

TA Series

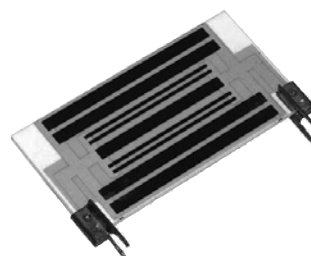


Power Chip Thick Film on Alumina Substrate

Ohmite's original Power Chip resistors feature our thick film on alumina substrate technology. These planar packages yield space saving, 10W/in² power densities that require over 50% less board space than other radial packages. Convection cooling is maximized by the planar package configuration which dissipates heat well above board level.

Ohmite's power chip resistors have a 125% higher operating temperature range than competitive product of similar design. High temperature solder and in-process plating keep terminations secure under self-heating effects by preventing re-flow from full power operation.

Flexible packaging schemes make these resistors ideal for power supplies, audio amplifiers, video fly-back, and other power control applications.



FEATURES

- High-Temp Terminal Construction
- Wide Resistance Range
- Low Inductance (50nH-100nH)
- High Power Density
- Easy to install. PC-mountable

SERIES SPECIFICATIONS

Series	Wattage	Series	Wattage	Series	Wattage	Series	Wattage	Series	Wattage
TA203	3.0	TA205	5.0	TA207	7.5	TA310	10.0	TA025	25.0
TA303	3.0	TA305	5.0	TA307	7.5	TA810	10.0	TA050	50.0
		TA605	5.0					TA100	100.0
		TA805	5.0						

CHARACTERISTICS

Substrate Alumina		Test Condition MILR83401		Specification
Resistor	Thick Film	Life (Rated Power)	40°C, rated power, 90 min ON 30 min OFF, 1000 hrs.	ΔR $\pm(1.0\% + 0.05\Omega)$
Coating	Glass	Life (Moisture Load)	60°C, 90 - 95% RH, rated power, 90 min ON 30 min OFF, 1000 hrs.	ΔR $\pm(1.0\% + 0.05\Omega)$
Terminals	Solder Plated Phosphor Bronze			
Temperature Coefficient	1 ohm: 450 ppm/°C 1 to 100Ω: 100 ppm/°C 101Ω and up: 50 ppm/°C			
Tolerance	$\pm 1\%$, $\pm 5\%$ and $\pm 10\%$			
Power Rating	Based on 25°C free air			
Resistance Range	0.25 ohm to 10M ohm. Consult factory for other values			
Maximum Operating Voltage	350 VAC, 500 VDC through glass, 1000 VAC, 1500 VDC through substrate, not to exceed power rating			
Overload	Five times rated power, as long as the one second average dissipation does not exceed the wattage rating. ΔR : $\pm 2\%$, 2000 hours			
Derating	100% @ 25°C to 0% @ 180°C ambient.			
Equivalent Parallel Capacitance	1.0pf (100 MHz)			
Withstanding Voltage	5000V thru back side			
Operating Temperature Range	-55°C to +180°C			
Overload Current	20 x rated current up to 8 ms ($\Delta R \pm 0.5\%$)			

Test	Test Condition MILR83401	Specification
Life (Rated Power)	40°C, rated power, 90 min ON 30 min OFF, 1000 hrs.	ΔR $\pm(1.0\% + 0.05\Omega)$
Life (Moisture Load)	60°C, 90 - 95% RH, rated power, 90 min ON 30 min OFF, 1000 hrs.	ΔR $\pm(1.0\% + 0.05\Omega)$
Temperature Cycling	Room temp > -55°C 30 min > RT 10 min $\pm$ 120°C 30 min > RT10 min 5 cycles	ΔR $\pm(0.25\% + 0.05\Omega)$
Flammability	UL94V-O rated (not recognized)	
Soldering Heat	350°C Solderpot, 3 secs.	ΔR $\pm(0.25\% + 0.05\Omega)$
Insulation Resistance	DC 100V, 1 min	Over 1000M ohm

(continued)

rev 6/18-

(continued)

rev 6/18-1

TA Series

Power Chip Thick Film on Alumina Substrate

DIMENSIONS

(±.020 in. / ±.508mm)

