

# 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/in<sup>2</sup> 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

Property	Value	Test Condition	Specification
Substrate	Alumina	Test MILR83401	
Resistor	Thick Film		
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)

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)  
 2 = .2"  
 3 = .3"  
 8 = .8"

Tolerance  
 K = 10%  
 J = 5%  
 F = 1%

RoHS compliant

**TA 305 PA 4 K 50 J E**

Series: TA  
 Power Rating: 305  
 Package: PA  
 Resistance Value (Ω): 4K50J  
 Suffix: E

03 = 3 W  
 05 = 5  
 07 = 7.5  
 10 = 10  
 025 = 25  
 050 = 50  
 100 = 100

PA = pin terminals, std. for 3-10 W  
 PW = wraparound, std. for 10-100 W  
 PY = high-stability wraparound

R250 = 0.25  
 10R0 = 10.0  
 2K00 = 2,000  
 45K0 = 45,000

### Standard part numbers for TA series

Ohmic value	Part No. Prefix Suffix	Part Number	Ohmic value	Part No. Prefix Suffix	Part Number	Ohmic value	Part No. Prefix Suffix	Part Number
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

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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