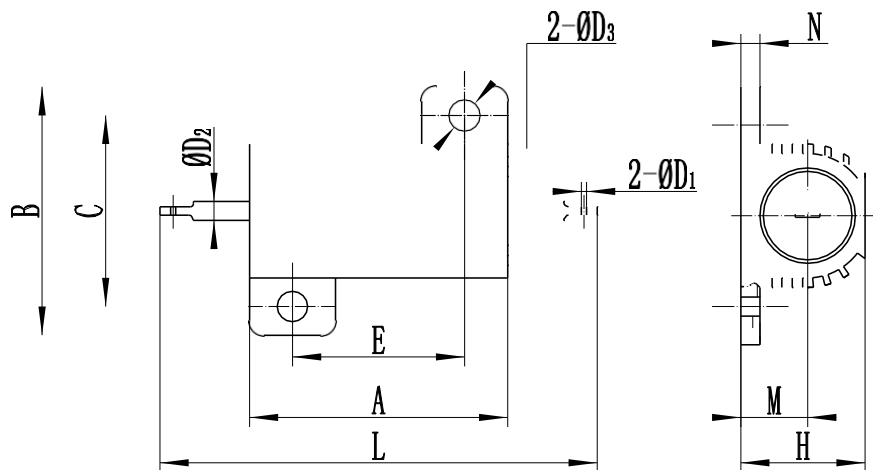


Technology Standard

1. GB/T5729-2003
2. Q/QH1630-2014



product picture and Outline Dimension



Structure and installation Size

Power	Size (mm)											Resistor Range (Ω)	Dissipate Heat Area (mm ²)
	L max	A ±0.5	B±0.5	C±0.5	E±0.5	M ±1	N ±0.3	H ±0.5	D1	D2	D3		
5W	31.0	15.0	16.0	12.0	11.0	4.4	1.5	8.5	1.5	1.5	2.4	0.51-1.0k	410
10W	39.0	19.5	21.0	16.0	14.0	5.0	2.0	10.0	2.0	2.0	2.5	0.51-1.5k	410
25W	52.0	27.0	27.0	20.0	18.0	7.0	2.3	14.0	2.0	2.0	3.5	0.51-8.2k	544
50W	73.0	50.0	29.0	21.5	40.0	7.3	2.3	15.5	2.0	2.0	3.5	0.51-20k	824

Chief Testing & Testing Requirements for the Authentication Testing

Test items	Test conditions/test methods	Test requirements
Solderability	235±5°C , 2s Solder welding method.	Solder Wet Out Leads and Free Flow
Lead-out strength	The lead-out end should be able to withstand 10N pulling force, maintaining time: 10s.	$\Delta R \leq \pm(1\%R+0.05\Omega)$
TemperatureRapid change	The resistor was held at (-55±3) ° C for 30 min and then placed in a (155±3) ° C environment for 30 min for 5 consecutive cycles. Meet the GB/T5729-2003 4.19 requirements.	$\Delta R \leq \pm(1\%R+0.05\Omega)$
Over load	Apply 10 times rated power load voltage; Duration: 5S.	$\Delta R \leq \pm(1\%R+0.05\Omega)$
apply to voltage	5W: 500Vac 60s ; 10W-25W: 1000Vac 60s ; 50W: 1500Vac 60s.	No breakdown, no flashover and arcing.
Temperature characteristics	-55°C、+20°C、+155°C	$\alpha \leq \pm 250\text{ppm}/^\circ\text{C}$
Steady heat	Maintain 504 hours in the environment of temperature: T=(40±2) ° C, relative humidity: RH=(93±3).	$\Delta R \leq \pm(5\%R+0.1\Omega)$
Crash	50g (500m/s ²), 11ms (half-sine), 18 times.	$\Delta R \leq \pm(1\%R+0.05\Omega)$
Vibration	Frequency: 10-500Hz, acceleration: 10g (a= 98m/S ² , A= 0.75mm) 10min cycle, duration: 6h.	$\Delta R \leq \pm(1\%R+0.05\Omega)$
Room temperatureDurability	At room temperature, the resistor applies a rated power load voltage,Duration: 1000 h.	$\Delta R \leq \pm(5\%R+0.1\Omega)$

RX27 Series ceramic cased wirewound resistors

Structure: Ceramic housed

Fillings: Silicon resin mixed SiO₂

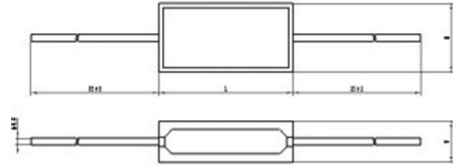
Core: ceramic rod (Al₂O₃ content over 75%)

Power Range: 3W-20W

Resistance range: 1 Ohm-10M Ohm

Resistance tolerance: ±1%-±10%

Resistance temperature coefficient: ±100PPM-±400PPM
Specialty: Ceramic-cased, flameproof, suitable for PCB assembly.



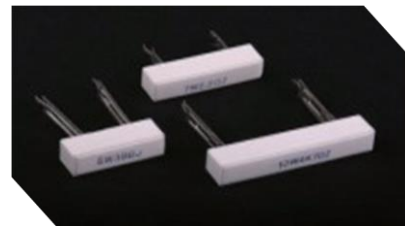
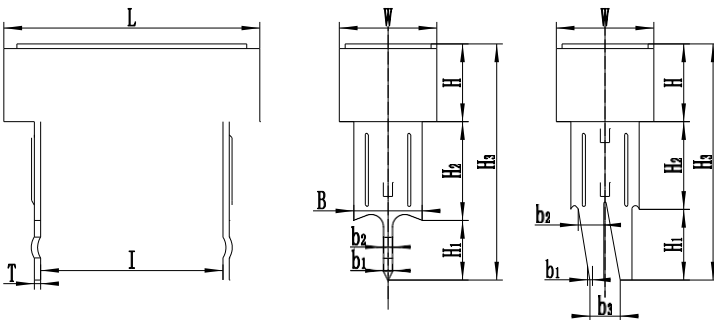
Dimensions

Power (W)	Resistance Range (Ω)	Contour Dimension(mm)				
		L	W±1	H±1	l	d±0.1
3	1.8-390	22±1	8.0	8.0	25.0±2	Φ0.8
5	1.8-390	22±1	9.5	9.5		Φ0.8
7	3.3-910	35±1	9.5	9.5		Φ0.8
10	3.9-1.5K	48±2	9.5	9.5		Φ0.8
15	5.1-1.6K	48±2	12.5	12.5		Φ1.0
20	5.1-2.4K	63±3	12.5	12.5		Φ1.0

Technology Standard

1. GB/T 5729-2003
2. Q/QH1634A-2014

Drawing And Dimensions



RX28(A) Aluminum housed wirewound resistors

Structure: Ceramic housed

Fillings: Silicon resin mixed SiO₂

Core: ceramic rod (Al₂O₃ content over 75%)

Power Range: 25W-150W

Resistance range: 2 Ohm-9.1K Ohm

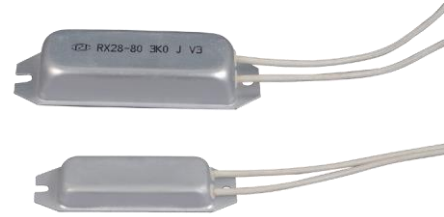
Specialty: With aluminum-housed heat sink, small size, high power, good stability.

Non-inductive products are available.

suitable for installation in heat diffusing plates

No heat diffusing plates installation, the power must be cut off 1/2.

