

RX20 管状线绕功率电阻器 Tube-style Wire-wound Fixed Power Resistor	文件编号 Document No.	YF-SE-02-20A/A01
	文件日期 Released Date	2023-3-31
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■产品特性 Feature:

- 高负荷、散热特性、不燃性;
High load, heat-sink performance, non-flame ;
- 高频特性好、抗脉冲性;
Stable performance of high voltage, pulsing load;
- 符合环保要求 RoHS compliant, halogen free, lead free;
- 防护等级 INGRESS PROTECTION: IP51;

■产品引用范围 Application:

- 模拟负荷、放电设备 Load molds;
- 电源系统/充电设备 Power supply systems;
- 工业/自动化行业 Industrial/automation system;
- 汽车电子 Auto systems;

■产品订货方式 Parts Number Explanation:

RX20	-	500W	-	30R	-	J	-	
类型		功率		特性(可选)		阻值		误差
Product		Rated		Feature		Resistance		Tolerance
Type		Power		(Optional)				Packing
		10W		N/A:Normal		0R47=0.47Ω		F:±1%
		20W		S:Small volume		2R7=2.7Ω		G:±2%
		50W		V:Variable		15R=15Ω		J:±5%
		100W		N:Non-inductive		510R=510Ω		K:±10%
		...		...		1K2=1.2KΩ		
		5000W						

■环保申明 RoHS declaration:

本产品符合 RoHS 2.0(2011/65/EU)环保要求。
 The products meet the standards of RoHS 2.0(2011/65/EU).

■参考标准 Reliability standard

可焊性 Weldability Standard:	IEC60068-2-20
环境标准 Environment Standard:	SJ/T 11363-2006, ROHS 2011/65/EU
检验标准 QC standard:	MIL-STD-105E, GB/T 2828.1-2003
产品性能 Performance:	IEC60115-2008, GB/T5729-2003

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■标准产品规格 Standard voltage parameters:

功率 Rated Power At 70℃	阻值 Resistance (Ω)	最高使用电压 Max. Rating Voltage(U _R)	最高超载电压 Max. Overload Voltage(U _L)	绝缘电压 Insulation Voltage(U _N)	温度系数 T.C.R. PPM/℃	工作温度 Operating Temperature
P < 50W	0.1 ~1K	350V	500V	1000V	±100	-55℃
50W~500W	0.1 ~2K	500V	650V	1500V	±250	~
P > 500W	0.1~5K	650V	1000V	2000V	±500	+275℃

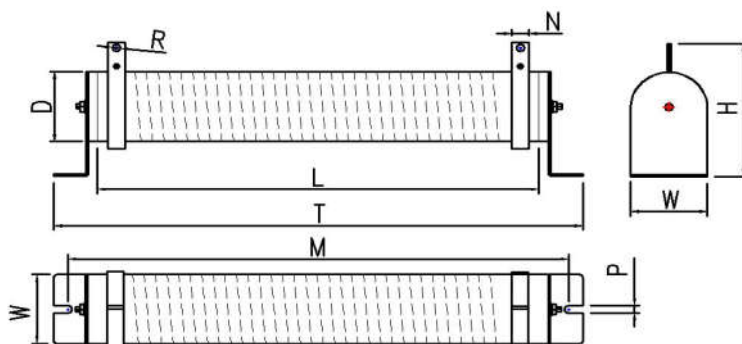
●额定电压 Rating Voltage:

额定功率对应的额定电压,直流(DC)或交流电流(AC),可以采用如下公式计算。当计算的额定电压超过最高使用电压时,则使用最高使用电压为额定电压。

The following equation may be used to determine the DC(Direct Current) or AC(Alternating Current)(RMS, root mean square value) of normal rated power. However, if the result value exceeds the max. using voltage, the max. using voltage is to be used:

$U_P = \sqrt{P \times R}$	U _P : 额定电压 Rating voltage (V) P: 额定功率 Rating Power (W) R: 电阻值 Resistance(Ω)
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■产品尺寸 Type dimension:



规格 Type	尺寸 Dimension(mm)							
	L±3.0	W±2.0	H±3.0	M±3.0	T±3	P±0.5	R±0.5	N±0.5
20W	50	16	50	70	95	5.5	3.0	6
50W	90	28	65	120	145	6	4.5	8
100W	167	28	65	196	223	6	4.5	8
150W	215	28	65	244	270	6	4.5	8
200W	267	28	65	296	323	6	4.5	8
300W	200	40	88	234	275	5.0	6.0	10
400W	267	40	88	301	342	5.0	6.0	10
500W	300	50	98	317	346	7.0	6.5	10
1000W	300	70	135	328	360	8.5	6.5	14
1500W	360	70	135	388	420	8.5	6.5	14
2000W	430	70	135	458	490	8.5	6.5	14
2500W	510	70	135	538	570	8.5	6.5	14
3000W	430	80	146	455	490	8.5	8.0	14
4000W	430	100	163	470	510	9.0	8.0	16
5000W	540	100	163	580	620	9.0	8.0	16
6000W	600	100	163	640	680	9.0	8.0	16

