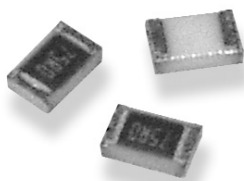


Type RN73 Series

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The RN73 series is a high stability precision chip resistor range offering various power dissipations relating to chip size, TCR's down to 5ppm/°C and resistance tolerances to 0.01%. The resistor is produced with three sputtered layers giving optimum performance. Values are restricted to the E96 and E24 value grids. The RN73 has accurate and uniform physical dimensions to facilitate placement.

Key Features

- High Precision - TCR 5ppm/°C and 10ppm/°C
- Tolerance down to 0.01%
- Thin Film (Nichrome)
- Choice of Packages
- Stable High Frequency Performance
- Temperature Range -55°C to +125°C

Characteristics - Electrical

0402							0603											
Rated Power @ 70°C (W):							0.063											
Resistance Range (Ohms) Min:							49R9	49R9	49R9	49R9	49R9	49R9	25R	25R	25R	25R	4R7	25R
Max:							12K	3K0	12K	3K0	12K	3K0	100K	15K	100K	15K	332K	15K
Tolerance (%):							0.01		0.05		0.1		0.01		0.05		0.1	
Code Letter:							L	L	A	A	B	B	L	L	A	A	B	B
Selection Series:							E24 / E96						E24 / E96					
Temp. Coefficient (ppm/°C):							10ppm	5ppm	10ppm	5ppm	10ppm	5ppm	10ppm	5ppm	10ppm	5ppm	10ppm	5ppm
Code Letter:							C	A	C	A	C	A	C	A	C	A	C	A
Limiting Element Voltage (V):							25						50					
Maximum Overload Voltage (V):							50						100					
Operating Temp. Range (°C):							-55 to +125						-55 to +125					
Climatic Category:							55/125/55						55/125/55					
Insulation Resistance Dry Min (Mohms):							10000						10000					
Stability (%):							0.5						0.5					

0805							1206					
Rated Power @ 70°C (W):							0.125					
Resistance Range (Ohms) Min:	25R	25R	25R	25R	4R7	25R	25R	25R	25R	25R	4R7	25R
	Max:	200K	30K	200K	30K	500K	30K	500K	50K	500K	50K	1M0
Tolerance (%):	0.01		0.05		0.1		0.01		0.05		0.1	
Code Letter:	L	L	A	A	B	B	L	L	A	A	B	B
Selection Series:	E24 / E96						E24 / E96					
Temp. Coefficient (ppm/°C):	10ppm	5ppm	10ppm	5ppm	10ppm	5ppm	10ppm	5ppm	10ppm	5ppm	10ppm	5ppm
Code Letter:	C	A	C	A	C	A	C	A	C	A	C	A
Limiting Element Voltage (V):	100						150					
Maximum Overload Voltage (V):	200						300					
Operating Temp. Range (°C):	-55 to +125						-55 to +125					
Climatic Category:	55/125/55						55/125/55					
Insulation Resistance Dry Min (Mohms):	10000						10000					
Stability (%):	0.5						0.5					

Characteristics - Environmental

Test Item	Specification		Test Method
	Tol. ≤0.05%	Tol. >0.05%	
Temperature Coefficient of Resistance	As Spec		MIL-STD-202F Method 304 +25/-55/+25/+125/+25°C
Short Time Overload	ΔR±0.05%	ΔR±0.5%	JIS-C-5202-5.5
	ΔR±0.5% for high power rating		RCWV*2.5 or Max Overloading Voltage for 5 seconds
Dielectric Withstand Voltage	By type		MIL-STD-202F Method 301 Apply Max Overload Voltage for 1 minute
Insulation Resistance	>1000M Ω		MIL-STD-202F Method 302 Apply 100V _{DC} for 1 minute
Thermal Shock	ΔR±0.05%	ΔR±0.25%	MIL-STD-202F Method 107G -55°C-150°C, 100 cycles
Load Life	ΔR±0.05%	ΔR±0.2%	MIL-STD-202F Method 108A
	>7k Ω ΔR±0.5%		RCWV, 70°C, 1.5 hours ON, 0.5 hours OFF, total 1000~1048 hours
	ΔR±0.5% for high power rating		
Humidity (Steady State)	ΔR±0.05%	ΔR±0.3%	MIL-STD-202F Method 103B 40°C, 90~95%RH, RCWV 1.5 hours ON, 0.5 hours OFF, total 1000~1048 hours
	ΔR±0.5% for high power rating		
Resistance to Dry Heat	ΔR±0.05%	ΔR±0.2%	JIS-C-5202-7.2 96 hours @ +155°C without load
Low Temperature Operation	ΔR±0.05%	ΔR±0.2%	JIS-C-5202-7.1
	ΔR±0.5% for high power rating		1 hours, -65°C, followed by 45minutes of RCWV
Bending Strength	ΔR±0.05%	ΔR±0.2%	JIS-C-5202-6.1.4 Bending Amplitude 3mm for 10 seconds
Solderability	95%min coverage		MIL-STD-202F Method 208H 235°C±5°C, 2±0.5 (sec)
Resistance to Soldering Heat	ΔR±0.05%	ΔR±0.2%	MIL-STD-202F Method 210E 260±5°C, 10±1 seconds

*Storage Temperature :25±3°C; Humidity <80%RH

Type RN73 Series

Marking Codes - Case Sizes 0805 to 2512

IEC 4 Digit Marking

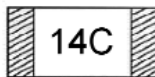
Resistance	100Ω	2.2KΩ	10KΩ	49.9KΩ	100KΩ
Marking Code	1000	2201	1002	4992	1003