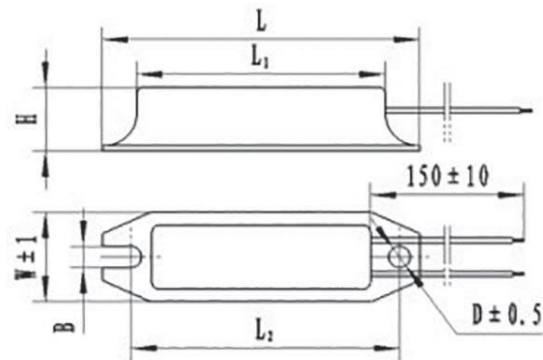
Special Requirements: Negotiate meet



Technology Standard

1. GB/T 5729-2003
2. Q/QH1635A-2014

product picture and Outline Dimension



Chief Technology Parameters & Contour Dimensions

25°C Power(w) with heat sink	Resistance Range(Ω)	Dimension(mm)					Weight(g)	Recommend aluminum heat sink (cm) Thickness ≥ 3mm
		L1	L2	W	H	B/ΦD		
25-60	2-5.1K	100	90	30	16.8	4.5	90	1000
80	5.1-5.6K	130	118	42	21	6.0	180	1000
120-150	8.2-9.1K	182	172	42	21	6.0	250	1000

RX28(B) Type Series Aluminum Shell Wire Wound Resistors

Chief Characteristic:

Aluminum enclosure, moisture resistance, chemical resistance, easy installation, good fixation. Soft lead, lead length can be customized according to user requirements.

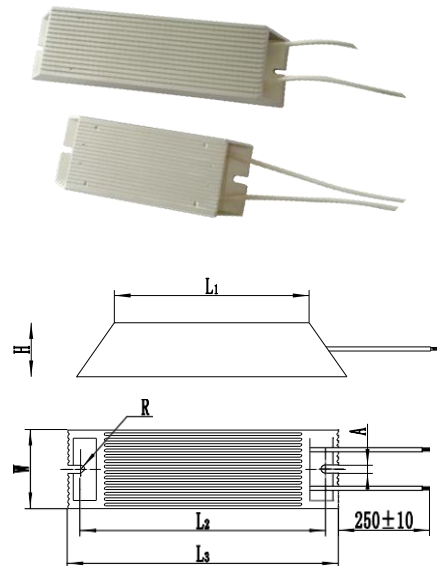
Chief Purpose

For partial distribute voltage, distribute current, resistor with charge and bleeder or load in power electronic devices. Widely used in power supply, inverter, servo circuit, high requirement and harsh environments.

Contour Drawing

Technology Standard

1. GB/T 5729-2003
2. Q/QH1635B-2014



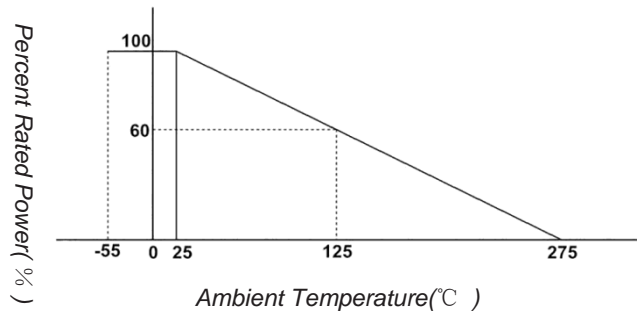
Chief Technology Parameters & Contour Dimensions

Power(w) With heat sink	Resistance Range(Ω)	Contour Dimension(mm)						Sectional Area(mm ²)	Recommend norm aluminum heatsink(cm ²) Thickness ≥3m
50	2.0-5.1K	68	76	90	40	20	5.5	1.2	824
60	2.0-5.1K	85	98	115	40	20	5.5	1.2	1000
70-80	2.0-5.1K	110	122	140	40	20	5.5	1.2	1000
100	2.0-5.1K	135	148	165	40	20	5.5	1.2	1000
120	5.1-5.6K	155	175	190	40	20	5.5	1.2	1000
150	5.1-5.6K	185	197	215	40	20	5.5	1.2	1000
160	8.2-8.2K	110	122	140	60	30	5.5	2.0	1200
200	4.0-6.8K	130	155	167	60	30	5.0	2.0	3755
250-300	4.0-10K	180	210	230	60	30	4.0	2.0	4755
350-400	4.0-10K	230	245	260	60	30	5.3	2.0	5795
500-600	4.0-10K	285	320	335	60	30	5.3	2.0	5795
700	4.0-10K	350	385	400	60	40	5.3	2.0	5795
800	4.0-10K	358	382	400	61	59	6.5	2.5	5795
1000*	5.0-15K	360	384	400	107	50	6.5	2.5	5795
1200*	5.0-15K	410	434	450	107	50	6.5	2.5	5795
1500*	5.0-15K	435	470	485	107	50	6.5	4.0	5795
1800*	5.0-15K	500	532	550	107	50	6.5	4.0	5795
2000*	5.0-15K	600	630	650	107	50	6.5	4.0	5795

Using Note:

1. Same as RX28(A) type resistor.
2. The data with * indicates the impact power of the resistor without heat sink at 25°C, and its rated power at 25°C is 80% of the impact power.

Power Derating Curve



Chief Testing & Testing Requirements for the Authentication Testing

Test items	Test condition/Test method	Test Requirement
Lead-out strength	Meet the GB/T5729-2003 4.16 Ual terminal should be able to withstand 20N pull.	Leads are not damaged. $\Delta R \leq \pm(2\%R+0.1\Omega)$
Vibration	It conforms to the provisions of GB/T 5729-2003 4.22.3, frequency: 10-500Hz, acceleration: 10g (a=98m/s ²), cycle once in 5min, duration: 1h.	No visible damage to the resistor. $\Delta R \leq \pm(2\%R+0.1\Omega)$
Collision	Meet the requirements of GB/T 5729-2003 4.20, frequency: 40-80 times / min Acceleration: 15g (a = 147m / s ²), times: 2000 times.	No visible damage to the resistor. $\Delta R \leq \pm(2\%R+0.1\Omega)$
Insulation resistance	500V±50V DC test voltage is applied between the lead wire and the shell of the resistor Measure according to the method recommended in GB/T 5729-2003 4.6.1.3	$R_i \geq 100M\Omega$
Insulation pressure	According to the method recommended in GB/T5729-2003 4.7, 2000Vac test voltage is applied between the lead wire and the shell of the resistor, and the time is 1 minute, and the leakage current is $\leq 5mA$.	No breakdown, arcing and flashover of resistors.
Steady heat	Meet GB/T5729-2003 4.24.2.1a. Temperature: $(40 \pm 2)^\circ C$, relative humidity: $(93 \pm 3)\% RH$, time: 96h.	$\Delta R \leq \pm(5\%R+0.1\Omega)$
temperature Rapid Variety	The resistor is held at $(-55 \pm 3)^\circ C$ for 30min and then placed in a $(155 \pm 3)^\circ C$ environment for 30min for 5 consecutive cycles. Meet the GB/T5729-2003 4.19 requirements.	$\Delta R \leq \pm(2\%R+0.1\Omega)$
Room temperature durability	According to GB/T 5729-2003 4.25.2 recommended method: resistor mounted on a standard heat sink, according to the nominal power load voltage. Power up for 1.5h; power off for 0.5h; 96h at room temperature.	$\Delta R \leq \pm(10\%R+0.1\Omega)$

Note:

This certification test item and requirements apply to both RX28 and RX28 (B) resistors.

