

APC Precision Chip Resistor



- Precision Thin Film Technology
- Wide Resistance Range 1R - 3M
- Precision tolerance down to $\pm 0.01\%$
- TCR as low as $\pm 2\text{ppm}/^\circ\text{C}$
- Tape & Reel packaging



- Standard Electrical Specifications
- Tolerance (Code): $\pm 0.05\%$ (A), $\pm 0.1\%$ (B), $\pm 0.25\%$ (C), $\pm 0.5\%$ (D), $\pm 1\%$ (F)
- TCR (Code): $\pm 25\text{ppm}$ (E), $\pm 50\text{ppm}$ (F)

Type	Power Rating at 70°C	Operating Temp Range	Max Operating Voltage	Max Overload Voltage	Tolerance / Resistance Range					TCR (PPM°C)
					±0.05%	±0.1%	±0.25%	±0.5%	±1%	
APC0201	1/32W	-55 to +155°C	15V	30V	N/A			49.9Ω to 4.99KΩ		±25
								49.9Ω to 33KΩ		±50
APC0402	1/16W	-55 to +155°C	25V	50V	49.9Ω to 12KΩ	10Ω to 255KΩ	4.7Ω to 511KΩ			±25
								±50		
APC0603	1/16W	-55 to +155°C	50V	100V	4.7Ω to 332KΩ	4.7Ω to 1MΩ	1Ω to 1MΩ			±25
								±50		
APC0805	1/10W	-55 to +155°C	100V	200V	4.7Ω to 1MΩ	4.7Ω to 2MΩ	1Ω to 2MΩ			±25
								±50		
APC1206	1/8W	-55 to +155°C	150V	300V	4.7Ω to 1MΩ	4.7Ω to 2.49MΩ	1Ω to 2.49MΩ			±25
APC1210	1/4W									±50
APC2010	1/4W	-55 to +155°C	150V	300V	4.7Ω to 1MΩ	4.7Ω to 3MΩ	1Ω to 3MΩ			±25
APC2512	1/2W									±50

- Special Electrical Specifications
- Tolerance (Code): $\pm 0.01\%$ (T), $\pm 0.05\%$ (A), $\pm 0.1\%$ (B), $\pm 0.25\%$ (C), $\pm 0.5\%$ (D), $\pm 1\%$ (F)
- TCR (Code): $\pm 2\text{ppm}$ (X), $\pm 3\text{ppm}$ (Y), $\pm 5\text{ppm}$ (Z), $\pm 10\text{ppm}$ (B), $\pm 15\text{ppm}$ (A)

Type	Power Rating at 70°C	Operating Temp Range	Max Operating Voltage	Max Overload Voltage	Resistance Range						TCR (PPM°C)
					±0.01%	±0.05%	±0.1%	±0.25%	±0.5%	±1%	
APC0402	1/16W	-55 to +155°C	25V	50V	49.9Ω to 4.99KΩ			N/A			±2, ±3
					49.9Ω to 4.99KΩ						±5
					49.9Ω to 12KΩ		49.9Ω to 60KΩ			±10	
							49.9Ω to 69.8KΩ			±15	
APC0603	1/16W	-55 to +155°C	50V	100V	24.9Ω to 15KΩ			N/A			±2, ±3
					24.9Ω to 15KΩ						±5
					24.9Ω to 100KΩ	4.7Ω to 332KΩ	4.7Ω to 511KΩ			±10, ±15	
APC0805	1/10W	-55 to +155°C	100V	200V	24.9Ω to 30KΩ			N/A			±2, ±3
					24.9Ω to 30KΩ						±5
					24.9Ω to 200KΩ	4.7Ω to 1MΩ				±10, ±15	
APC1206	1/8W	-55 to +155°C	150V	300V	24.9Ω to 49.9KΩ			N/A			±2, ±3
					24.9Ω to 49.9KΩ						±5
					24.9Ω to 499KΩ	4.7Ω to 1MΩ			±10, ±15		
APC1210	1/4W	-55 to +155°C	150V	300V	24.9Ω to 49.9KΩ			N/A			±2, ±3
					24.9Ω to 49.9KΩ						±5
					24.9Ω to 499KΩ	4.7Ω to 1MΩ			±10, ±15		
APC2010	1/4W	-55 to +155°C	150V	300V	24.9Ω to 100KΩ			N/A			±2, ±3
					24.9Ω to 100KΩ						±5
					24.9Ω to 499KΩ	4.7Ω to 1MΩ			±10, ±15		
APC2512	1/2W	-55 to +155°C	150V	300V	24.9Ω to 100KΩ			N/A			±2, ±3
					24.9Ω to 100KΩ						±5
					24.9Ω to 499KΩ	4.7Ω to 1MΩ			±10, ±15		