Case Sizes 0603

E24 3 Digit Marking - Example: 101=100ff 102=1Kff

E24	10	11	12	13	15	16	18	20	22	24	27	30
	33	36	39	43	47	51	56	62	68	75	82	91

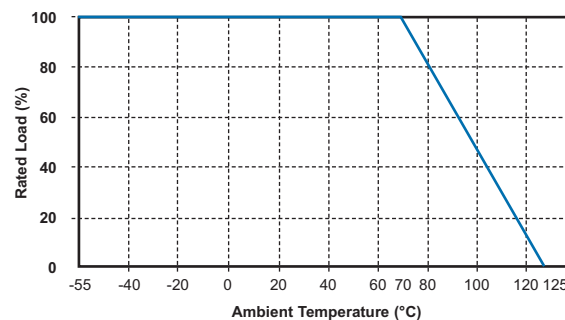
E96 3 Digit Marking - Examples: 14C=13K7ff, 13C=13K3ff, 68B=4K99ff, 68X=49.9ff



0603 E96 Marking Code Table

Code	E96		Code	E96		Code	E96		Code	E96	
01	100		25	178		49	316		73	562	
02	102		26	182		50	324		74	576	
03	105		27	187		51	332		75	590	
04	107		28	191		52	340		76	604	
05	110		29	196		53	348		77	619	
06	113		30	200		54	357		78	634	
07	115		31	205		55	365		79	649	
08	118		32	210		56	374		80	665	
09	121		33	215		57	383		81	681	
10	124		34	221		58	392		82	698	
11	127		35	226		59	402		83	715	
12	130		36	232		60	412		84	732	
13	133		37	237		61	422		85	750	
14	137		38	243		62	432		86	768	
15	140		39	249		63	442		87	787	
16	143		40	255		64	453		88	806	
17	147		41	261		65	464		89	825	
18	150		42	267		66	475		90	845	
19	154		43	274		67	487		91	866	
20	158		44	280		68	499		92	887	
21	162		45	287		69	511		93	909	
22	165		46	294		70	523		94	931	
23	169		47	301		71	536		95	953	
24	174		48	309		72	549		96	976	
Code	A	B	C	D	E	F	G	H	X	Y	Z
Multiplier	10 ⁰	10 ¹	10 ²	10 ³	10 ⁴	10 ⁵	10 ⁶	10 ⁷	10 ⁻¹	10 ⁻²	10 ⁻³

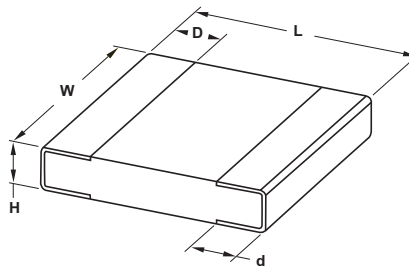
Power Derating Curve



For temperatures in excess of 70°C the load shall be derated in accordance with this curve.

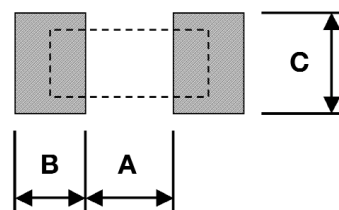
Type RN73 Series

Dimensions



Type	L ± 0.2	W ± 0.2	D	d $\pm \begin{smallmatrix} 0.2 \\ 0.1 \end{smallmatrix}$	H ± 0.1
RN73 1E	1.0	0.5	0.2	0.2	0.35
RN73 1J	1.6	0.8	0.3 ± 0.2	0.3	0.4
RN73 2A	2.0	1.25	0.4 ± 0.2	0.3	0.5
RN73 2B	3.2	1.6	0.5 ± 0.3	0.4	0.6

Recommended Land Pattern



Codes	A	B	C
RN73 1E	0.50	0.50	0.60 ± 0.2
RN73 1J	0.80	1.00	0.90 ± 0.2
RN73 2A	1.00	1.00	1.35 ± 0.2
RN73 2B	2.00	1.15	1.70 ± 0.2

Packaging

Type	E24 Pack Qty	E96 Pack Qty
RN73 1E	1000 / 5000 / 10000	250* / 1000 / 5000 / 10000
RN73 1J	1000 / 5000	250* / 1000 / 5000
RN73 2A	1000 / 5000	250* / 1000 / 5000
RN73 2B	5000	1000 / 5000

*250 piece packs are supplied in vacuum sealed bags of cut tape length

How to Order

RN73	C	2A	100K	B	TDF
Common Part	Temp. Coefficient	Chip Size	Resistance Value	Tolerance	Pack Quantity
RN73 - High Precision Resistors (RoHS Compliant)	A - $\pm 5\text{ppm}/^\circ\text{C}$	1E - 04:02	100 ohms (100 ohms) 100R	A $\pm 0.05\%$	TG - Cut Tape Lengths (1E, 1J, 2A only)
NR73 - High Precision Resistors (Non RoHS Compliant)	*C - $\pm 10\text{ppm}/^\circ\text{C}$	*1J - 06:03	1 K ohm (1000 ohms) 1K0	*B $\pm 0.1\%$	TDF - 1000 (1E, 1J, 2A only)
	*Preferred Stock Item	2B - 12:06	100 K ohm (100000 ohms) 100K	L $\pm 0.01\%$	TD - 5000
		*Preferred Stock Item		*Preferred Stock Item	