RXHG Type Series Painted Wave -Wire Wound Resistors

Coating: A(Lead free vitreous enamel),B(Flameproof silicon resin)

Core: Ceramic rod (50% Al₂O₃)

Tolerances: ±5%-±10%

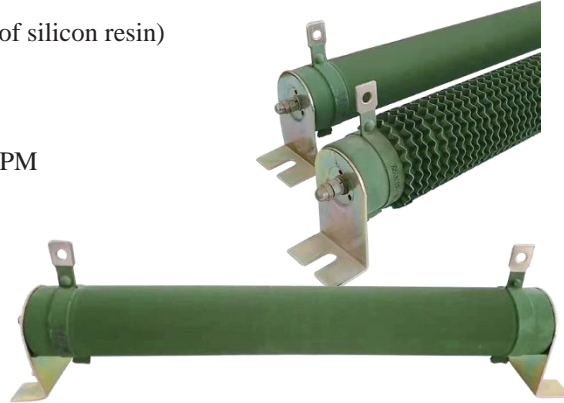
Resistance temperature coefficient: ±50PPM-±400PPM

Resistance range: 1 Ohm-150 Ohm

Non inductive products are available.

Power range: 80W-3000W.

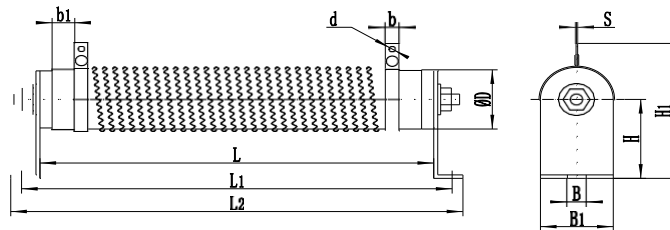
Special Requirements: Negotiate meet



Chief Characteristic

The vertical corrugated winding, space saving, favorable heat dissipation, prolonging the service life. Suitable for large power equipment of DC or low frequency AC circuit. Two kinds of coating methods is available, RXHG-A type selection of glass glaze coating; RXHG-B type selection of organic material coated with high temperature resistance circuit.

Contour Drawing



Chief Technology Parameters & Contour Dimensions

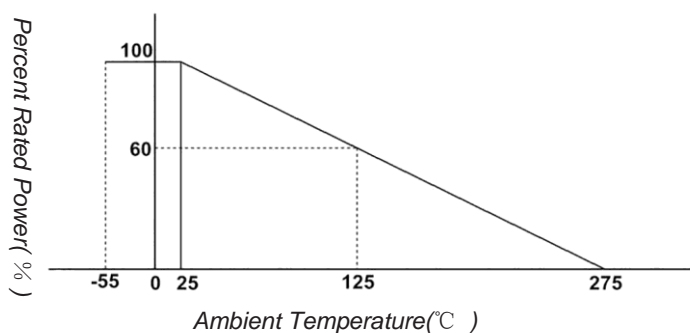
Type	Power(w)	Resistance Range(Ω)	Contour Dimension (mm)									Weight (g)
RXHG -A	100	1-6.2	170±3.5	200±4	212±4	30±3	64±3	6±1	3.5	6.5	26	263
	150		215±4.0	245±4	257±4	30±3	64±3	6±1	3.5	6.5	26	290
	200	1-8.2	266±3.0	296±4	308±4	30±3	72±3	9±1	4.0	6.5	26	395
	300	1-10	266±3.0	296±4	310±4	36±3	84±3	9±1	4.0	6.5	34	485
RXHG -B		1-12										6 4 0
	400	1-20	250±2.0	290±3	312±4	54±3	94±3	16±1	8.0	7.0	48	1 0 0 0
	500		315±2.0	340±3	362±4	54±3	94±3	16±1	8.0	7.0	48	
		1-51										
	80	0.5-5.1	140±2.0	162±3	174±4	32±3	76±3	12±1	5.5	6.5	28	1 3 5 0
	-B		170±2.0	192±3	204±4	32±3	76±3	12±1	5.5	6.5	28	1 3 3
		0.5-6.2										
	150	0.5-8.2	215±2.0	237±3	249±4	32±3	76±3	12±1	5.5	6.5	28	160
	200		266±2.0	288±3	300±4	32±3	76±3	12±1	5.5	6.5	28	205
		1-10				36±3	88±3					
	300	1-12	266±2.0	288±3	302±4	54±3	102±3	12±1	5.5	6.5	34	255
	400		250±2.0	280±3	302±4			15±1	6.5	7.0	48	410

5 0 0	2000	3000	1-	2	0							
1 0 0 0			1-	5	1	3	1	5				±2.0
150			1	-	6	8	3	0				0±3.0

Technology Standard

1. GB/T 5729-2003
2. Q/QH1636-2014

Power Derating Curve



Chief Testing & Testing Requirements for the Authentication Testing

Test item	Test condition and Performance index request	Testing result
Strength of leading-out terminal	Enduring tension 20N(GB/T5729-2003 4.16 Ua1)	$\Delta R \leq \pm(2\%R+0.1)$ Wire no damage
Vibration	Frequency:10-500Hz; Accelerated:10g(a=98/S2 A=0.75mm); Primary circulation per 10min, Time of duration:6h. qualified to GB/T5729-2003 4.22.3	$\Delta R \leq \pm(2\%R+0.1)$ Resistor no damage.
collision	Frequency:40-80 times/min; Accelerated: 15g (a=147m/s ²); Total 2000 times.GB/T5729-2003 4.20	$\Delta R \leq \pm(2\%R+0.1)$ Resistor no damage.
Insulation Resistance	GB/T5729-2003 4.6.1.3 500V±50V direct-current test voltage between wire and holders, Time of duration:1 min.	Insulation Resistance $\geq 100M\Omega$
Insulation and voltage resistance	GB/T5729-2003 4.7 1500V direct-current test voltage between wire and holders, Time: 60s, Leak current $\leq 5mA$.	Without breakdown, fox and the flicker phenomenon of the resistor.
Steady damp-heat	GB/T5729-2003 4.24.2.1a. T:(40±2)°C ,RH=(93±3)%, Time of duration:96h	$\Delta R \leq \pm(5\%R+0.1)$
Temperature fast changed	Keep 30min in (-55±3) °C , then warming to (200±3) °C ,keep 30 min, 5 cycles.Be up to the mustard GB/T5729-2003 4.19	$\Delta R \leq \pm(2\%R+0.1)$
Indoor temperature durability	GB/T5729-2003 4.25.2 the heat sink, apply the voltage in the rated power, Power on: 1.5h, Power off: 0.5h, 96 hours indoors.	$\Delta R \leq \pm(10\%R+0.1)$

Note: RXHG-A is glazed; RXHG-B is painted.

RXG Type Series Large Power Aluminum Shell Wire Wound Resistors

Chief Characteristic

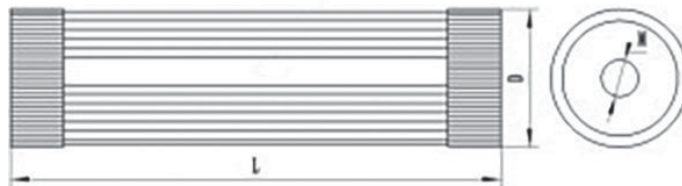
Small Volume. High Power. The shell is owing to use aluminum alloy material sealing structure. Strong heat dispersion. It be suitable to the various ambient. The resistance is high precision. High reliability. It can be able to use in the domain of the electric power, electric locomotive, machine-electric equipment etc. They are perfect elements of the power absorption & load.

