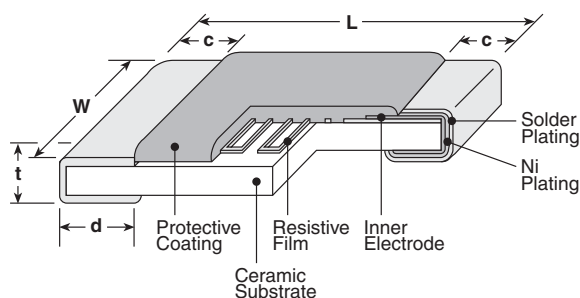


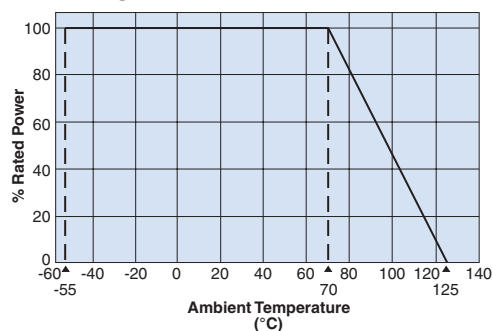
ultra precision 0.05%, 0.1%, 1% tolerance  
 thin film chip resistor

**features**

- Nickel chromium thin film resistor element
- Anti-leaching nickel barrier terminations
- Meets or exceeds EIA 576, MIL-R-55342F
- Marking: Four-digit, distinctive color identifiers
- Products with lead-free terminations meet EU RoHS requirements

**dimensions and construction**


Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
<b>RN73 1E (0402)</b>	.039 <sup>+0.004</sup> <sub>-.002</sub> (1.0 <sup>+0.1</sup> <sub>-0.05</sub> )	.02±.002 (0.5±0.05)	.008±.004 (0.2±0.1)	.01 <sup>+0.002</sup> <sub>-.004</sub> (0.25 <sup>+0.05</sup> <sub>-0.1</sub> )	.014±.002 (0.35±0.05)
<b>RN73 1J (0603)</b>	.063±.008 (1.6±0.2)	.031±.004 (0.8±0.1)	.012±.004 (0.3±0.1)	.012±.004 (0.3±0.1)	.018±.004 (0.45±0.1)
<b>RN73 2A (0805)</b>	.079±.008 (2.0±0.2)	.049±.008 (1.25±0.2)	.016±.008 (0.4±0.2)	.012 <sup>+0.008</sup> <sub>-.004</sub> (0.3 <sup>+0.2</sup> <sub>-0.1</sub> )	.02±.004 (0.5±0.1)
<b>RN73 2B (1206)</b>	.126±.008 (3.2±0.2)	.063±.008 (1.6±0.2)	.02±.012 (0.5±0.3)	.016 <sup>+0.008</sup> <sub>-.004</sub> (0.4 <sup>+0.2</sup> <sub>-0.1</sub> )	.024±.004 (0.6±0.1)
<b>RN73 2E (1210)</b>		.098±.008 (2.5±0.2)			

**Derating Curve**

**ordering information**

New Part #	RN73	2B	T	TE	1002	B	25
Type							
Size		1E 1J 2A 2B 2E					
Termination Material			T: Sn L: SnPb				
Packaging				TP: 0402, 0603, 0805: 7" 2mm pitch punch paper TD: 0603, 0805, 1206, 1210: 7" 2mm pitch punched paper TDD: 0603, 0805, 1206, 1210: 10" paper tape TE: 0805, 1206, 1210: 7" punched plastic TED: 0805, 1206, 1210: 10" punched plastic For further information on packaging, please refer to Appendix A			
Nominal Resistance					3 significant figures + 1 multiplier "R" indicates decimal on value <100Ω		
Tolerance						A: ±0.05% B: ±0.1% C: ±0.25% D: ±0.5% F: ±1.0%	
T.C.R. (ppm/°C)							05 10 25 50 100

