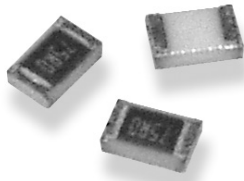


## Type RN73 Series

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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						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):	0.1						0.125					
Resistance Range (Ohms) Min:	25R	25R	25R	25R	4R7	25R	25R	25R	25R	4R7	25R	
Max:	200K	30K	200K	30K	500K	30K	500K	50K	500K	50K	1M0	50K
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 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 <sub>DC</sub> 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 RCWV, 70°C, 1.5 hours ON, 0.5 hours OFF, total 1000~1048 hours
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
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 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

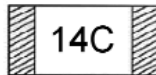
Resistance	100Ω	2.2KΩ	10KΩ	49.9KΩ	100KΩ
Marking Code	1000	2201	1002	4992	1003

### 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

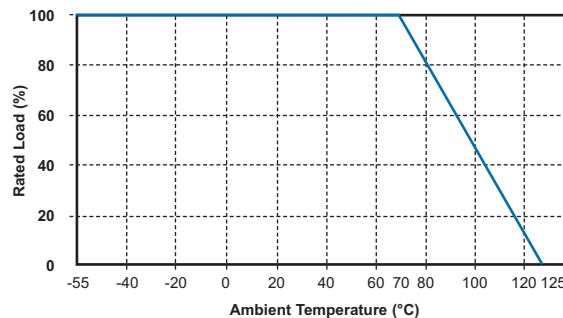
#### E96 3 Digit Marking - Examples: 14C=13K7ff, 13C=13K3ff, 68B=4K99ff, 68X=49.9ff



#### 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 <sup>0</sup>	10 <sup>1</sup>	10 <sup>2</sup>	10 <sup>3</sup>	10 <sup>4</sup>	10 <sup>5</sup>	10 <sup>6</sup>	10 <sup>7</sup>	10 <sup>-1</sup>	10 <sup>-2</sup>	10 <sup>-3</sup>

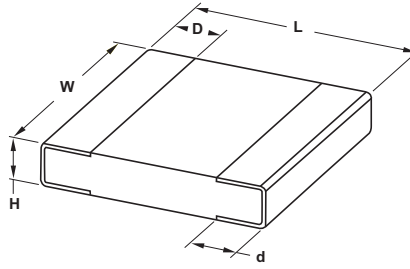
### Power Derating Curve



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

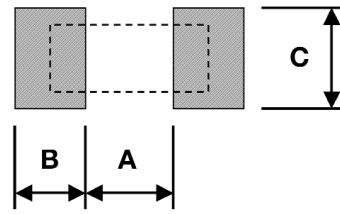
## Type RN73 Series

### Dimensions



Type	L ±0.2	W ±0.2	D	d ± <sup>0.2</sup> <sub>0.1</sub>	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 - ±5ppm/°C *C - ±10ppm/°C	1E - 04:02 *1J - 06:03 *2A - 08:05 2B - 12:06	100 ohms (100 ohms) 100R 1 K ohm (1000 ohms) 1K0 100 K ohm (100000 ohms) 100K	A ±0.05% *B ±0.1% L ±0.01%	TG - Cut Tape Lengths (1E, 1J, 2A only) TDF - 1000 (1E, 1J, 2A only) TD - 5000
NR73 - High Precision Resistors (Non RoHS Compliant)	*Preferred Stock Item	*Preferred Stock Item		*Preferred Stock Item	