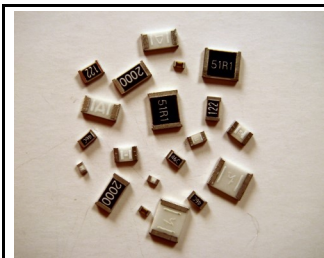




Product Family: [Precision Thin Film Chip Resistor-Anti Sulfur](#)
Part Number Series: [AS Series](#)



Construction:

- High Purity Alumina Substrate
- Metal film resistive element
- Anti-Sulfur
- Wrap around electrodes
- 100% matte tin over Ni terminations (RoHS compliant and Pb Free)

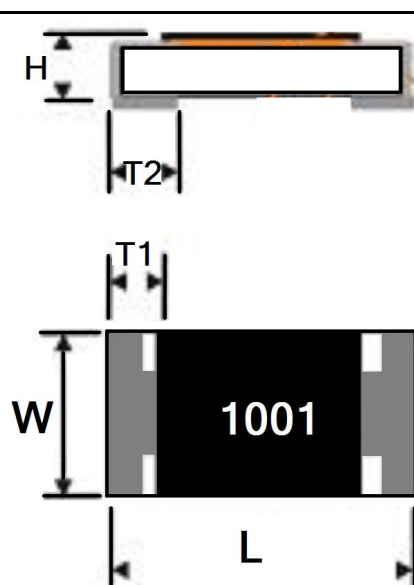
Features:

- 0402, 0603, 0805, 1206, 1210, 2010 and 2512 E24+E-96 values
- TCR's down to ± 25 ppm/ $^{\circ}$ C
- Resistance down to 4.7Ω available
- High volume production suitable for commercial and special applications

Description:

These anti-sulfur, precision chip resistors offer excellent performance and tolerance in TCR, current noise, and linearity for high frequency circuit applications and other applications requiring precision and stability. They are perfect for demanding applications where high reliability and anti-sulfur is a must, such as automotive applications. High volume manufacturing allows for lower costs for the customer.

Product Dimensions:



Dimensions	AS0402 (1005)	AS0603 (1608)	AS0805 (2012)	AS1206 (3216)	1210 (3225)	2010 (5025)	2512 (6432)
L	0.039 ± 0.004	0.061 ± 0.004	0.078 ± 0.004	0.120 ± 0.006	0.122 ± 0.004	0.197 ± 0.004	0.249 ± 0.004
W	0.020 ± 0.002	0.031 ± 0.004	0.049 ± 0.004	0.061 ± 0.006	0.102 ± 0.006	0.098 ± 0.006	0.126 ± 0.006
H	0.012 ± 0.002	0.018 ± 0.006	0.020 ± 0.006	0.022 ± 0.006	0.022 ± 0.004	0.022 ± 0.004	0.022 ± 0.004
T1	0.006 ± 0.004	0.006 ± 0.006	0.010 ± 0.008	0.016 ± 0.008	0.020 ± 0.008	0.024 ± 0.008	0.024 ± 0.008
T2	0.010 ± 0.004	0.012 ± 0.006	0.016 ± 0.008	0.016 ± 0.008	0.020 ± 0.008	0.024 ± 0.010	0.035 ± 0.010

All dimensions are shown in inches, Metric case sizes are shown in parenthesis.

Part Numbering: Ex: AS0603E2002D-T5

Product Designator	Size W x L English	Temp. Coefficient of Resistance (TCR)	Resistance Value	Resistance Tolerance	T&R Packaging Quantity
AS	0402, 0603, 0805, 1206, 1210, 2010, 2512	E = ± 25 ppm/ $^{\circ}$ C Q = ± 50 ppm/ $^{\circ}$ C	4 digits with the first 3 being significant. The last digit specifies the number of zeros. "R" denotes decimal position as necessary	A = $\pm 0.05\%$ B = $\pm 0.1\%$ D = $\pm 0.50\%$ F = $\pm 1.00\%$	-T4 = 4,000 PCS (2010, 2512) --T5 = 5,000 PCS* (0603, 0805, 1206, 1210) -T10 = 10,000 PCS (0402)

* Note 1: Tape quantity codes can be left off when ordering or requesting quote. These will be assigned by us based on part/quantity ordered.

Electrical Specifications:

Type	AS0402	AS0603	AS0805	AS1206	AS1210	AS2010	AS2512
English Size	0402	0603	0805	1206	1210	2010	2512
Power	1/10 Watt	1/10 Watt	1/8 Watt	1/4 Watt	2/5 Watt	3/4 Watt	1 Watt
Tolerance% (code)	$\pm 0.05(A)$, $\pm 0.1(B)$, $\pm 0.5(D)$, $\pm 1(F)$						
Resistance Range (Ω)	10 ~ 100K	4.7 ~ 680K	4.7 ~ 1M		10 ~ 1M	10 ~ 1.5M	
Resistance Offering	E-24 + E-96 Values						
TCR ppm/ $^{\circ}C$ (code)	$\pm 25(E)$, $\pm 50(Q)$						
Max Operating Voltage	50V	75V	150V	200V			
Operating Temp. Range	-55 $^{\circ}C$ ~ 155 $^{\circ}C$ De-Rating @ 70 $^{\circ}C$						
Packaging	10,000 pcs/reel	5,000 pcs/reel				4,000 pcs/reel	

Reliability Specifications:

Test	Test Method	Specification
Short Time Overload	Applied voltage: 2.5X rated voltage or 2X maximum operating voltage, whichever is less. Test duration: 5 seconds	$\pm 0.5\%$ +0.05 Ω
Load Life	Test Temperature: 70 $^{\circ}C$ Applied voltage: rated voltage Test period: 1000 hours with power cycling as follows: 90 min. power ON/ 30 min. power OFF,	$\pm 0.5\%$ +0.05 Ω
Moisture Load Life	Test Condition: 40 $^{\circ}C$ /95% RH Applied voltage: rated voltage Test period: 1000 hours with power cycling as follows: 90 min. power ON/30 min. power OFF	$\pm 0.5\%$ +0.05 Ω
Temperature Cycle	Repeat 5 cycles as follows: -55 $^{\circ}C$ (30 min.) / Room temp (2 min) / +125 $^{\circ}C$ (30 min.) / Room temp (2 min)	$\pm 0.1\%$ +0.05 Ω

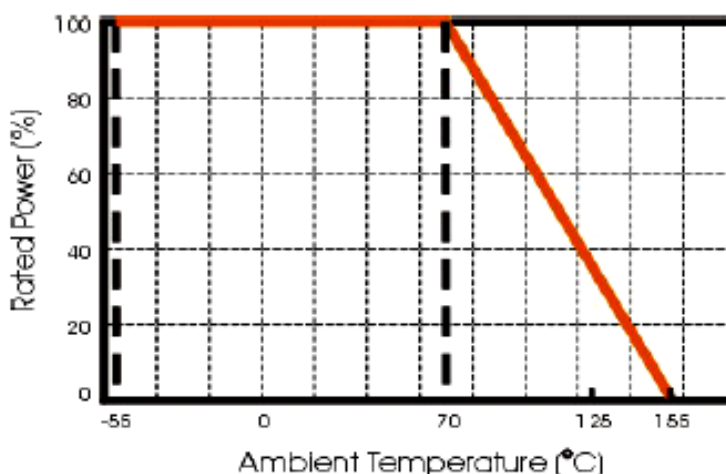
Derating Curve:

Fig.2 Maximum dissipation in percentage of rated power
As a function of the ambient temperature