ARCOL UK Limited,
Threemilestone Ind. Estate,
Truro, Cornwall, TR4 9LG, UK.
T +44 (0) 1872 277431
F +44 (0) 1872 222002
E sales@arcolresistors.com

www.arcolresistors.com

The information contained herein does not form part of a contract and is subject to change without notice. ARCOL operate a policy of continual product development, therefore, specifications may change.

It is the responsibility of the customer to ensure that the component selected from our range is suitable for the intended application. If in doubt please ask ARCOL.

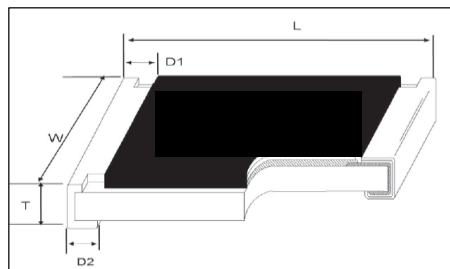
Characteristics

Item	Tol. ≤ 0.05%	Tol. > 0.05%	Method
Short Time Overload	$\Delta R \pm 0.05\%$	$\Delta R \pm 0.02\%$	RCWV*2.5 or Max. Overload Voltage - whichever is lower for 5 secs.
Insulation Resistance	> 1000 MΩ		Apply 100V dc for 1 minute
Endurance	$\Delta R \pm 0.05\%$	$\Delta R \pm 0.02\%$	70 ±2°C RCWV for 1000 hours with 1.5 hrs ON and 0.5 hrs OFF
Thermal Shock	$\Delta R \pm 0.05\%$	$\Delta R \pm 0.025\%$	-55 to +155°C, 100 Cycles
Low Temp Operation	$\Delta R \pm 0.05\%$	$\Delta R \pm 0.2\%$	1 hour, -65°C followed by 45 mins of RCWV

*RCWV (Rated Continuous Working Voltage) = $\sqrt{P \cdot R}$ or Max. Operating Voltage - whichever is lower

Dimensions (mm)

Type	L	W	T	D1	D2
APC0201	0.58 ±0.05	0.29 ±0.05	0.23 ±0.05	0.12 ±0.05	0.15 ±0.05
APC0402	1.00 ±0.05	0.50 ±0.05	0.30 ±0.05	0.20 ±0.05	0.20 ±0.05
APC0603	1.55 ±0.10	0.80 ±0.10	0.45 ±0.10	0.30 ±0.20	0.30 ±0.20
APC0805	2.00 ±0.15	1.25 ±0.15	0.55 ±0.10	0.30 ±0.20	0.40 ±0.20
APC1206	3.05 ±0.15	1.55 ±0.15	0.55 ±0.10	0.42 ±0.20	0.35 ±0.25
APC1210	3.10 ±0.15	2.40 ±0.15	0.55 ±0.10	0.40 ±0.20	0.55 ±0.25
APC2010	4.90 ±0.15	2.40 ±0.15	0.55 ±0.10	0.60 ±0.30	0.50 ±0.25
APC2512	6.30 ±0.15	3.10 ±0.15	0.55 ±0.10	0.60 ±0.30	0.50 ±0.25

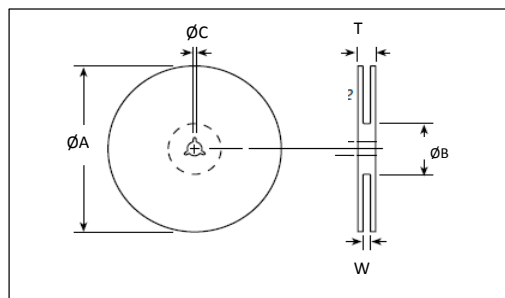


Reel Dimensions (mm)