Technology Standard

1. GB/T 5729-2003
2. Q/QH1637-2014



Contour Drawing



Chief Technology Parameters & Contour Dimensions

Type	[25°C] Power(w)	Impact Power(w)	Resistance Range(Ω)								
				L1	L2	L3	L4	D	H	H1	Φd
RXG300D-I/II	200	300	5.1-3.0K	199	183	**	72	Φ51	73	58	Φ5
RXG400A-I/II	300	400	5.1-3.0K	202	182	**	76	Φ66	80.5	75	Φ5
RXG600D-I/II	400	600	5.1-4.7K	304	286	129	72	Φ51	73	58	Φ5
RXG800A-I/II	600	800	5.1-7.5K	307	287	129	76	Φ66	80.5	75	Φ5
RXG800B-I/II	600	800	6.8-10K	269	144	--	--	Φ85	127.5	--	--
RXG800C-I/II	600	800	5.1-6.8K	291	271	127	76	Φ68	81.5	75	Φ5
RXG1000B-I/II	800	1000	10-12.0K	309	185	--	--	Φ85	127.5	--	--

Note:

Indicates that the resistor is only assigned to one clamping ring/fixing bracket located in the middle of the resistor.

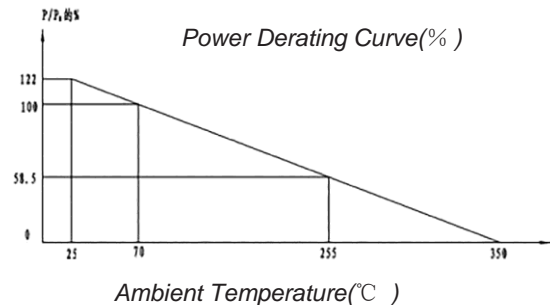
Chief Testing & Testing Requirements for the Authentication Testing

Test Item	Test condition/Test method	Test Result
Crash	According to GB/T5729-2003 standard 4.21 recommended method, the resistor withstands 1000m/s ² , Duration of 6ms external impact; times: 1000 times.	No visible damage to the resistor. $\Delta R \leq (2\%R+0.1)$
Vibration	According to GB/T 5729-2003 standard 4.22.3 recommended method. Frequency: 10-500Hz; Acceleration: 10g (a=98m/s ² or A=0.75mm); 5min cycle, duration: 3h.	No visible damage to the resistor. $\Delta R \leq (2\%R+0.1)$
Insulation resistance	500V±50V DC test voltage is applied between the terminal of the resistor and the housing. Measured according to the method recommended in GB/T 5729-2003 4.6.1.3.	Insulation resistance $R_i \geq 1000M\Omega$
Insulation pressure	According to the method recommended in GB/T5729-2003 4.7, a test voltage of 4000Vac (the voltage applied to the RXG800B/1000B resistor is 6000Vac) is applied between the terminal of the resistor and the housing, and the time is 60s and the leakage current is $\leq 5mA$.	No breakdown, arcing and flash over of resistors.
Steady heat	According to GB/T 5729-2003 standard 4.24.2.1a recommended method, temperature: $(40 \pm 2)^\circ C$; relative humidity: $(93 \pm 3)\% RH$; time: 96h.	$\Delta R \leq (5\%R+0.1)$
Room temperature durability	According to the method recommended by GB/T 5729-2003 4.25.2: The resistor applies a voltage according to the rated power. Power 1.5h; power off 0.5h; total 1000h in room temperature environment.	No visible damage to the resistor. $\Delta R \leq (10\%R+0.1)$

Power Derating Curve

Explanation:

1. The resistance range of this series is 5.1Ω-12KΩ, but the resistance range can be extended to both ends according to the user's requirements to make lower resistance and higher resistance resistors for users' convenience.
2. Since the packaging material of this series contains certain volatile material substances, the “exhaust” phenomenon will occur when the resistor is used for the first time, and at the same time, some odors will be generated. This is a normal phenomenon.



3. Produce non-inductive products based on the agreement of both parties.

RXG1 Type Series Power Glazed Wire Wound Resistors

Chief Characteristic:

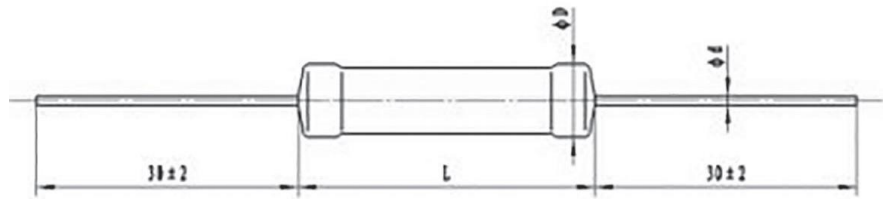
Axial wire leads, glazed, small size. Power load, high precision resistance, we can provide users with 1% /2% tolerance range of products. It is suitable for printed circuit board mounting. They are widely used in DC or low frequency AC circuits.

Technology Standard

1. GB/T 5729-2003
2. Q/QH1638-2014



Contour Drawing



Chief Technology Parameters&Contour Dimensions

Power (w)	Resistance Range(Ω)	Resistance tolerance(%)	Limited Voltage(v)	Temperature Coefficient (×10 /PPM)	Contour Dimension(mm)		
					L max	ΦD max	Φd
2.5	1-1.0k	3	100	$R \geq 10\Omega$ $TCR \leq \pm 200$ $5\Omega < R < 10\Omega$ $TCR \leq \pm 400$ $R \leq 5\Omega$	12.7	5.6	0.8
3.0	1-1.0k	3	120		14.0	7.0	0.8
4.3	1-3.6k	3	160		23.0	7.0	0.8
6.0	1-6.8k	5	200		22.2	8.0	0.8
6.5	1-8.2k	5	240		23.7	8.0	0.8
8.0	1-15k	5	400		34.0	8.0	1.0
9.0	1-20k	10	500		38.1	8.0	0.8
11.0	1-30k	10	750		46.8	10.8	1.0
12.0	1-30k	10	750		53.5	8.0	0.8

Note:

Go beyond the afore cited scope, we can provide the products according to the user's requirements.

RXG1B Type Series Power Glazed Wire Wound Resistors

Chief Characteristic

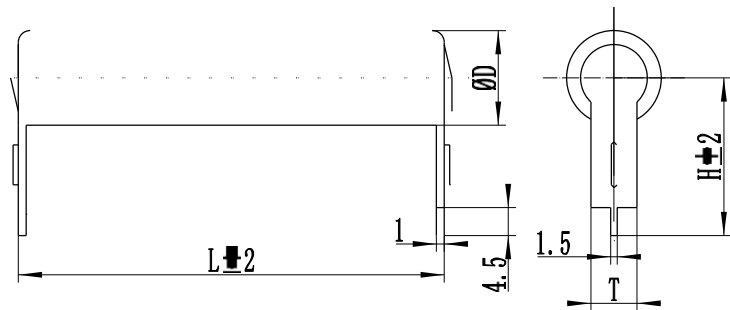
Electro leads to radial lug. Glazed. Small size. Power load is large. High precision resistance. We can provide users with 1%/2% tolerance range of products. It is suitable for printed circuit board mounting. They are widely used in DC or low frequency AC circuits.



