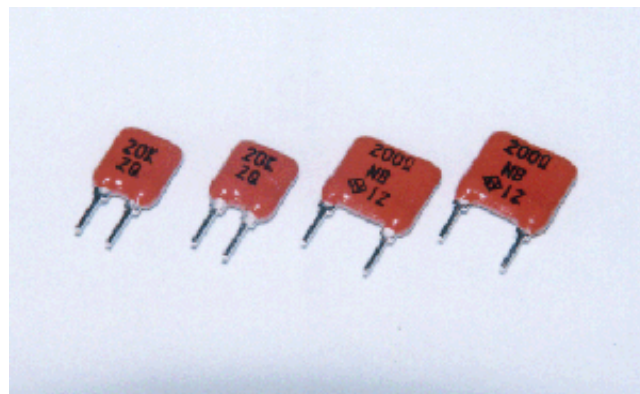


精密抵抗器 (1/4W)

1/4W, Precision Thin Film Resistors

RP48, RP47, RP46, RP45



特長 用途

世界最初の 1ppm/°Cクラスの直線的な抵抗温度係数の薄膜抵抗器。量子物性を追求した抵抗材料とプロセスで完成した超精密薄膜抵抗器。

標準性能は温度係数±2ppm/°C, 許容差±0.02%。

リードピッチ 2.54mm(RP48), 3.81mm(RP47), 5.08mm(RP46), 7.62mm(RP45)、定格電力 1/4W。

使用温度範囲-55°Cから+125°C。

長期安定性, 発生雑音, 電圧係数, 熱起電力など精密抵抗器に求められる特性をすべて備え, しかも優れた経済性と納期安定性。製作抵抗値はE24とE96。

表面実装タイプは NQ1/8, NQ1/4。

工業計器, 半導体試験装置, 電子負荷装置, 計測器, 医用電子機器, 宇宙航空用電子機器などの

高精度分圧回路, オペアンプ帰還抵抗器, ADC 基準電源, その他のアナログ回路。

Features and Applications

High precision thin film resistors, typically 2ppm/C TC made by Ni-Cr alloy spattered on alumina substrate, also 5ppm/C and 0.05% is standard.

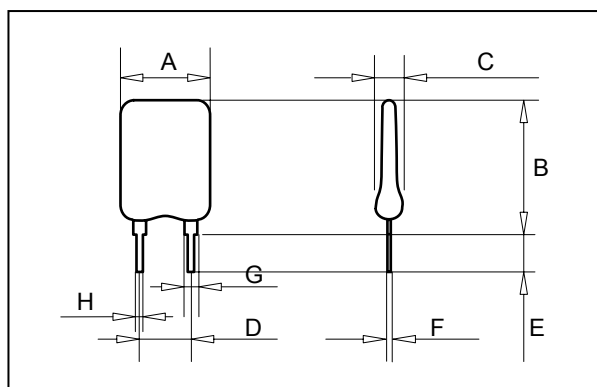
Wide operation temperature range covered from -55 to 125°C and absolutely linear (not bent) proportional dR vs. dT characteristics in the temperature range.

Sufficient rating power, long-term stability, low current noise, low voltage coefficient and low thermal EMF are provided.

Easy to install on precision electronics by leaded style, shorter delivery than another type precision resistors, free from matching and tracking calculation and economical.

Fit for discrete voltage divider and common analog circuit of professional audio, sensor pre-amplifier, industrial measurement, control, medical electronics, ATE, airspace, reliable power electronics.

寸法 Dimension (mm)



(mm)	RP48	RP47	RP46	RP45
A	5.6max	6.8max	8.0max	10.16max
B	8.2max	8.6max	9.0max	9.0max
C	2.54max	2.54max	2.54max	2.54max
D	2.54+/-0.25	3.81+/-0.25	5.08+/-0.25	7.62+/-0.25
E	3.3+/-0.5	3.3+/-0.5	3.3+/-0.5	3.3+/-0.5
F	0.25	0.25	0.25	0.25
G	1.2	1.2	1.2	1.2
H	0.5+/-0.05	0.5+/-0.05	0.5+/-0.05	0.5+/-0.05

形名呼称 Ordering Information

P/N	Type	TC	Resistance	Tolerance	Code	Note
RP48Z101BZ00	RP48	5ppm(Z)	100Ω	0.1%(B)	Z00	1/4W, 2.54mm
RP48Y103QZ00	RP48	2ppm(Y)	10kΩ	0.02%(B)	Z00	1/4W, 2.54mm
RP46Z101AZ00	RP46	5ppm(Z)	100Ω	0.05%(A)	Z00	1/4W, 5.08mm
RP46Y103QZ00	RP46	2ppm(Y)	10kΩ	0.02%(Q)	Z00	1/4W, 5.08mm
RP46C101FZ00	RP46	50ppm(C)	10kΩ	1.0%(F)	Z00	1/4W, 5.08mm

精密抵抗器(1/4W)

