

# Anti Sulphur Chip Resistors

## ASC Series

- Special construction resists sulphide growth
- Withstands sulphur bearing fume environment
- Tested to ASTM-B809 (“Flowers-of-Sulphur”)
- Suitable for industrial, automotive and roadside uses
- RoHS compliant matt tin finish terminations
- AEC-Q200 qualified



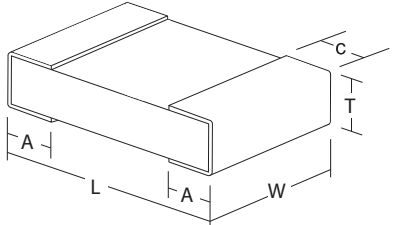
 All parts are Pb-free and comply with EU Directive 2011/65/EU amended by (EU) 2015/863 (RoHS3)

## Electrical Data

		0402	0603	0805	1206	1210	2010	2512
Power rating @ 70°C	watts	0.063	0.1	0.125	0.25	0.33	0.75	1
Resistance range	ohms	1R0 - 10M						
Current Rating (zero ohm jumper)	amps	1	1	2	2	2.5	3.5	4
Limiting element voltage	volts	50		150	200		250	
TCR	ppm/°C	<10R: 200 10R to 1M0: 100 >1M0: 200						
Resistance tolerance	%	1						
Standard values		E24, E96						
Ambient temperature range	°C	-55 to +155						

## Physical Data

	Dimensions (mm) and weight (mg)						Wt. nom.
	L	W	T	C	A		
0402	1.0 ±0.05	0.5 ±0.05	0.35 ±0.05	0.2 ±0.1	0.2 ±0.1	0.62	
0603	1.6 ±0.1	0.8 ±0.1	0.45 ±0.1	0.3 ±0.2	0.3 ±0.2	2.04	
0805	2.0 ±0.1	1.25 ±0.1	0.5 ±0.1	0.35 ±0.2	0.4 ±0.2	4.37	
1206	3.1 ±0.1	1.55 ±0.1	0.55 ±0.1	0.5 ±0.25	0.5 ±0.2	8.95	
1210	3.2 ±0.2	2.6 ±0.15		16.0			
2010	5.0 ±0.2	2.5 ±0.15		24.2			
2512	6.35 ±0.2	3.2 ±0.15		39.4			



Wrap-around terminations  
(3 faces)

### Construction

Conductors, resistive element, glass inner protection and epoxy outer protection are applied to a 96% alumina substrate. The chips are supplied with wrap-around terminations suitable for soldering. The terminations have an electroplated nickel barrier and 100% matt tin finish.

### Marking

Sizes larger than 0603 are individually marked with 4 digits. The first three digits are the significant figures and the fourth defines the number of added zeros.

Size 0603, E24 values are marked with 3 digits. The first two digits are the significant figures and the third defines the number of added zeros.

Size 0603, E96 values are marked with a standard 3 digit EIA96 code.

Size 0402 has no marking.

The body protection and marking are resistant to all normal cleaning solvents suitable for printed circuits.

### General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.

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ASC Series

## Performance Data

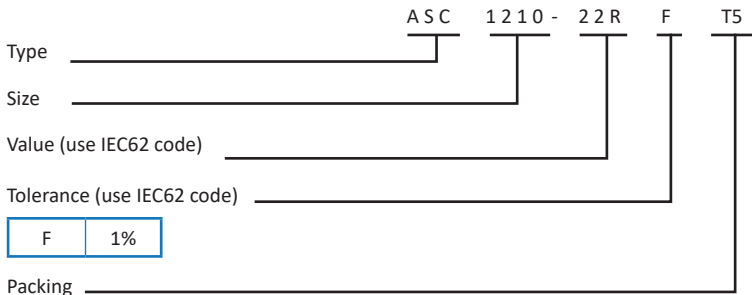
		Maximum
Load at rated power: 1000 hours cyclic load @ 70°C	ΔR%	2% + 0.1Ω
Short term overload: Lesser of 6.25 x rated power or 2 x LEV for s	ΔR%	1% + 0.05Ω
Hydrogen Sulphide: 1000 hours 3-5ppm H2S, 50 ±2°C, 92 ±1% RH, no load	ΔR%	0.5% and no visual defects
Derating from rated power at 70°C		Linear to zero at 155°C
Dry heat: 1000 hours at 155°C	ΔR%	1% + 0.05Ω
Damp heat 1000 hours 40°C 90-95% RH	ΔR%	2% + 0.1Ω
Temperature rapid change -55 to 155°C, 5 cycles	ΔR%	0.5% + 0.05Ω
Resistance to solder heat: 260±5°C for 10s	ΔR%	0.5% + 0.05Ω
Solderability: 245±5°C for 3s		≥95% coverage
Solder leaching: 260±5°C for 30s		Leached area ≤10% total, ≤5% individual
Board Flex: once for 5s, 2010 & 2512: 2mm, smaller sizes: 3mm	ΔR%	1% +0.05Ω
Insulation resistance @ 2 x LEV for 60s	ohms	>10G

### Packaging

ASC resistors are supplied taped and reeled on a 7 or 10" reel as per IEC 286-3. The tape is 12mm wide embossed plastic tape for 2010 and 2512 sizes and 8mm wide paper tape for the smaller sizes.

## Ordering Procedure

Example: ASC1210 at 22 ohms and 1% tolerance on a reel of 5000 pieces -



F	1%
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T10	Tape	0402	10,000/reel (7")	Standard
T5		0603, 0805, 1206, 1210	5000/reel (10")	
T4		2010, 2512	4000/reel (7")	

Note: For zero ohm jumper, substitute value and tolerance with the code R000

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## TT Electronics:

[ASC1206EW-1K2FT5](#) [ASC2512-6R8FT4](#) [ASC2512-1M0FT4](#) [ASC2010-330KFT4](#) [ASC2512-1R0FT4](#) [ASC2512-1K5FT4](#) [ASC2010-68RFT4](#) [ASC2010-470RFT4](#) [ASC2010-220RFT4](#) [ASC2010-150RFT4](#) [ASC2010-100KFT4](#)  
[ASC2512-22RFT4](#)