INTRODUCING;

TAKMAN -

"REX" Audio Grade Carbon Film Resistor

"REY" Audio Grade Metal Film Resistor

The electric current laden with sound signals through resistors is influenced by the various structures and composing materials of the resistors in various aspects. They are magnetic, inductive, electrified and caused by contact resistance and vibration. These appear as incidental noises in reproduced sound making the sound center flat and spread and these are heard as clouded sound which is usually expressed as coloring. The reproduced sound with such incidental metallic-colored noises often strike your ear apparently as brilliant but if you listen carefully, you will come to realize that the sound is vague in its contours and lacking in stereoscopical effect, not faithful to the original sound. It is not too much to say that the very requisite to gain clear and solid sound lies in getting rid of these unnecessary incidental noises.

We embarked on the development of our resistors exclusively for audio applications back in 1997. We collected a lot of resistors which were reputed to be good for audio equipment and listened to them thoroughly and repeatedly. As a result, we could not succeed in obtaining natural sound with no incidental noises from any of these but also found that some of them worked to deteriorate the sound quality. We set up the theme that we should aim at getting sounds as near as those of nature and thoroughly examined the materials and structures that composed resistors and also researched the relations among electromagnetic field, electrostatic induction and signals themselves for several years and finally the relations among them could be clarified. These studies led us to the development of our 1st released audio grade resistor "maestro" (patented in USA and Japan), predecessor of the REX and REY. We, however, found that we merely sought high quality sound neglecting the fact that the structure had not been suited for mass production. Then, drawing on the above technology, we have succeeded in developing axial-lead resistors suitable for mass production while maintaining the sound quality of "maestro". They are Audio Grade Resistors "REX" (carbon film) and "REY" (metal film).

Most of resistors marketed for audio equipment are focused on the quality of their caps and lead wires. We discovered that there were other factors largely affecting reproduced sound and based on these, we have taken every possible measure which remarkably differentiates our products from those of other competitors. We sought for pure and natural sound to the bitter end with our eternal theme "Don't add any colors and incidental noises to reproduced sound without decreasing the amount of the original sound data on the disk". We have no doubt that our Audio Grade Resistors "REX" and "REY" completed by making the best of our know-how and sophisticated technology of a resistor-specialized manufacturer will not betray your expectations and will be the best choice for your audio equipment or circuits seeking for unlimited high-quality sound.

Manufacturer

TAKMAN ELECTRONICS CO., LTD.
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Exclusive Exporter

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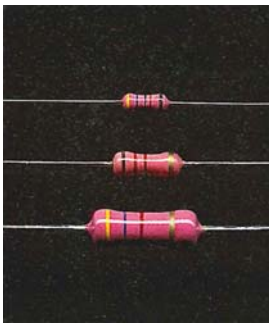
E-mail: audio@atc-jp.com

TAKMAN

REX

RoHS

CARBON FILM RESISTOR FOR AUDIO EQUIPMENT



INTRODUCTION

Our REX carbon film resistor for audio equipment "The Pink" is the result of our pursuit for pure and high quality sound. The basic material is highly pure ceramic, the resistor body is highly pure carbon, the cap is made of brass and the lead wire is made of non-oxygen copper. Non-magnetic materials were severely chosen. For the external coat, paint that prevents any adverse effect by vibration is chosen. Spiral trimming to adjust resistance value is made as short as possible in consideration of the influence on the inductance. Moreover, uniquely 1/4W product (REX25) has a directionality which enables to improve performance for audio applications (optional extra).

