## **Resistors**

# **Electronics**

# **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
	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •				• • • • • • • • • • • • • • • • • • • •	2312
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)				^			
	L	W	T	С	А	Wt. nom.	
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	TA -
1206	3.1 ±0.1	1.55 ±0.1		0.5.10.35		8.95	L W
1210	3.2 ±0.2	2.6 ±0.15	0.55 ±0.1	0.5 ±0.25	0.5 ±0.25		
2010	5.0 ±0.2	2.5 ±0.15	0.55 ±0.1	0.5 ±0.2 0.6 ±0.25		24.2	Wrap-around terminations
2512	6.35 ±0.2	3.2 ±0.15		U.0 ±U.25		39.4	(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

# **Anti Sulphur Chip Resistors**



#### **ASC Series**

## Performance Data

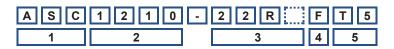
		Maximum
Load at rated power: 1000 hours cyclic load @ 70°C	ΔR%	2% + 0.1Ω
Short term overload: Lesser of 6.25 x rated power or 2 x LEV for s	ΔR%	1% + 0.05Ω
Hydrogen Sulphide: 1000 hours 3-5ppm H2S, $50 \pm 2^{\circ}$ C, $92 \pm 1\%$ RH, no load	ΔR%	0.5% and no visual defects
Derating from rated power 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%	$0.5\% + 0.05\Omega$
Resistance to solder heat: 260±5°C for 10s	ΔR%	$0.5\% + 0.05\Omega$
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: ASC1210-22RFT5 (1210, 22 ohms ±1%, Pb-free)



1	2	3	4	5			
Туре	Size	Value	Tolerance	Packing			
ASC	0402	E24 = 3/4 characters	F = ±1%	T10	0402	10,000 / 7" reel	
	0603	E96 = 3/4 characters	Blank for	T5	0603, 0805, 1206, 1210	5000 / 10" reel	
	0805	R = ohms	jumper	T4	2010, 2512	4000 / 7" reel	
	1206	K = kilohms					
	1210	M = megohms					
	2010	R000 = Jumper					
	2512		•				

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