Technology Standard

1. GB/T 5729-2003
2. Q/QH1639-2014

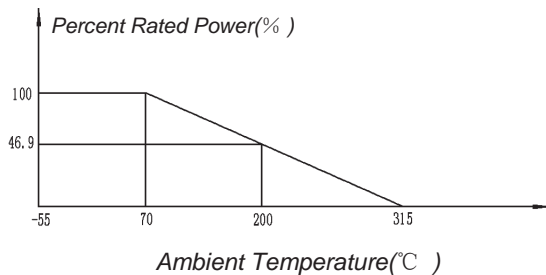
Contour Drawing



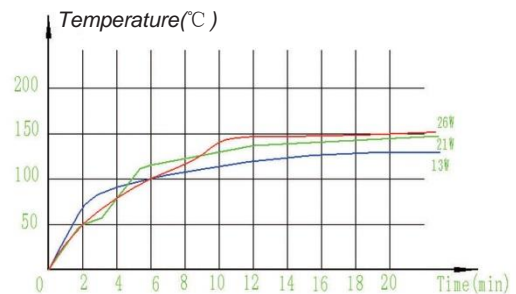
Chief Technology Parameters & Contour Dimensions

Rated Power(w)	Resistance Range(Ω)	Resistance Tolerance(%)	Temperature Coefficient($\times 10$ /PPM)	L	$\Phi D(\text{max})$	H	T
				13	5.1- 4.7K	5	$R \geq 10\Omega; TCR \leq \pm 200$ $5 < R < 10\Omega;$ $TCR \leq \pm 400$
21	5.1- 5.6K	78	15.5	25	6		
26	5.1-6.2K	86	15.5	25	6		

Power Derating Curve



Temperature curve



Chief Testing & Testing Requirements for the Authentication Testing

Test Item	Test Condition/Test Method	Test Result
Solderability	Meet the relevant requirements of the GB/T5729-2003 standard section 4.17. 235±5° C, 2s slot welding method.	Solder infiltrates the terminals and is free to flow
Over Load	Meet the relevant requirements of GB/T5729-2003 standard 4.13. Apply 10 times rated power load voltage; duration: 5s.	$\Delta R \leq \pm (2\%R + 0.05\Omega)$
Lead-out strength	Meet the relevant requirements of the GB/T5729-2003 standard section 4.16. The outlet can withstand 40N tension for 10s.	$\Delta R \leq \pm (1\%R + 0.05\Omega)$
Collision	Meet the relevant requirements of GB/T5729-2003 standard 4.20. Acceleration a = 39g, times: 4000 times.	$\Delta R \leq \pm (1\%R + 0.05\Omega)$
Vibration	Meet the relevant requirements of GB/T5729-2003 standard section 4.22. Frequency: 10-500Hz, acceleration: 10g (a=98m/s ²) 10min cycle, duration: 6h.	$\Delta R \leq \pm (1\%R + 0.05\Omega)$
Crash	Meet the relevant requirements of GB/T5729-2003 standard section 4.21. Acceleration a = 49g (a = 490m/s ²), 11ms, 18 times.	$\Delta R \leq \pm (1\%R + 0.05\Omega)$
Temperature rise	Meet the GB/T5729-2003 standard 4.14 requirements. Apply rated power load voltage; maintain time 30min.	$\Delta T = (T - T_0) \leq 245^\circ\text{C}$
Temperature Rapid change	Meet the relevant requirements of GB/T5729-2003 standard 4.19. The resistor is held at (-55±3)° C for 30min and then placed in (155±3)° C environment for 30min; 5 cycles in a row.	$\Delta R \leq \pm (1\%R + 0.05\Omega)$
Steady heat	Meet the relevant requirements of the GB/T5729-2003 standard section 4.24. The product was kept in the environment of temperature: T=(40±2)° C, relative humidity: RH=(93±3)% for 96 h.	$\Delta R \leq \pm (5\%R + 0.1\Omega)$
Room temperature Durability	Meet the relevant requirements of GB/T5729-2003 standard 4.25. At room temperature, the resistor applies a rated power load voltage for 1000 h.	$\Delta R \leq \pm (5\%R + 0.1\Omega)$

Note:

- The test project and requirements are based on the characteristics of RXGIB resistors. Therefore, it cannot be completely equivalent to the RXG1 resistor requirement. For example, the terminal strength, RXG1 resistor is only 10N.
- As mentioned earlier, the preconditions for the supplier's certification test are:
 - 2.1 The user's monthly demand is more than 500pcs; and the annual demand is more than 5000pcs, when the user requests it.
 - 2.2 When the supplier changes the main materials and processes for any reason.
- This note applies to all products covered by this product specification/catalogue.

RXG2 Type Large Power Painted Wire Wound Resistors

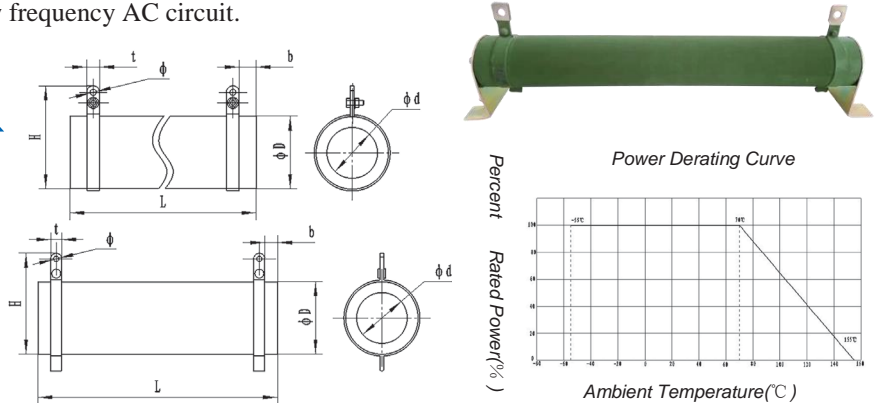
Chief Characteristic

Simple structure, convenient installation. Wide resistance range, coated organic green paint on the surface. Strong anti-pollution ability. Good heat radiating performance. Therefore, they are widely used in high power electric equipment of DC or low frequency AC circuit.

Technology Standard

1. GB/T 5729-2003
2. Q/QH1640-2014

Contour Drawing



Chief Technology Parameters & Contour Dimensions

Type	Rated Power(w)	Resistance Range(Ω)	Resistance Tolerance (%)	Temperature Coefficient (PPM/°C)	外形尺寸Contour Dimension(mm)						
					L	D	d	H	b	t	Φ
RXG2-10	10	0.5-33K	±1-±5	≤ ±300	41±1.0	14±0.6	4.5±0.3	25±2.0	3±1.0	4	2
RXG2-16	16	0.5-36K			(25-125)°C	17±6.0	7.5±0.6	28±2.0	3±1.0	4	2
RXG2-20	20	1.0-43K			51±1.5	18±1.0	8.0±0.6	34±2.5	3±1.0	5	2
RXG2-25	25	1.0-47K			51±1.8	21±1.0	12±0.8	34±2.5	3±1.0	5	2
RXG2-30	30	1.0-51K			71±2.0	20±1.0	14±0.8	34±2.5	3±1.0	5	2
RXG2-40	40	1.0-51K			87±2.0	20±1.0	12±0.8	45±3.0	4±1.5	5	2.5
RXG2-50	50	1.0-56K	±2-±5	≤ ±300	91±2.5	28±1.2	20±1.0	45±3.0	4±1.5	5	2.5
RXG2-75	75	1.0-68K			136±2.5	28±1.5	20±1.0	51±3.0	5±1.5	6	2.5
RXG2-100	100	1.0-75K			170±3.0	28±1.5	20±1.0	51±3.0	5±1.5	6	2.5
RXG2-150	150	10-75K			215±4.0	28±1.5	20±1.0	51±3.0	5±1.5	8	2.5
RXG2-200	200	10-82K			247±4.0	28±1.5	20±1.0	60±3.0	8±2.0	10	4
RXG2-250	250	10-100K			260±4.0	35±1.0	23±1.0	60±3.0	8±2.0	10	4
RXG2-300	300	10-100K	±5-±10	≤ ±400	(25-125)°C	40±1.0	26±1.0	95±4.0	8±2.0	10	4
RXG2-400	400	20-120K			330±3.0	50±2.0	33±1.0	95±4.0	8±2.0	10	4
RXG2-550	550	20-180K			350±5.0	50±2.0	33±1.0	95±4.0	10±2.0	16	6

