

TA Series

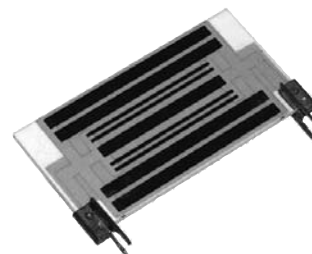


Power Chip Thick Film on Alumina Substrate

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	
Resistor	Thick Film	MILR83401	Specification
Coating	Glass		
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	±1%, ±5% and ±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: ±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 (ΔR ± 0.5%)		
Life (Rated Power)	40°C, rated power, 90 min ON 30 min OFF, 1000 hrs.		ΔR ±(1.0% + 0.05Ω)
Life (Moisture Load)	60°C, 90 - 95% RH, rated power, 90 min ON 30 min OFF, 1000 hrs.		ΔR ±(1.0% + 0.05Ω)
Temperature Cycling	Room temp > -55°C 30 min > RT 10 min ± 120°C 30 min > RT10 min 5 cycles		ΔR ±(0.25% + 0.05Ω)
Flammability	UL94V-O rated (not recognized)		
Soldering Heat	350°C Solderpot, 3 secs.		ΔR ±(0.25% + 0.05Ω)
Insulation Resistance	DC 100V, 1 min		Over 1000M ohm

(continued)

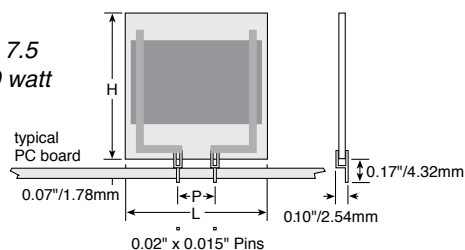
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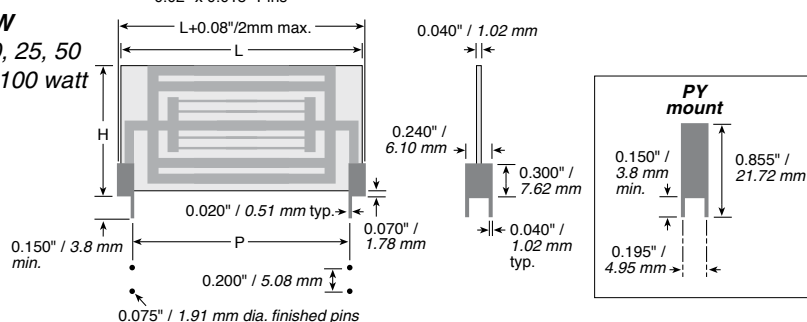
DIMENSIONS

(±.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%		
TA 3 0 5 PA 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