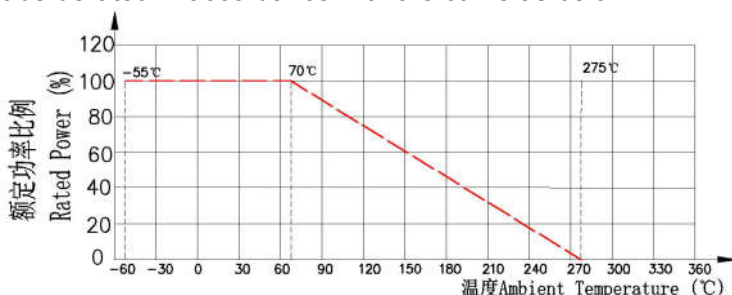
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■ 产品特性 Product performance:

● 额定功耗 Power Derating Curve:

额定功率是周围温度 70℃ 以下(推荐工作区域), 可连续使用的负载功率的最大数值, 且应使机械性能与电气性能满足. 如周围温度超过 70℃ 时, 依照下图功率衰减曲线而定。

Rated power is the max using power under 70℃ and continuous duty. At the same time, the overload power is fit for mechanical properties and electrical properties. When the temperature is over 70℃, the power must be derated in accordance with the curve as below:



● 品特性 Product reliable performance:

测试项目 Test Item	测试方法 Test Method	测试方法 Procedure	测试标准 Requirements										
端子强度 Terminal robustness	IEC60115-1 4.16	端子加载 20N 拉力, 时间 10 秒; Pressurizing force:20N, 10 seconds	无损伤 No damage										
本体强度 Body robustness	IEC60115-1 4.15	电阻体中间, 加载 10N 的压力, 时间 10 秒 Central part pressurizing force:10N, 10seconds	无损伤 No damage										
耐振性 Vibration	IEC60115-1 4.22	10~55HZ/0.75mm/2H*3	无损伤 No damage										
耐焊锡热 Soldering Heat	IEC60115-1 4.18	350±5℃, 3S±0.5S	△R/R≤±0.5%										
可焊锡性 Solderability	IEC60115-1 4.17	245±5℃, 5±0.5S	≥95%										
温度系数 Temperature coefficient (T.C.R.)	IEC60115-1 4.8	$T.C.R. = \frac{R - R_0}{R_0} \times \frac{1}{T - T_0} \times 10^6 \quad (PPM/^{\circ}C)$ R ₀ :常温下(T ₀)的阻值 Resistance at room temperature(T ₀); R: 测试温度(T=T ₀ +100)的阻值 Resistance at T=T ₀ +100;	根据产品额定参数 Refer to Ratings										
短时间过负载 Short Time Overload	IEC60115-1 4.13	Min($\sqrt{10 \times P \times R}$, U _R), 5s	△R/R≤±2.0%										
绝缘耐压 Voltage proof	IEC60115-1 4.7	U _N , 60S, I≤2mA.	△R/R≤±1%										
绝缘阻值 Insulation resistance	IEC60115-1 4.6	DC500V, R>100MΩ	△R/R≤±0.5%										
耐久性 Endurance	IEC60115-1 4.25	Min(U _P , U _R), 1.5H- ON, 0.5H-OFF, 1000H	△R/R≤±5%										
高温存储 High Temp. Exposure	IEC60115-1 4.23	125℃, 80%, 500H	无损伤 No damage										
温度循环 Temperature Cycle	IEC60115-1 4.19	如下循环 Cycle Below: <table><tr><td>温度 Temperature</td><td>25℃</td><td>125℃</td><td>25℃</td><td>-25℃</td></tr><tr><td>时间 Duration</td><td>15min</td><td>15min</td><td>15min</td><td>15min</td></tr></table> 持续时间 Cycle Time:1000Hrs.	温度 Temperature	25℃	125℃	25℃	-25℃	时间 Duration	15min	15min	15min	15min	无损坏 No damage △R/R≤±1%
温度 Temperature	25℃	125℃	25℃	-25℃									
时间 Duration	15min	15min	15min	15min									
不燃特性 Noninflammability	UL94-V0	16*U _P , 5min,	无燃烧现象 No flame										