RXG2-750	750	20-240K	±10	≤ ±400	350±2.0	60±3.0	42±1.0	95±4.0	10±2	16	6
RXG2-1000	1000	24-300K			430±3.0	60±3.0	42±1.0	110±5	10±2	16	6
RXG2-1200	1200	24-360K			430±3.0	70±4.0	58±1.5	110±5	10±2	16	6
RXG2-1500	1500	24-390K			430±3.0	80±4.0	58±1.5	110±5	10±2	16	6
RXG2-2000	2000	24-430K			508±3.0	80±4.0	50±1.5	110±5	10±2	16	6
RXG2-2500	2500	30-430K			508±1.0	90±4.0	68±2.0	120±5	10±2	16	6

Chief Testing & Testing Requirements for the Authentication Testing

Test Item	Test Condition/Test Method	Test Result
Resistance to welding heat	According to BG/T5729-2003 standard 4.18.2.b recommended method. Solder temperature: 350±10° C, immersion depth: bare part of immersed electrode. Time: 10±1s.	No visible damage to the resistor $\Delta R \leq \pm(1\%R+0.05\Omega)$
Solderability	Meet the GB/T5729-2003 standard 4.17.3.1 requirements. Solder temperature: 270±10° C; time: 2s; slot welding method.	Evenly tin, free flowing.
Over load	According to the recommended method of BG/T5729-2003 standard 4.13, the resistor applies 10 times the rated power voltage for 5 seconds.	No visible damage to the resistor $\Delta R \leq \pm(1\%R+0.05\Omega)$
Surface temperature _{rise}	According to the recommended method of BG/T5729-2003 standard 4.14, the resistor applies a rated power voltage and measures the highest point temperature when the resistor reaches thermal equilibrium.	$\Delta T \leq 250^{\circ}\text{C}$
vibration	According to GB/T 5729-2003 standard 4.22.3 recommended method. Frequency 10-500Hz; Acceleration: 10g (a=98m/s ² or A=0.75mm); 5min cycle, duration: 3h.	No visible damage to the resistor $\Delta R \leq \pm(5\%R+0.1\Omega)$
Room temperature _{durability}	According to the method recommended by GB/T 5729-2003 4.25.2: The resistor applies a voltage according to the rated power. Power 1.5h; power off 0.5h; total 1000h in room temperature environment.	No visible damage to the resistor $\Delta R \leq \pm(5\%R+0.1\Omega)$

Note:

The preconditions for supplier certification testing are:

1. The user's monthly demand is more than 500pcs; and the annual demand is more than 5000pcs, when the user requests it.
2. When the supplier changes the main materials and processes for any reason. This note applies to all products covered by this product specification/catalogue.

RXGN Series Metal Cap Model Non-Inductance Wire Wound Resistors

Chief Characteristic

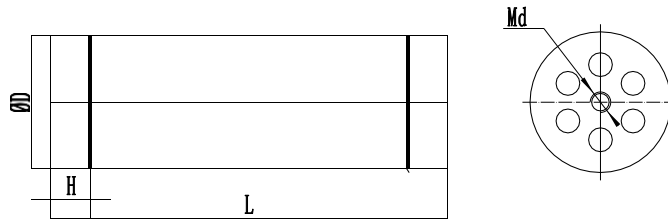
Novel structure, convenient installation. Surface is coated organic green paint or glazed enamel, strong anti-pollution ability, good heat radiating performance. Overload capacity has the ideal, it can be used in harsh environments. Therefore they are widely used in high power electric equipment of DC or low frequency AC circuit.



Technology Standard

1. GB/T 5729-2003
2. Q/QH1641-2014

Contour Drawing



Chief Technology Parameters & Contour Dimensions

Type	Rated Power(w)	Resistance Range(Ω)	Resistance Tolerance(%)					Remark
				L \pm 1.5	H	Φ D	d	
RXGN	50	20-8.0K	\pm 5(J)	100	15	31	M6	
	75	20-10K	\pm 5(J)	150	15	31	M6	Glazed
	100	20-10K	\pm 5(J)	170	15.5	31	M6	
	150	20-10K	\pm 10(K)	155	18	62	M8	Glazed
	160	20-10K	\pm 10(K)	155	14	55	M8	
	200	20-10K	\pm 10(K)	215	15	37	M8	
	250	20-10K	\pm 10(K)	266	15	30	M8	
	300	20-10K	\pm 10(K)	300	18	52	M8	
	500	20-10K	\pm 10(K)	600	18	62	M8	

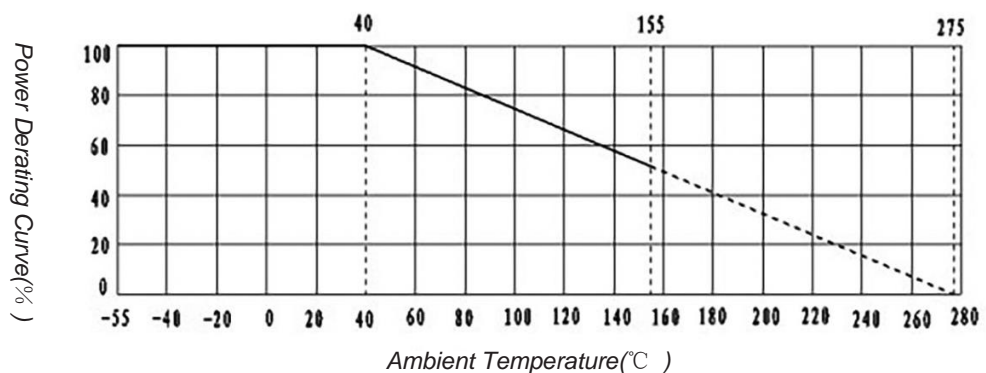
Note:

1. In the remarks column, the current supply product is indicated; according to the user's request, the cover type can also be changed; the user can select the cover type if not indicated.
2. Beyond the above technical specifications, the supplier can be negotiated according to the requirements put forward by the user.
3. Except the Glazed, others are painted