PA
3, 5, 7.5
& 10 watt



PW
10, 25, 50
& 100 watt



Series	Wattage	P	Length L	Height H
TA203PA	3.0	0.200 / 5.08	0.50 / 12.70	0.60 / 15.24
TA303PA	3.0	0.300 / 7.62	0.50 / 12.70	0.60 / 15.24
TA205PA	5.0	0.200 / 5.08	0.50 / 12.70	1.00 / 25.40
TA305PA	5.0	0.300 / 7.62	0.50 / 12.70	1.00 / 25.40
TA605PA	5.0	0.600 / 15.24	1.00 / 25.40	0.50 / 12.70
TA805PA	5.0	0.800 / 20.32	1.00 / 25.40	0.50 / 12.70
TA207PA	7.5	0.200 / 5.08	0.75 / 19.05	1.00 / 25.40
TA307PA	7.5	0.300 / 7.62	0.75 / 19.05	1.00 / 25.40
TA310PA	10.0	0.300 / 7.62	1.00 / 25.40	1.00 / 25.40
TA310PW*	10.0	0.300 / 7.62	1.085 / 27.56	1.00 / 25.40
TA810PA	10.0	0.800 / 20.32	1.00 / 25.40	1.00 / 25.40
TA810PW*	10.0	0.800 / 20.32	1.085 / 27.56	1.00 / 25.40
TA025PA	25.0	1.90 / 48.3	2.220 / 56.39	1.170 / 29.70
TA025PY*	25.0	1.90 / 48.3	2.220 / 56.39	1.170 / 29.70
TA050PA	50.0	1.90 / 48.3	2.220 / 56.39	2.270 / 57.60
TA050PY*	50.0	1.90 / 48.3	2.220 / 56.39	2.270 / 57.60
TA100PA	100.0	4.10 / 104.1	4.420 / 112.27	2.270 / 57.60
TA100PY*	100.0	4.10 / 104.1	4.420 / 112.27	2.270 / 57.60

*10-100 watts available in PW,PA, and PY packages.

ORDERING INFORMATION

Pin spacing (on 3-10W models only)		Tolerance		RoHS compliant
2 = .2"		K = 10%		
3 = .3"		J = 5%		
8 = .8"		F = 1%		
T A 3 0 5 P A 4 K 5 0 J E				
Series	Power Rating:	Package:	Resistance Value (Ω)	
	03 = 3 W	PA = pin terminals,	R250 = 0.25	
	05 = 5	std. for 3-10 W	10R0 = 10.0	
	07 = 7.5	PW = wraparound,	2K00 = 2,000	
	10 = 10	std. for 10-100 W	45K0 = 45,000	
	025 = 25	PY = high-stability		
	050 = 50	wraparound		
	100 = 100			

Standard part numbers for TA series

Ohmic value	Part Number												Ohmic value	Part Number												Ohmic value	Part Number													
	Part No. Prefix ▶ Suffix ▼	TA203PA	TA303PA	TA205PA	TA305PA	TA207PA	TA310PA	TA810PW	TA025PW	TA050PW	TA100PW	Part No. Prefix ▶ Suffix ▼		TA203PA	TA303PA	TA205PA	TA305PA	TA207PA	TA310PA	TA810PW	TA025PW	TA050PW	TA100PW	Part No. Prefix ▶ Suffix ▼	TA203PA		TA303PA	TA205PA	TA305PA	TA207PA	TA310PA	TA810PW	TA025PW	TA050PW	TA100PW					
0.25	—R250J	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	50.00	—50R0J	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	2,500.00	—2K50J	✓	✓	✓	+	✓	✓	✓	✓	✓	✓	✓	✓			
1.00	—1R00J	✓	✓	✓	+	✓	✓	✓	✓	✓	✓	62.00	—62R0J	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	3,000.00	—3K00J	✓	✓	✓	+	✓	✓	+	✓	✓	✓	✓	✓			
1.50	—1R50J	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	68.00	—68R0J	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	4,000.00	—4K00J	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	✓	✓	✓		
2.00	—2R00J	+	✓	✓	✓	+	✓	✓	✓	✓	✓	75.00	—75R0J	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	4,700.00	—4K70J	✓	✓	✓	+	+	+	✓	✓	✓	✓	✓	✓			
4.70	—4R70J	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	100.00	—100RJ	+	✓	✓	✓	+	✓	✓	✓	✓	✓	5,000.00	—5K00J	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	✓	✓	✓		
5.00	—5R00J	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	150.00	—150RJ	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	5,100.00	—5K10J	✓	✓	✓	+	✓	✓	+	✓	✓	✓	✓	✓			
5.10	—5R10J	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	200.00	—200RJ	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	7,500.00	—7K50J	✓	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	✓	✓		
7.50	—7R50J	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	250.00	—250RJ	✓	✓	✓	✓	✓	+	✓	✓	✓	✓	10,000.00	—10K0J	+	✓	✓	✓	+	+	+	+	✓	✓	✓	✓	✓		
8.20	—8R20J	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	270.00	—270RJ	✓	✓	✓	✓	✓	✓	+	✓	✓	✓	15,000.00	—15K0J	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
10.00	—10R0J	+	✓	✓	+	✓	✓	+	✓	✓	✓	300.00	—300RJ	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	18,000.00	—18K0J	✓	+	✓	✓	+	✓	✓	✓	✓	✓	✓	✓	✓		
11.00	—11R0J	✓	✓	✓	+	✓	✓	✓	✓	✓	✓	470.00	—470RJ	+	✓	✓	✓	✓	✓	+	✓	✓	✓	20,000.00	—20K0J	✓	✓	✓	+	✓	+	✓	✓	✓	✓	✓	✓	✓		
12.00	—12R0J	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	500.00	—560	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	30,000.00	—30K0J	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
15.00	—15R0J	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	620.00	—620RJ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	39,000.00	—39K0J	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	✓	✓	✓		
20.00	—20R0J	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	680.00	—680RJ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	50,000.00	—50K0J	✓	✓	✓	✓	✓	+	✓	✓	✓	✓	✓	✓	✓	✓	
24.00	—24R0J	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1,000.00	—1K00J	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	75,000.00	—75K0J	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
27.00	—27R0J	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	1,500.00	—1K50J	✓	✓	✓	✓	✓	+	✓	✓	✓	✓	100,000	—100KJ	+	✓	✓	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
33.00	—33R0J	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1,800.00	—1K80J	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	150,000	—150KJ	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
47.00	—47R0J	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	2,000.00	—2K00J	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	200,000	—200KJ	✓	+	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

