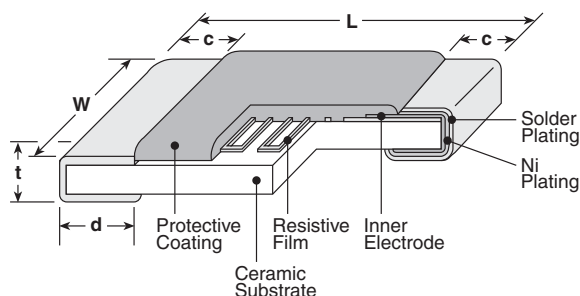


features

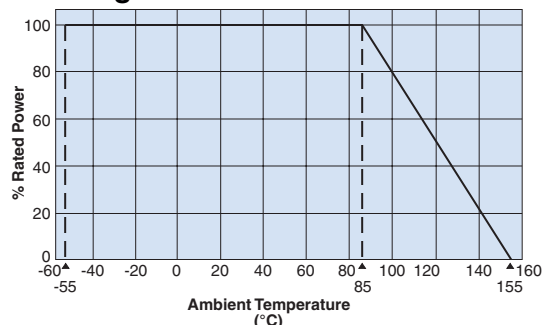
- High precision type $\pm 0.05\%$ is available with standard products
- Improved moisture resistance by special protective coating
- Rated up to $+155^{\circ}\text{C}$
- Marking: Black coating
- Products with lead-free terminations meet EU RoHS requirements
- Rated ambient temperature: 85°C
- AEC-Q200 Qualified: 0402 (1E), 0603 (1J), 0805 (2A), 1206 (2B), 1210 (2E)

dimensions and construction



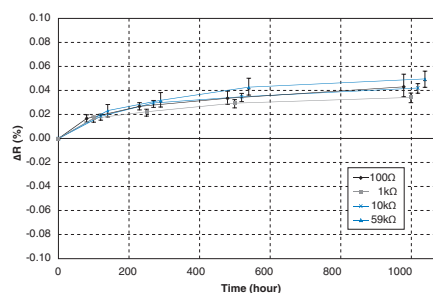
Type (Inch Size Code)	Dimensions inches (mm)				
	L	W	c	d	t
1E (0402)	.039 $\begin{smallmatrix} +.004 \\ -.002 \end{smallmatrix}$ (1.0 $\begin{smallmatrix} +0.1 \\ -0.05 \end{smallmatrix}$)	.020 \pm .002 (0.5 \pm 0.05)	.010 \pm .004 (0.25 \pm 0.1)	.010 $\begin{smallmatrix} +.002 \\ -.004 \\ +0.05 \\ -.1 \end{smallmatrix}$.014 \pm .002 (0.35 \pm 0.05)
1J (0603)	.063 \pm .008 (1.6 \pm 0.2)	.031 \pm .004 (0.8 \pm 0.1)	.012 \pm .004 (0.3 \pm 0.1)	.012 \pm .004 (0.3 \pm 0.1)	.018 \pm .004 (0.45 \pm 0.1)
2A (0805)	.079 \pm .008 (2.0 \pm 0.2)	.049 \pm .008 (1.25 \pm 0.2)	.016 \pm .008 (0.4 \pm 0.2)	.012 $\begin{smallmatrix} +.008 \\ -.004 \\ +0.2 \\ -.1 \end{smallmatrix}$.02 \pm .004 (0.5 \pm 0.1)
2B (1206)	.126 \pm .008 (3.2 \pm 0.2)	.063 \pm .008 (1.6 \pm 0.2)	.02 \pm .012 (0.5 \pm 0.3)	.016 $\begin{smallmatrix} +.008 \\ -.004 \\ +0.2 \\ -.1 \end{smallmatrix}$.024 \pm .004 (0.6 \pm 0.1)
2E (1210)		.098 \pm .008 (2.5 \pm 0.2)			

Derating Curve



For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the above derating curve.

High Temperature Exposure (155°C , 1000 Hr) RN73H2A



ordering information

New Part #	RN73H	2B	T	TD	1002	B	25
Type							
Size		1E: 0.063W 1J: 0.1W 2A: 0.125W 2B: 0.25W 2E: 0.25W					
Termination Material			T: Sn				
Packaging				TP: 0402 only: 7" 2mm pitch punched paper TD: 0603, 0805, 1206, 1210: 7" 4mm pitch punched paper TDD: 0603, 0805, 1206, 1210: 10" paper tape TE: 0805, 1206, 1210: 7" embossed plastic TED: 0805, 1206, 1210: 10" embossed plastic For further information on packaging, please refer to Appendix A			
Nominal Resistance					3 significant figures + 1 multiplier "R" indicates decimal on value <100 Ω		
Resistance Tolerance						A: $\pm 0.05\%$ B: $\pm 0.1\%$ C: $\pm 0.25\%$ D: $\pm 0.5\%$ F: $\pm 1.0\%$	
T.C.R. (ppm/ $^{\circ}\text{C}$)							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*					Maximum Working Voltage	Maximum Overload Voltage	Operating Temp. Range
			(A±0.05%)	(B±0.1%)	(C±0.25%)	(D±0.5%)	(F±1.0%)			
RN73H1E	1/16W (.063W)	±10	—	100Ω - 10kΩ	100Ω - 10kΩ	100Ω - 10kΩ	100Ω - 10kΩ	50V	75V	-55°C to +155°C
		±25	—	100Ω - 300kΩ	100Ω - 300kΩ	47Ω - 300kΩ	47Ω - 300kΩ			
		±50	—	100Ω - 300kΩ	100Ω - 300kΩ	10Ω - 300kΩ	10Ω - 300kΩ			
RN73H1J	1/10W (.10W)	±5	100Ω - 47kΩ	100Ω - 47kΩ	—	—	—	75V	150V	
		±10	100Ω - 59kΩ	100Ω - 59kΩ	100Ω - 59kΩ	100Ω - 59kΩ	100Ω - 59kΩ			
		±25	51Ω - 59kΩ	15Ω - 1MΩ	15Ω - 1MΩ	10Ω - 1MΩ	10Ω - 1MΩ			
		±50	—	15Ω - 1MΩ	15Ω - 1MΩ	10Ω - 1MΩ	10Ω - 1MΩ			
RN73H2A	1/8W (.125W)	±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			
RN73H2B	1/4W (.25W)	±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			
RN73H2E	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 $\Delta R \pm(\% \pm 0.05\Omega)$		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/-55°C and +25°C/+155°C**
Overload (Short time)	±0.05%	±0.01%	Rated Voltage x 2.5 or Max. overload volume, whichever is less for 5 seconds
Resistance to Solder Heat	±0.05%*	±0.01%	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	±0.1%*	±0.02%	1J, 2A: -55°C (30 minutes), +155°C (30 minutes), 1000 cycles 2B, 2E: -55°C (30 minutes), +155°C (30 minutes), 500 cycles
Moisture Resistance	±0.1%*	±0.05%	85°C ± 2°C, 85%±5%RH, 1000 hours; 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 85°C	±0.1%*	±0.05%	85°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
High Temperature Exposure	±0.1%*	±0.05%	+155°C, 1000 hours

* Depends on resistance value, please contact KOA Speer for details.

** Test conditions differs depending on resistance value

For Surface Temperature Rise Graph see Environmental Applications. Additional environmental applications can also be found at 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.

12/04/12