Chief Testing & Testing Requirements for the Authentication Testing

Test Item	Test Condition/Test Method	Test Result
Insulation resistance	A direct current test voltage of $500V \pm 50V$ is applied between the terminal of the resistor and the insulating coating layer, and the measurement is performed according to the method recommended in GB/T 5729-2003 4.6.1.2.	Insulation resistance : $R_i \geq 20M\Omega$
Insulation pressure	According to the method recommended in GB/T5729-2003 Standard 4.7, a test voltage of 2000V DC or peak 50Hz alternating current is applied between the terminal of the resistor and the insulating coating. Time: 60s, leakage current $\leq 5mA$.	No breakdown, arcing and flashover of resistors.
Body strength	According to the method recommended in GB/T 5729-2003 standard 4.15.2, an external force of 100 N is applied in the middle of the resistor, and the maintenance time is 10 s.	Resistors is no visible damage ; $\Delta R \leq \pm(1\%R+0.05\Omega)$
vibration	According to GB/T 5729-2003 standard 4.22.3 recommended method. Frequency: 10-500Hz; Acceleration: 10g ($a=98m/s^2$ or $A=0.75mm$); 5min cycle, duration: 3h.	Resistors is no visible damage ; $\Delta R \leq \pm(1\%R+0.05\Omega)$
collision	According to the GB/T5729-2003 standard 4.20 recommended method. Frequency: 40-80times/min Acceleration: 15g ($a=147m/s^2$), a total of 2000 times.	Resistors is no visible damage ; $\Delta R \leq \pm(1\%R+0.05\Omega)$
Surface temperature rise	According to the method recommended in BG/T5729-2003 standard 4.14, the resistor applies a rated power voltage and measures the highest point temperature when the resistor reaches thermal equilibrium.	$\Delta T \leq 325^\circ C$
temperature Rapid Variety	The resistor is held in $(-55\pm 3)^\circ C$ for 30min and then placed in $(200\pm 3)^\circ C$ environment for 30min for 5 cycles. Meet the GB/T5729-2003 standard 4.19 requirements.	Resistors is no visible damage ; $\Delta R \leq \pm(2\%R+0.1\Omega)$
Over load	According to the recommended method of BG/T5729-2003 standard 4.13, the resistor applies 10 times the rated power voltage for 5 seconds.	Resistors is no visible damage ; $\Delta R \leq \pm(2\%R+0.1\Omega)$
Steady heat	According to GB/T5729-2003 standard 4.24.2.1a recommended method. Temperature: $(40 \pm 2)^\circ C$, relative humidity: $(93 \pm 3)\% RH$, time: 96 h.	$\Delta R \leq \pm(2\%R+0.1\Omega)$
Room temperature resistance Durability	According to the GB/T5729-2003 standard 4.25.2 recommended method: resistors according to the nominal power load voltage. Power 1.5h; power off 0.5h; total 1000h in room temperature environment.	Resistors is no visible damage ; $\Delta R \leq \pm(5\%R+0.1\Omega)$

Power Derating Curve

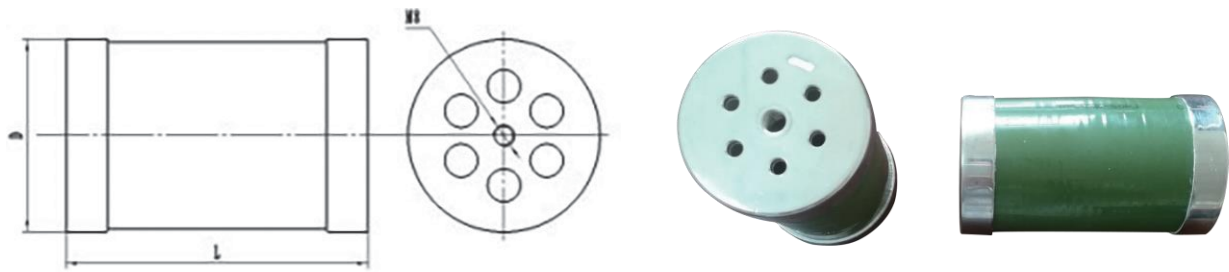


RXFD Glazed Type Composite No-inductance Wire Wound Resistors

Chief Characteristic

Due to adopt compound structure, it possess characteristic of small value large power. The ability for enduring short time large power shock is strong. Extensively used to the equipment of metallurgy and electronic power in large type high voltage devices.

Contour Drawing



Technology Standard

1. GB/T 5729-2003
2. Q/QH1642-2014

Chief Technology Parameters & Contour Dimensions

Rated Power (w)	Resistance Range(Ω)	Resistance tolerance(%)	Contour Dimensions (mm)		
			ΦD	L	Connection screw hole
200	10-30	± 2	70 ± 0.5	110 ± 1.5	M8
	40-60				
	70-90				
	100-120	± 3			
	130-150				
	160-180				
	180-200	± 5			
	210-220				
230-250					

Note:

Go beyond the afore cited scope, we can provide the products according to the user's requirements .

BWL Power Type Low Resistance

Moulded Resistors Series

encapsulation mode: compression moulding forming

packaging materials: Epoxy mixed SiO₂

core: PMF; MF; MOF; Glaze Resistor; Wirewound Resistor; Alloy Chip

Power Range: 0.5-10W

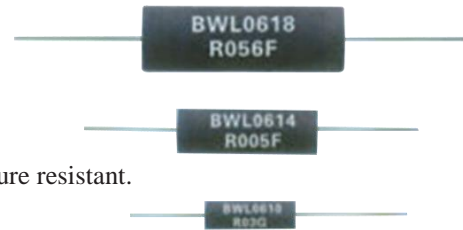
Resistance range: R008-1G

Resistance tolerance: 0.1%-20%

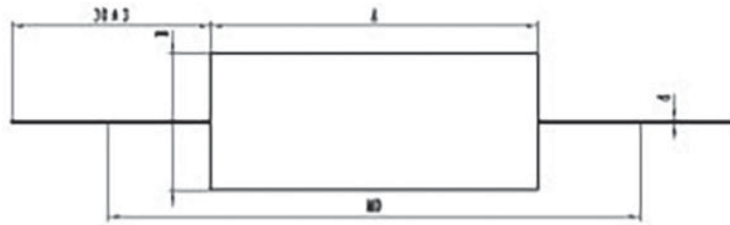
Resistance temperature coefficient: 50-350PPM

Specialty: Good stability and reliability; Good insulation and moisture resistant.

Special Requirements: Negotiate meet



product picture and Outline Dimension



Type	Power(w)	Dimensions(mm)			
		MD	A±0.25	ΦB±0.25	d
BWL 0610/0640	0.5	27.0	7.0	3.0	Φ0.8
BWL 0612/0642	1.0	31.0	11.0	3.0	Φ0.8
BWL 0614/0644	3.0	34.0	15.0	5.2	Φ0.8
BWL 0616/0646	4.0	38.0	18.0	6.5	Φ0.8
BWL 0618/0648	5.0	44.0	24.0	8.4	Φ1.0
BWL 0620/0650	10.0	66.0	46.5	10.0	Φ1.0

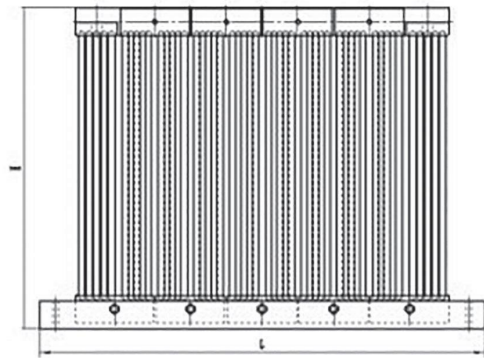
FL—A Type Precision Shunts

Chief Characteristic

Reasonable structure, the resistance characteristics of precision, has low resistance, low inductance, high reliability.

Applications Scope: Be used for the limiting current, even current or sampling detection of other electronic equipment loop current in large power.

Contour Drawing



Chief Technology Parameters & Contour Dimensions

Type	Rated Current(A)	Rated Current(V)	Standard Resistance(mΩ)	Resistance Tolerance(%)			
						W	
FL-AI	500	2.0	3.991	±1	460	65	235
FL-A II	600	2.5	4.105	±1	480	65	240
FL-AIII	700	3.0	4.281	±1	500	65	250

Note:

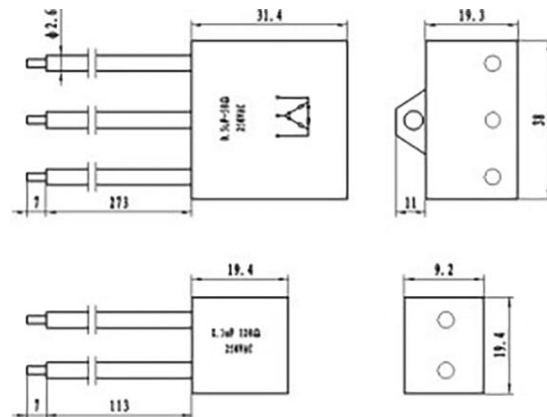
List of parameters for the supply of products. Beyond the above technical indicators, according to the user request, negotiating supply.