+= Most popular standard values, ✓ = Stock values

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Authorized Distributor

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TA025PW250RJ	TA025PW30K0J	TA025PW10K0J	TA025PW20R0J	TA303PA15R0J	TA303PA1R50J
TA025PW200RJ	TA205PA5R00JE	TA303PA620RJE	TA203PA24R0JE	TA303PA20R0JE	TA305PA5R10JE
TA303PA5R10JE	TA205PA24R0JE	TA305PA2K00JE	TA203PA200RJE	TA025PW8R20JE	TA205PA1K00JE
TA310PA68R0JE	TA303PA12R0JE	TA203PA1K00JE	TA205PA200RJE	TA305PA12R0JE	TA025PW27R0JE
TA303PA2K00JE	TA205PA15R0JE	TA303PA7K50JE	TA305PA7R50JE	TA303PA7R50JE	TA203PA15R0JE
TA025PW30K0JE	TA305PA7K50JE	TA025PW100RJE	TA305PA1K80JE	TA305PA4K70JE	TA303PA4R70JE
TA305PA150RJE	TA303PA150RJE	TA305PA4R70JE	TA303PA4K70JE	TA303PA1K80JE	TA203PA75R0JE
TA025PW10K0JE	TA203PA270RJE	TA305PA200RJE	TA303PA1K00JE	TA310PA250RJE	TA205PA100RJE
TA205PA2K50JE	TA203PA5R00JE	TA205PA33R0JE	TA305PA620RJE	TA305PA150KJE	TA310PA10K0JE
TA305PA1R00JE	TA303PA1R00JE	TA305PA470RJE	TA205PA20R0JE	TA305PA24R0JE	TA205PA5K10JE
TA310PA100RJE	TA203PA5K10JE	TA303PA24R0JE	TA303PA470RJE	TA303PA27R0JE	TA305PA33R0JE
TA305PA27R0JE	TA310PA1K50JE	TA203PA150RJE	TA205PA150RJE	TA025PW2R00JE	TA025PW12R0JE
TA025PW20K0JE	TA025PW680RJE	TA305PA39K0JE	TA205PA50R0JE	TA203PAR250JE	TA203PA50R0JE
TA305PA18K0JE	TA310PA15R0JE	TA205PAR250JE	TA303PA200RJE	TA203PA100RJE	TA305PA1K00JE
TA305PA75R0JE	TA025PW300RJE	TA305PA270RJE	TA305PA4K00JE	TA305PA1K50JE	TA303PA270RJE
TA305PA1R50JE	TA303PA1K50JE	TA303PA4K00JE	TA303PA75R0JE	TA303PA10R0JE	TA205PA10K0JE
TA310PA1K00JE	TA305PA10R0JE	TA310PA1R00JE	TA203PA10K0JE		