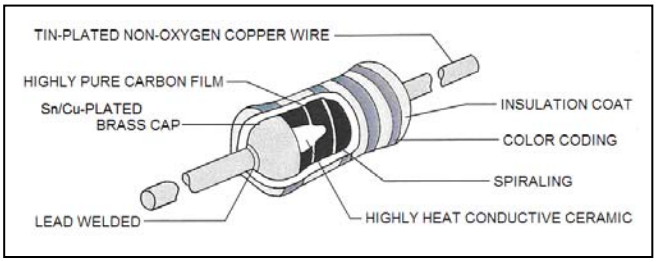
FEATURES

- Low distortion, high quality sound
- Non-magnetic materials used
- Brass caps and non-oxygen copper wire used

APPLICATIONS

- Audio equipment
- Audio-related components

CONSTRUCTION

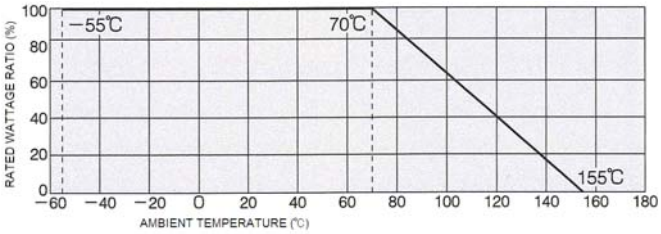


TAKMAN

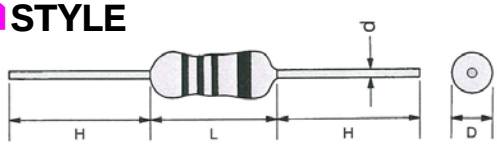
拓万

The corporate name of TAKMAN is created from a combination of two different Japanese Kanji characters "拓" (pioneer, expand) and "万" (myriads, everything) with our strong determination to develop outstanding technology at any cost.

DERATING CURVE



STYLE



External coating color: Pink

CHARACTERISTICS

Test Items		Specified Values
Short time overload		±(1%+0.05Ω)
Dielectric withstand voltage		±(0.5%+0.05Ω)
Insulation resistance		Over 1000MΩ
Terminal strength		±(0.25%+0.05Ω)
Moisture load life		R≦100KΩ:±3% R＞100KΩ:±5%
Load life at 70℃		R≦100KΩ:±3% R＞100KΩ:±5%
Temperature cycling		±(1%+0.05Ω)
Effect of soldering		±(1%+0.05Ω)
Vibration resistance		±(1%+0.05Ω)
Solderability		Over 95%
Resistance to solvent		No evidence of mechanical damage
Temp. coefficient	R≦100KΩ	Max -450ppm/℃
	R＞100KΩ	Max -700ppm/℃

DIMENSIONS & RATINGS

Type	Dimensions (mm)				Power Rating	Max. Working Voltage	Max. Overload Voltage	Dielectric Withstand Voltage	Resistance Tolerance	Resistance Range (Ω)	Standard Resistance
	L	D	d	H±3							
REX25	6.3±0.5	2.3±0.5	0.6	30	1/4W	250V	500V	350V	1%(F)	10~1M	E-24
									2%(G) 5%(J)	2.2~1M	
REX50	9.0±0.5	3.5±0.5	0.7	30	1/2W	350V	700V	500V	1%(F)	10~1M	
									2%(G) 5%(J)	2.2~1M	
REX75	14±1	5.0±0.7	1.0	38	1W	500V	1000V	600V	1%(F)	10~1M	
									2%(G) 5%(J)	2.2~1M	

TYPE DESIGNATION

REX	25	J	5.1KΩ	T
Carbon Film Resistor for Audio Equipment	Rated Power	Resistance Tolerance	Nominal Resistance	Packaging B: Bulk T: Taped

Remarks: Specifications are subject to change without notice. Parts colors may vary a little due to printing.

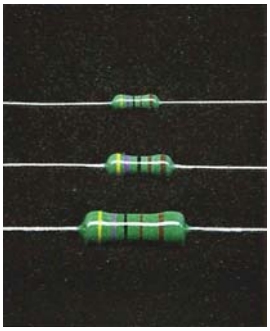
REV. 2

TAKMAN

REY

RoHS

METAL FILM RESISTOR FOR AUDIO EQUIPMENT



❑ INTRODUCTION

Our REY metal film resistor for audio equipment has the features that it consists of resistor thin film made mainly of Ni-Cr-Al materials, brass caps and non-oxygen copper wire. High-precision is realized with laser trimming and high stability and high sound quality are achieved with most proper coating. This resistor is usable for any audio components.