Eliminate arc device/Filter Used for The Precision Numerical Control Machine Tool

Chief Characteristic

The capacitors is used for eliminate arc device adopt the capacitor of the metabolized polypropylene film. Employ the metal film resistors as resistors is used for eliminate arc device. Owing to the plastic prevented burning and with epoxy resin adopted, the eliminate are device may achieve UL94V-0 grade. Enduring impact current. The reliability is high. It is the first select device for the industry of the making machine tool and various inductance electron equipment automatic control.

Contour Drawing



Applications Scope:

It is used absorbing impulse voltage/extinguish arc in the process of the numerical control machine variation course. May be used touch point switch of the various inductance electron equipment eliminate impulse voltage/spark discharge when the switch are “OFF” and “ON”.

Chief Technology Parameters

Item	Performance
Coating	Encapsulated in a plastic sealed with epoxy resin
Grade of prevented burning	UL94V-0
Fetching out ways	Soft leading wire
Reference standard	GB/T15288-94 GB7343-87 En133200:1999 GB/T15287-94
Between voltage ①-② ②-③ ③-①	3.2times Rated voltage
Rated voltage	250V A.C. 50/60Hz
Climatic category	-40/85/21
Impact current endurance	Impulse current three million in the general condition
Reliability	Under operating technology condition.Failure rate $\leq 100\text{PPM}$ with in 22000 hours.
Insulation Resistance Between Case and Pole	$R_i \geq 15000\text{M}\Omega$ (at 500V D.C.)
Capacitance Tolerance	$-5\% < \Delta C / C < +5\%$ $f=10\text{KHz}$
Resistance Tolerance of discharge resistor	$-7\% < \Delta R < +5\%$

Typical Dimensions

Assortment	Length(mm)	Wide(mm)	Thickness(mm)	Wire length(mm)
3pases	38	31.4	19.3	273
phase	19.4	19.4	9.2	113

Note:

Special requirements can be designed at the request of customers.

High Voltage Resistor Box, Series High Voltage & Large Power Resistor Cabinet Introduction

High Voltage Box

Owing to the resistor box has been pumped high vacuum and filled with the insulator, it can endure voltage 50KV, Resistance 10K Ω and high frequency performance is stable. Enduring shock load achieve more than million joules. Long term operating the appearance of the puncture & the arc-over dose not take place.



High voltage large power load box

Our factory produces the resistor cabinet that can endure voltage 20-150KV, power 5-100KW, resistance 100 Ω -100K Ω , compulsory wind cold. It has been used extensively in the high voltage equipment of the metallurgy and the underground, high voltage testing, voltage measuring. The performance is Stable, Which have received a lot of praise from our user's.

QH Series large power load box

According to user needs, design different types, different styles of resistance box, cabinet. Meet high power, high voltage, large current and other electrical parameters. It can be configured to insert/patch type temperature sensor, electronic digital display meter, equipped with a 485 communication interface. Therefore, realize real time monitoring temperature of the resistors cabinet.



Introduction of High Voltage Resistor Reference Material

1. High voltage resistors abide by electronics basic formula yet Using in the equipment circuit.

1.1 Ohm Law

$$I \propto V \quad V = IR \text{ or } I = V/R$$

A. / Flowed Resistor Current, Dimension: A.

V. / Voltage Exerted Resistor, Dimension: V.

Ω . / Resistor's Resistance, Dimension: Ω .

1.2 The Relation of Average Power and Peak Value Power

$$P = P_p \cdot J \cdot F$$

P- / Peak Value Power, Dimension: W.

J- Pulse Width, Dimension: S (ms, μ s, ns.

F- Frequency, Dimension: Hz.

1.3 Rated voltage U_r or U_R

DEFINITION: Using product for the indication resistance and rated power is calculated it's square root value.

The value is a voltage for the D.C. or A.C. Rms.

$$U_r = \sqrt{P_R R}$$

V. / Continuous operating voltage for rated D.C. or A.C. effective. Dimension: V.

P^R - / Rated Power, Dimension: W.

R- Ω . / Indication Resistance Dimension: Ω .

2. How to Choose the Resistor Type

For high-frequency circuits, to recommend oxide film or glass glaze resistors. The resistance of the structure body, determines that it has a low inductance. There are requirements on the circuit inductance, film resistor is your best choice.

3. How to Choose the Resistor Power

Power is larger ($\geq 20W$) of the load resistor at full power for a long (more than 2 hours) work surface will produce $300^\circ C$ temperature of around, And safe use of the resistor surface temperature is preferably maintained at less than $200^\circ C$. Therefore, when the choice of the resistor, should consider derating power usage.

4. Withstanding Voltage

China National Standard GB/T5729-2003/IEC60115-1:2001 in on the withstand voltage so provides: "4.7.2 In addition to surface mount resistors for all except resistors, test voltage shall be applied to the following two electrodes between: two resistors connected together as a lead-out electrode, V-block, a metal foil or mounting member as the other electrode. test voltage is AC (40Hz-60Hz), the peak of about 100v/s rate of rose from zero detailed specification insulation voltage worth 1.42 times the specified voltage is reached after keeping 60s \pm 5s." Obviously, this is the measurement resistor resistance of the insulation coating layer or carrier (such as porcelain) the withstand voltage performance. Therefore, it is not necessarily linked the resistance of the resistor voltage and other technical parameters, like power, resistance, etc.

5. Limiting Element Voltage

China National Standard GB/T5729-2003/IEC60115-1: 2001 in the limits of the voltage on the resistor so provides: "2.2.16 can be continuously applied to the resistor terminals on the two largest DC or AC rms voltage. (voltage typically depends on the resistor element limits the size and the manufacturing process).

This is a structure parameters determined by the resistor resistor technical parameters. Often depends on the resistor geometry between the two electrodes. It is necessarily linked with the resistor power values.

6. Resistor structure model and parameters characteristics

6.1 glass glaze resistor: It is extremely stable chemical properties resistor paste coated on 95% AL₂O₃ ceramic tube, high temperature resistance film formed after firing. In order to guarantee stable electrical performance parameters, the surface to be coated with a protective lacquer. Its characteristics:

Resistance Range: Ω --G Ω

Power range: 0.5--500W

Frequency response: less oxide film resistors ideal, but much better than wire wound resistors. (Called non-inductive resistor)

6.2 oxide film resistors: is the liquid chemical reagent injected into the high pressure borrow about 800°C AL₂O₃ 95% of the ceramic tube, in the high temperature generated in the resistive film. Surface without protective lacquer coating. Its characteristics:

Resistance range: 1 Ω --5K Ω

Power range: 10W--500W

Frequency response: \geq 100MHz truly non-inductive resistor

6.3 Wire wound resistor: alloy resistance wire is wound on an insulating substrate for the endurance temperature, the surface protective layer coating made of resistive components. Because the different of the coted and package. It can be divided into paint type, glaze type, metal shell type, porcelain shell type. Its characteristics:

Resistance range: 0.15 Ω --20K Ω

Power range: 1W--300W

Frequency response: inability to completely eliminate inductive factors, the frequency characteristics of the worst of the three resistors.