Size	ØA	ØB	ØC	W	T	Qty Per Reel
0201*	178 ±1.0	60 ±1.0	13.5 ±0.7	9.5 ±1.0	11.5 ±1.0	10,000
0402*	178 ±1.0	60 ±1.0	13.5 ±0.7	9.5 ±1.0	11.5 ±1.0	10,000
0603*	178 ±1.0	60 ±1.0	13.5 ±0.7	9.5 ±1.0	11.5 ±1.0	5,000
0805*	178 ±1.0	60 ±1.0	13.5 ±0.7	9.5 ±1.0	11.5 ±1.0	5,000
1206*	178 ±1.0	60 ±1.0	13.5 ±0.7	9.5 ±1.0	11.5 ±1.0	5,000
1210*	178 ±1.0	60 ±1.0	13.5 ±0.7	9.5 ±1.0	11.5 ±1.0	5,000
2010**	178 ±1.0	60 ±1.0	13.5 ±0.7	13.5 ±1.0	15.5 ±1.0	4,000
2512**	178 ±1.0	60 ±1.0	13.5 ±0.7	13.5 ±1.0	15.5 ±1.0	4,000

* Paper Tape

** Plastic Embossed Tape



Ordering Procedure

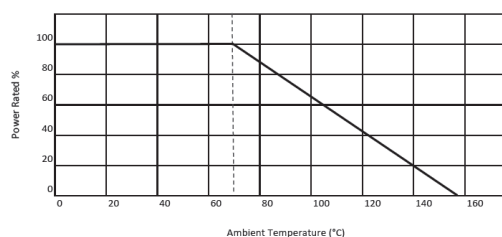
Standard Resistor: Series, Size, Tol Code, Resistance Value, TCR Code

Eg: APC0603A100RB
 100Ω
 ±0.05%
 1/16 watt
 (0603 size)

Tol: ±0.01% (T), ±0.05% (A), ±0.1% (B), ±0.25% (C), ±0.5% (D), ±1% (F)

TCR: ±2ppm (X), ±3ppm (Y), ±5ppm (Z), ±10ppm (B), ±15ppm (A), ±25ppm (E), ±50ppm (F)

Derating Curve



ARCOL UK Limited,
 Threemilestone Ind. Estate,
 Truro, Cornwall, TR4 9LG, UK.
 T +44 (0) 1872 277431
 F +44 (0) 1872 222002
 E sales@arcolresistors.com

www.arcolresistors.com

The information contained herein does not form part of a contract and is subject to change without notice. ARCOL operate a policy of continual product development, therefore, specifications may change.

It is the responsibility of the customer to ensure that the component selected from our range is suitable for the intended application. If in doubt please ask ARCOL.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Ohmite:](#)

APC0805B100KN	APC1206B100KN	APC0603B15K0N	APC0603B15K4N	APC1206B100RN	APC0805T100RZ
APC1206T499RZ	APC1206B1K00N	APC0805T4K99Z	APC1206T49K9Z	APC1206B499RN	APC0603B24K3N
APC0603B130KN	APC1206T200RZ	APC0805B100RN	APC0805T10K0Z	APC1206B10K0N	APC0805T2K00Z
APC0603B20K0N	APC0603B49K9N	APC1206B2K00N	APC0603B332KN	APC0603T100RZ	APC0603T4K99Z
APC0603B1K00N	APC0805B24R9N	APC1206B49R9N	APC1206B250RN	APC0805T1K00Z	APC0805T200RZ
APC0805B250RN	APC0603B4K99N	APC0603B100KN	APC0603B205KN	APC0603T10K0Z	APC0805T499RZ
APC1206T100RZ	APC1206T4K99Z	APC0603B2K00N	APC1206T24R9Z	APC1206T10K0Z	APC0805T49R9Z
APC0603B19K1N	APC0805B1K00N	APC0805B200RN	APC0603T24R9Z	APC0805T24R9Z	APC0603B3K74N
APC0603B200KN	APC0805B49K9N	APC1206B4K99N	APC0805B4K99N	APC0603B75K0N	APC1206T49R9Z
APC0603B10K0N	APC0805B49R9N	APC0805B2K00N	APC0603T15K0Z	APC1206B24R9N	APC1206B200RN
APC0603T49R9Z	APC0603B312RN	APC1206B49K9N	APC1206T2K00Z	APC1206T1K00Z	APC0603T200RZ
APC0603B942RN	APC0603B215KN	APC0805B499RN	APC0805B10K0N		