

## Wirewound Resistors, Open Air, Current Sense, Low Value



### FEATURES

- Open air design
- Low resistance values for all types of current sensing, voltage division and pulse applications including switching and linear supplies, instrumentation and power amplifiers
- All welded construction
- Solid metal nickel-chrome or copper-nickel alloy resistive element
- Solderable terminations
- Very low inductance
- Lead (Pb)-free version is RoHS compliant



**RoHS\***  
COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS			
MODEL	POWER RATING $P_{70\text{ }^\circ\text{C}}$ W	TOLERANCE $\pm \%$	RESISTANCE RANGE $\Omega$
SR1	1.0	1, 5	0.005 - 0.03
SR3	3.0	1, 5	0.005 - 0.05
SR5	5.0	1, 5	0.004 - 0.05

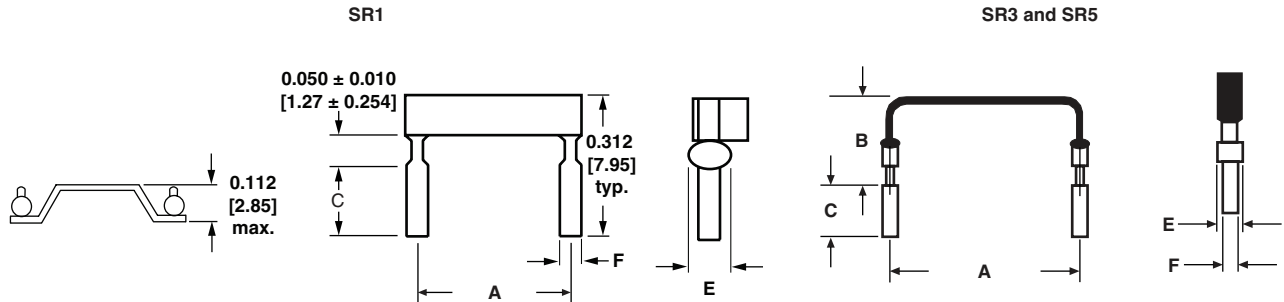
TECHNICAL SPECIFICATIONS			
PARAMETER	UNIT	SR Resistor Characteristics	
Temperature Coefficient	ppm/ $^\circ\text{C}$	0.004 $\Omega$ - 0.005 $\Omega$ = $\pm$ 300 0.0051 $\Omega$ - 0.0099 $\Omega$ = $\pm$ 175 0.01 $\Omega$ - 0.05 $\Omega$ = $\pm$ 100	
Operating Temperature Range	$^\circ\text{C}$	- 65 to + 275	
Maximum Continuous Current	A	$(P/R)^{1/2}$	

**SAP ORDERING INFORMATION** (Part Number 18 digits)

Global Part Numbering Example: SR55L000JE14

S	R	5	5	L	0	0	0	J	E	1	4			
GLOBAL MODEL		VALUE			TOLERANCE			PACKAGING		SPECIAL				
SR1 SR3 SR5		L = m $\Omega$ (below 0.01 $\Omega$ ) R = Decimal 5L000 = 0.005 $\Omega$ R0100 = 0.01 $\Omega$			F = $\pm$ 1.0 % J = $\pm$ 5.0 % K = $\pm$ 10 %			E14 = Lead (Pb)-free bulk  B14 = Tin/lead bulk		(Dash Number) (up to 3 digits) From 1 - 999 as applicable				

\* Pb containing terminations are not RoHS compliant, exemptions may apply

**DIMENSIONS** in inches [millimeters]


MODEL	DIMENSIONS in inches [millimeters]				
	A	B	C	E	F
SR1	$0.450 + 0.020$ [11.43 + 0.508]	-		$0.070$ [1.78]	
SR3	$0.600 + 0.040/- 0.020$ [15.24 + 1.020/- 0.508]	1.0 maximum [25.4 maximum]	$0.125 \pm 0.030$ [3.18 ± 0.762]	$0.065 + 0.010/- 0.005$ [1.65 + 0.254/- 0.127]	$0.040 \pm 0.002$ [1.02 ± 0.051]
SR5	$0.800 + 0.040/- 0.020$ [20.32 + 1.020/- 0.508]				

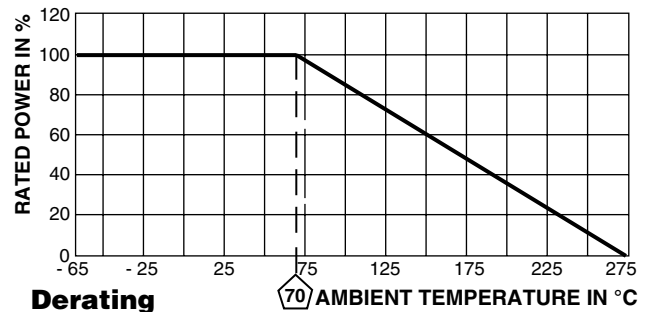
**MATERIAL SPECIFICATIONS**

**Element:** Nickel-chrome or copper-nickel alloy depending on resistance value

**Terminals:** Tinned copper

**Encapsulation:** None

**Marking:** None



PERFORMANCE		
TEST	CONDITIONS OF TEST	TEST LIMITS
Temperature Cycling	- 55 °C to + 125 °C, 1000 cycles, 15 min at each extreme	± (1.0 % + 0.0005 Ω) ΔR
Low Temperature Storage	- 65 °C for 24 h	± (0.5 % + 0.0005 Ω) ΔR
High Temperature Exposure	1000 h at + 275 °C	± (2.0 % + 0.0005 Ω) ΔR
Bias Humidity	+ 85 °C, 85 % RH, 10 % bias, 1000 h	± (1.0 % + 0.0005 Ω) ΔR
Mechanical Shock	100 g's for 11 ms, 5 pulses	± (0.2 % + 0.0005 Ω) ΔR
Vibration	Frequency varied 10 to 2000 Hz in 1 min, 3 directions, 12 h	± (0.2 % + 0.0005 Ω) ΔR
Load Life	1000 h at rated power, + 70 °C, 1.5 h "ON", 0.5 h "OFF"	± (2.0 % + 0.0005 Ω) ΔR
Resistance to Solder Heat	+ 260 °C solder, 10 - 12 s dwell, 25 mm/s emergence	± (0.5 % + 0.0005 Ω) ΔR
Moisture Resistance	MIL-STD-202 Method 106, 0 % power, 7a and 7b not required	± (0.5 % + 0.0005 Ω) ΔR



## Disclaimer

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