1/4W, Precision Thin Film Resistors RP48, RP47, RP46, RP45

仕様 Specifications

形名 Type	RP48, RP47					Notes
抵抗値範囲 Resistance Range (Ω)	100-20K	100-150K	100-150 K	50-150K	10-150K	
抵抗温度係数 Absolute TCR (+/-ppm/C)	1(X)(*)	2(Y), 2.5(W)	5(Z)	10(N)	25(E)	-55 to +125C
抵抗値許容差 Absolute Tolerance (+/-%)	0.01(T)(*)	0.02(Q)	0.05(A)	0.1(B)	0.1(B)	-55 to +125C
製作抵抗値 Standard Resistance	E96** and E24**, include 2.5 and 5.0 / any resistance value*					
定格電力 Rating Power (Watts)	0.25W					-55 to +70C
最高使用電圧 Max Working Voltages (V)	$\sqrt{P \cdot R}$					

形名 Type	RP46, RP45					Notes
抵抗値範囲 Resistance Range (Ω)	100-20K	100-150K	100-150 K	50-510K	10-1M	
抵抗温度係数 Absolute TCR (+/-ppm/C)	1(X)(*)	2(Y), 2.5(W)	5(Z)	10(N)	25(E)	-55 to +125C
抵抗値許容差 Absolute Tolerance (+/-%)	0.01(T)(*)	0.02(Q)	0.05(A)	0.1(B)	0.1(B)	-55 to +125C
製作抵抗値 Standard Resistance	E96** and E24**, include 2.5 and 5.0 / any resistance value*					
定格電力 Rating Power (Watts)	0.25W					-55 to +70 C
最高使用電圧 Max Working Voltages (V)	$\sqrt{P \cdot R}$					

* 有効数字が4桁以上の端数抵抗値については、表記方法等について工場に問合せください。* 4 or more significant resistance and odd resistance, please call factory about printing method.

(*) 精度1ppm/deg C-0.01% の抵抗器は、特殊品であって、個別データ付きで製品を供給します。

(*) Resistor, 1ppm/deg C-0.01% is optionally supplied attached with data one by one.

性能 Performances

Items	Specification	Conditions and Note
発生雑音 Noise	<-60dB	
電圧係数 Voltage Coefficient	<0.1ppm/V	THD at rating power < -120dB
熱起電力 Thermal EMF	0.05 uV/C	
熱衝撃 Temperature Cycle	+/-0.05%	-55 deg C30min, +120 deg C30min, 20cycles.
短時間過負荷 Short Time Over Load	+/-0.05%	Rating Power*2.5, 5seconds
はんだ付け性 Solder ability	Covered 95%	235 deg C, 2seconds
耐溶剤性 Solvent	No damage	IPA test
端子強度 Terminal Strength	+/-0.05%	
絶縁耐電圧 Withstanding Voltage	+/-0.03%	
はんだ耐熱性 Soldering Heat	+/-0.03%	350C, 3seconds.
耐振性 Vibration	Not specified	
負荷寿命 Load Life	+/-0.05%	1000 hours
耐湿負荷寿命 Humidity	+/-0.05%	1000 hours
長期安定性 Shelf Life Stability	+/-0.03%	One year at 25 deg C
使用温度範囲 Operating Temp	-55 to +125C	
保存温度範囲 Storage Temp. Range	-55 to +125C	

温度係数と許容差記号
TCR and Tolerance Identifications

TCR and Symbols		Tolerance and Symbols	
X	+/-1ppm/C	T	+/-0.01%
Y	+/-2ppm/C	Q	+/-0.02%
W	+/-2.5ppm/C	A	+/-0.05%
Z	+/-5ppm/C	B	+/-0.10%
N	+/-10ppm/C	D	+/-0.50%
L	+/-10ppm/C	F	+/-1.0%
E	+/-25ppm/C		
C	+/-50ppm/C		

*製作抵抗値 E24+
Resistance, E24+

1.0	1.5	2.2	3.0	4.3	5.6	8.2
1.1	1.6	2.4	3.3	4.7	6.2	9.1
1.2	1.8	(2.5)	3.6	(5.0)	6.8	
1.3	2.0	2.7	3.9	5.1	7.5	

製作抵抗値 E96 Resistance, E96

1.00	1.21	1.47	1.78	2.15	2.61	3.16	3.83	4.64	5.62	6.81	8.25
1.02	1.24	1.50	1.82	2.21	2.67	3.24	3.92	4.75	5.76	6.98	8.45
1.05	1.27	1.54	1.87	2.26	2.74	3.32	4.02	4.87	5.90	7.15	8.66
1.07	1.30	1.58	1.91	2.32	2.80	3.40	4.12	4.99	6.04	7.32	8.87
1.10	1.33	1.62	1.96	2.37	2.87	3.48	4.22	5.11	6.19	7.50	9.09
1.13	1.37	1.65	2.00	2.43	2.94	3.57	4.32	5.23	6.34	7.68	9.31
1.15	1.40	1.69	2.05	2.49	3.01	3.65	4.42	5.36	6.49	7.87	9.53
1.18	1.43	1.74	2.10	2.55	3.09	3.74	4.53	5.49	6.65	8.06	9.76

20090601