Resistor Technology

SRN-Series
Precision Resistor Networks for Wire-Bonding

Sizes: 0.50 x 0.50 mm² to 6 x 10 mm²

RoHS / ELV conform 2011/65/EC 2000/53/EC

e4

Non-Magnetic

Features:

- Thin film (NiCr) applied on Alumina or passivated Si-substrate
- Standard types and customized networks
- Wide variety of schematics is realizable
- Excellent ratio and tracking data
- Relative-data (tolerance, temperature coefficient and stability) much closer than realizations with single resistors
- Suitable for wire bonding (US/TC/TS)
- Suitable for active laser trimming

Dimensions:

Chip size	Chip thickness	Bondpad size	Bondpad material
Minimum: 0.50 x 0.50 mm² Maximum: up to 6 x 10 mm²	Alumina: $0.38^{\pm 0.05}$ mm Si : $0.26^{\pm 0.05}$ mm	Min. 0.10 x 0.10 mm²	Aluminium or Gold (US-/TS-/TC-bondable)

(Detailed drawing and layout on request)

Inquiry and ordering data:

- Dimensions
- Resistance values
- Number and connection of resistors (circuitry)
- Tolerance and temperature coefficient TCR (absolute and relative)
- Power rating
- Packaging
- Special requirements
- Quantity

Packaging:

- Chip tray, (Waffle pack)
- Wafer/inked or
- Wafer diced and inked on foil

Customized Designs:

- Any circuit design is possible.
- Resistor parameters are given by the customer.
- Applications at frequencies above 100 kHz the use of ceramic substrate is recommended.

SRT Resistor Technology GmbH
Am Farrnbach 10
D-90556 Cadolzburg
Germany

TÜV SÜD ISO 9001

Fon: +49 (0)9103 / 7952-0
Fax: +49 (0)9103 / 7952-99
E-mail: info@srt-restech.de
Internet: www.srt-restech.de

SRN-Series
Precision Resistor Networks for Wire-Bonding

Sizes: 0.50 x 0.50 mm² to 6 x 10 mm²

Technical data – depending on size:

Power rating P_{70} (P_{125} = 0 mW)	25 mW/mm² 10 mW/mm² for ultra precision application
Resistance range	5 R ... 10 M (depending on chip size)
Operating voltage	$U \leq \sqrt{PxR}$
Isolating voltage	100 V on Silicon, 1000 V on Alumina
Tolerance absolute relative	± 0.05; ± 0.1; ± 0.25; ± 0.5; ± 1 % < 0.025; < 0.05; < 0.1 %
Temperature coefficient TCR absolute relative	± 5[1)], ± 10, ± 25, ± 50 ppm/K 0.5[1)]; 1[1)]; 2; 5; 10 ppm/K

[1)] Temperature range: 0 …+ 70°C

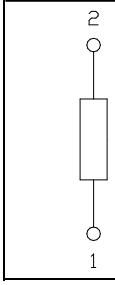
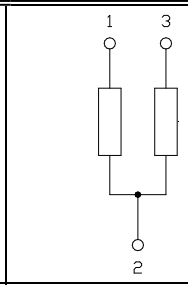
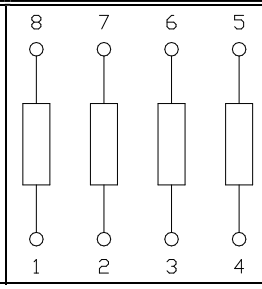
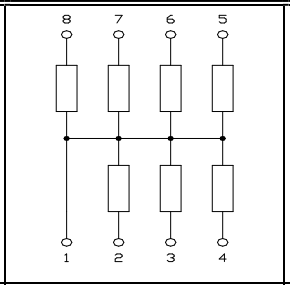
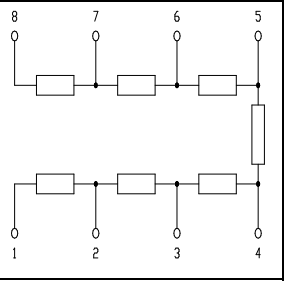
Technical data – general:

Operating temperature range	- 55°C ... + 125°C
Climatic category acc. to EN 60068-1	25/125/56
Condition for application	Polymer-passivation or hermetic sealing
Moisture Sensitivity Level acc. to J-STD-020	MSL 1 (unlimited)

Long term stability	Tolerance ≦ 0.25 %	Tolerance > 0.25 %
Storage 125°C/ 1000 h absolute relative	< 0.02 % < 0.005 %	< 0.05 % < 0.01 %

The networks are to protect from environmental impacts in the application.

Sample circuits:

Size: 0.5 x 0.5 mm² / 0.75 x 0.75 mm²		Size: 1.6 x 2.0 mm²		
Single resistor	Voltage divider / Current divider	Array of single resistors	Current divider	Voltage divider
				

Standard versions: Resistor bridges, single resistors, voltage- and current-divider

SRT Resistor Technology GmbH
Am Farrnbach 10
D-90556 Cadolzburg
Germany

Fon: +49 (0)9103 / 7952-0
Fax: +49 (0)9103 / 7952-99
E-mail: info@srt-restech.de
Internet: www.srt-restech.de