

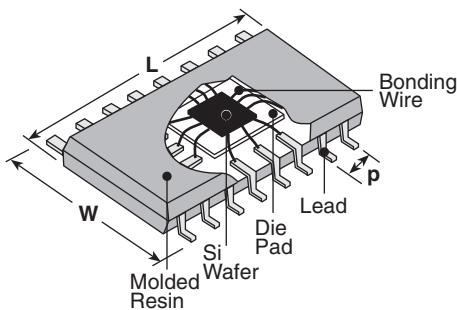
features

- Thin film on silicon
- Electrical and mechanical stability
- High integration
- Products with lead-free terminations meet EU RoHS and China RoHS requirements

applications

- Series termination
- Pull-up/pull-down
- Current limiting

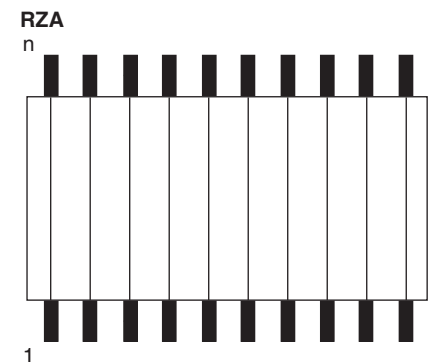
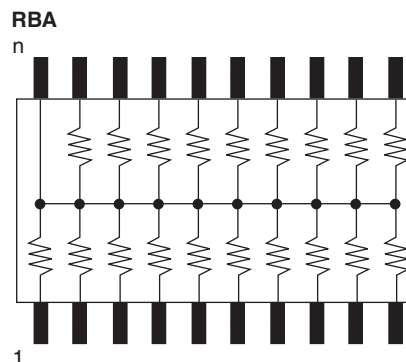
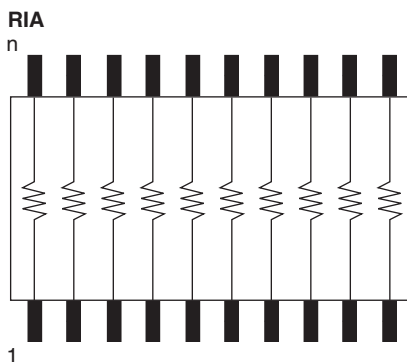
dimensions and construction



Size Code	Dimensions inches (mm)		
	L	W	p
T16	.197 (5.00)	.252 (6.40)	.026 (0.65)
T20	.256 (6.50)	.252 (6.40)	.026 (0.65)
T24	.307 (7.80)	.252 (6.40)	.026 (0.65)
Q16	.193 (4.90)	.236 (5.99)	.025 (0.635)
Q20	.341 (8.66)	.236 (5.99)	.025 (0.635)
Q24	.341 (8.66)	.236 (5.99)	.025 (0.635)
Q28	.39 (9.9)	.236 (5.99)	.025 (0.635)

Size Code	Dimensions inches (mm)		
	L	W	p
N08	.190 (4.83)	.236 (5.99)	.050 (1.27)
N14	.341 (8.66)	.236 (5.99)	.050 (1.27)
N16	.390 (9.91)	.236 (5.99)	.050 (1.27)

circuit schematic



n = number of pins (16, 20 or 24)

ordering information

New Part #	RIA	Q20	T	TEB	1002	B	H	B	T
Type	RIA RBA RZA*	Package Symbol Reference above table	Termination Material T: Sn (Other termination styles available, contact factory for options)	Packaging TEB: 13" embossed plastic	Nominal Resistance B,C,D,F: 4 digits G,J: 3 digits	Absolute Tolerance B: ±0.1% C: ±0.25% D: ±0.5% F: ±1% G: ±2% J: ±5%	T.C.R. T: ±10 E: ±25 C: ±50 H: ±100	Relative Res. Toler. A: ±0.05% B: ±0.1% C: ±0.25% D: ±0.5% F: ±1% G: ±2%	T.C.R. Tracking Y: ±05 T: ±10 E: ±25 C: ±50

* Example of New Part # for RZA: RZAQ20TTEB

For further information on packaging, please refer to Appendix A.

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

12/28/08

applications and ratings

Part Designation	T.C.R. (ppm/°C)	Resistance Range	Resistance Tolerance	Relative Resistance Tolerance	Tracking T.C.R. (ppm/°C)	Storage Temperature Range	Operating Temperature Range
RIA, RBA	±10,±25,±50,±100*	10Ω - 1MΩ	±20% ~ ±0.1%	B:±0.1%,C:±0.25%, D:±0.5%,F:±1%, G:±2%	±5,±10,±25,±50	-65°C to +150°C	-55°C to +125°C

*For special tolerance and T.C.R. requests, please contact KOA Engineering

electrical characteristics

Package	TSSOP			QSOP				SOIC		
Package Symbol	T16	T20	T24	Q16	Q20	Q24	Q28	N08	N14	N16
Power Rating	0.8W	1.0W	1.0W	0.8W	1.0W	1.0W	1.0W	0.4W	0.6W	0.8W
Resistance Range	10Ω ~ 1kΩ	Power rating 200mW/resistor element *2								
	1.1kΩ	Power rating 50mW/resistor element *2								
Max. Working Voltage	100V									
Rated Voltage	√ Rated power x nominal resistance value, rated voltage should not exceed max. working voltage									
Rated Ambient Temp.	+70°C									

*2 Above rating is based on the thermal resistance using multi-layer circuit board (EIA/JESD51). For mounting on a mono-layer board, power derating shall be needed. Total power consumption of all elements should not exceed the package power rating.

resistance ranges

Product Code	Number of Pins	T.C.R.	Resistance Range (Ω) (E24) and Resistance Tolerance				
			B: ±0.1%	C: ±0.25%	D: ±0.05%	F: ±1%	G: ±2%, J: ±5%
RIA	8, 14, 16	T: ±10	510 ~ 100k		510 ~ 100k		
		E: ±25			510 ~ 510K		
		C: ±50			51 ~ 1M		
		H: ±100			51 ~ 1M	30 ~ 1M	10 ~ 1M
	20, 24	T: ±10	510 ~ 100k			510 ~ 100k	
		E: ±25	100 ~ 200K			100 ~ 200K	
		C: ±50	51 ~ 200k			51 ~ 200k	
		H: ±100	51 ~ 200k	30 ~ 200k	10 ~ 200k	10 ~ 200k	
RBA	8, 14, 16, 20, 24	E: ±25	—		100 ~ 100k		
		C: ±50			51 ~ 200K		
		H: ±100			—	30 ~ 200K	10 ~ 200K