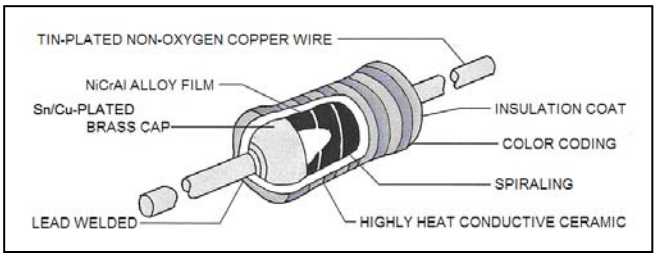
❑ FEATURES

- ○ High quality sound
- ○ Low temperature characteristics
- ○ High reliability
- ○ Precise resistance tolerance

❑ APPLICATIONS

- ○ Audio equipment
- ○ Audio-related components

❑ CONSTRUCTION



❑ CHARACTERISTICS

Test Items	Specified Values
Short time overload	±(0.5%+0.05Ω)
Dielectric withstand voltage	±(0.5%+0.05Ω)
Insulation resistance	Over 1000MΩ
Terminal strength	±(0.25%+0.05Ω)
Moisture load life	±(1%+0.05Ω)
Load life at 70℃	±(1%+0.05Ω)
Temperature cycling	±(0.5%+0.05Ω)
Effect of soldering	±(0.5%+0.05Ω)
Vibration resistance	±(0.5%+0.05Ω)
Low temperature operation	±(0.5%+0.05Ω)
Current noise	Max 0.3μV/V
Solderability	Over 95%
Resistance to solvent	No evidence of mechanical damage

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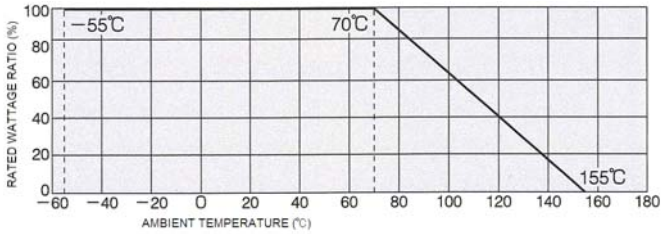
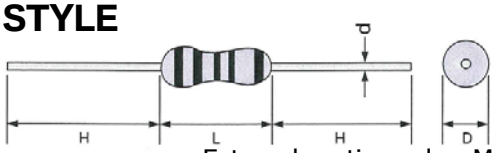
❑ DERATING CURVE



❑ STYLE



External coating color: Moss Green

❑ DIMENSIONS & RATINGS

Type	Dimensions (mm)				Power Rating	Max. Working Voltage	Max. Overload Voltage	Dielectric Withstand Voltage	Resistance Tolerance	T.C.R. ±(ppm/℃)	Res. Range (Ω)	Standard Resistance
	L	D	d	H±3								
REY25	6.3±0.5	2.3±0.5	0.6	30	1/4W	250V	500V	350V	0.5%(D) 1%(F)	50(Y) 100(X)	10~1M	E-96
									2%(G) 5%(J)	100(X) 200(V)	1~1M	E-24
REY50	9.0±0.5	3.5±0.5	0.7	30	1/2W	350V	700V	500V	0.5%(D) 1%(F)	50(Y) 100(X)	10~1M	E-96
									2%(G) 5%(J)	100(X) 200(V)	1~1M	E-24
REY75	14±1	5.0±0.7	1.0	38	1W	500V	1000V	600V	1%(F)	50(Y) 100(X)	10~1M	E-96
									2%(G) 5%(J)	100(X) 200(V)	1~1M	E-24

❑ TYPE DESIGNATION

REY	50	F	X	100KΩ	T
Metal Film Resistor for Audio Equipment	Rated Power	Resistance Tolerance	T.C.R.	Nominal Resistance	Packaging B: Bulk T: Taped

Remarks: Specifications are subject to change without notice. Parts colors may vary a little due to printing.

REV. 2