## applications and ratings

Part Designation	Power Rating @ 70°C	T.C.R. (ppm/°C) Max.	Resistance Range E-24, E-96, E-192*					Absolute Maximum Working Voltage	Absolute Maximum Overload Voltage	Operating Temp. Range
			(A±0.05%)	(B±0.1%)	(C±0.25%)	(D±0.5%)	(F±1.0%)			
RN731E	1/16W (.063W)	±25	—	100Ω - 100kΩ	100Ω - 100kΩ	10Ω - 100kΩ	10Ω - 100kΩ	25V	50V	-55°C to +125°C
		±50	—	100Ω - 100kΩ	100Ω - 100kΩ	10Ω - 100kΩ	10Ω - 100kΩ			
RN731J	1/16W (.063W)	±5	1KΩ - 47KΩ	100Ω - 47kΩ	—	—	—	50V	100V	
		±10	1KΩ - 47KΩ	100Ω - 47KΩ	100Ω - 47KΩ	100Ω - 47KΩ	100Ω - 47KΩ			
		±25	1KΩ - 47KΩ	15Ω - 360kΩ	15Ω - 360kΩ	10Ω - 360kΩ	10Ω - 360kΩ			
		±50	—	15Ω - 360kΩ	15Ω - 360kΩ	10Ω - 360kΩ	10Ω - 360kΩ			
		±100	—	—	—	10Ω - 360kΩ	10Ω - 360kΩ			
RN732A	1/10W (.10W)	±5	100Ω - 100KΩ	100Ω - 100kΩ	—	—	—	100V	200V	
		±10	100Ω - 100KΩ	100Ω - 100kΩ	100Ω - 100kΩ	100Ω - 100kΩ	100Ω - 100kΩ			
		±25	51Ω - 100kΩ	15Ω - 1MΩ	15Ω - 1MΩ	10Ω - 1MΩ	10Ω - 1MΩ			
		±50	—	15Ω - 1MΩ	15Ω - 1MΩ	10Ω - 1MΩ	10Ω - 1MΩ			
		±100	—	—	—	10Ω - 1MΩ	10Ω - 1MΩ			
RN732B	1/8W (.125W)	±5	100Ω - 300kΩ	100Ω - 300kΩ	—	—	—	150V	300V	
		±10	100Ω - 300kΩ	100Ω - 300kΩ	100Ω - 300kΩ	100Ω - 300kΩ	100Ω - 300kΩ			
		±25	51Ω - 300kΩ	15Ω - 1MΩ	15Ω - 1MΩ	10Ω - 1MΩ	10Ω - 1MΩ			
		±50	—	15Ω - 1MΩ	15Ω - 1MΩ	10Ω - 1MΩ	10Ω - 1MΩ			
		±100	—	—	—	10Ω - 1MΩ	10Ω - 1MΩ			
RN732E	1/4W (.25W)	±10	100Ω - 510KΩ	100Ω - 510KΩ	100Ω - 510KΩ	100Ω - 510KΩ	100Ω - 510KΩ	200V	400V	
		±25	51Ω - 510kΩ	15Ω - 1MΩ	15Ω - 1MΩ	10Ω - 1MΩ	10Ω - 1MΩ			
		±50	—	15Ω - 1MΩ	15Ω - 1MΩ	10Ω - 1MΩ	10Ω - 1MΩ			
		±100	—	—	—	10Ω - 1MΩ	10Ω - 1MΩ			

\* No marking on E-192 values

## environmental applications

### Performance Characteristics

Parameter	Requirement Δ R		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/+125°C: T.C.R. = ±5 (X10 <sup>-6</sup> /K) +25°C/-55°C and +25°C/+125°C: another
Overload (Short time)	±0.1%	±0.01%	Rated Voltage x 2.5 or Max. overload volume, whichever is less for 5 seconds
Resistance to Solder Heat	±0.1%	±0.04%	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	±0.25%	±0.03%	-55°C (30 minutes), +125°C (30 minutes), 5 cycles
Moisture Resistance	±0.5%	±0.06%	RN73: 40°C ± 2°C, 90%-95% RH, 1000 hours
Endurance at 70°C	±0.25%	±0.02%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	—	±0.01%	+125°C, 100 hours

For Surface Temperature Rise Graph see Terms & Definitions. Additional environmental applications can also be found at [www.koaspeer.com](http://www.koaspeer.com)

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

7/31/09



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**25 January, 2010**  
Page 1 of 1

TO: To whom it may concern

FROM: Michael Griffith  
KOA Speer Electronics, Inc.

SUBJECT: 1k reel taping specification.

Upon customer request KOA has the ability to tape certain components with 1,000 pcs per reel. The designation that is used is TDK. The "TD" stands for a 7" paper tape reel and the "K" stands for 1,000 pcs. Please note that the TDK packaging cannot be found in any KOA catalog because this is a custom taping style only performed when requested by the customer. The TDK packaging has been done on the 0603, 0805 1206 and 1210 SMD thin film resistors. For any other SMD device please allow KOA to review your request before placing orders for TDK packaging.

If you have any questions please feel free to contact me via phone, e-mail or fax. The numbers are located above.

Thank you,

Michael E. Griffith  
(Product/Application Engineer)