FrelTec GmbH

Mathildenstr. 10A
82319 Starnberg
Germany

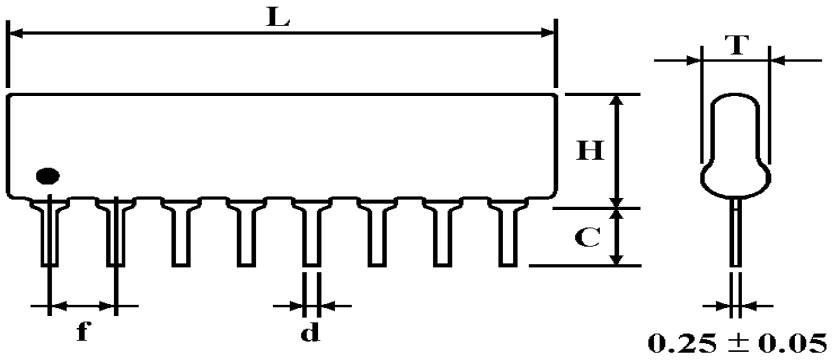
Resistor Network

SPECIFICATION

Part Number

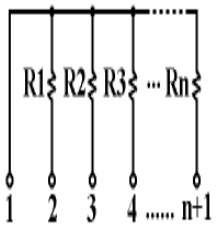
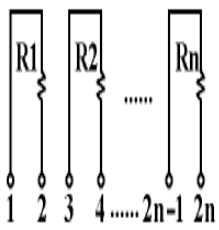
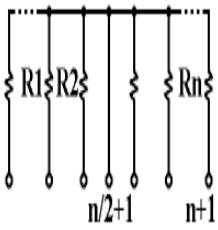
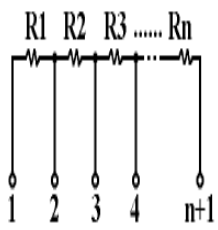
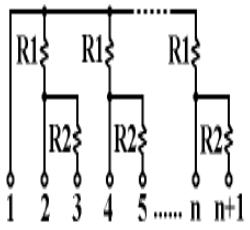
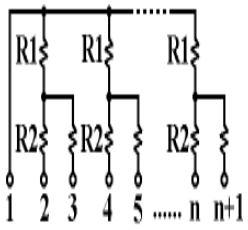
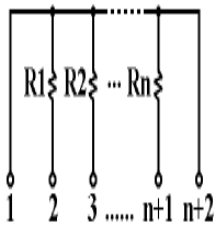
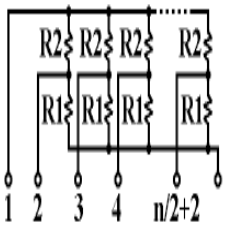
042	A*	08*	1001*	J*	B
Type	Circuit Type	Number of Pins	Value	Tolerance	Packing
042 : Resistor Network	A : Single Common	04 : 4 pins	The last digit is the multiplier	G : ±2%	B: Bulk in Box
	B : Isolated	05 : 5 pins	which denotes the number of zero following	J : ±5%	
		06 : 6 pins	0000=0Ohm		
		07 : 7 pins	R=Decimal		
		08 : 8 pins	Example: R010 = 0,01Ohm		
		09 : 9 pins	97R6=		
		10 : 10 pins	9760 = 976Ohm		
		11 : 11 pins	1001 = 1kOhm		
		12 : 12 pins	E24-Series is first digit “0”		
		13 : 13 pins			
		14 : 14 pins	* not all combination is possible		

The type designation shall be in the following form:



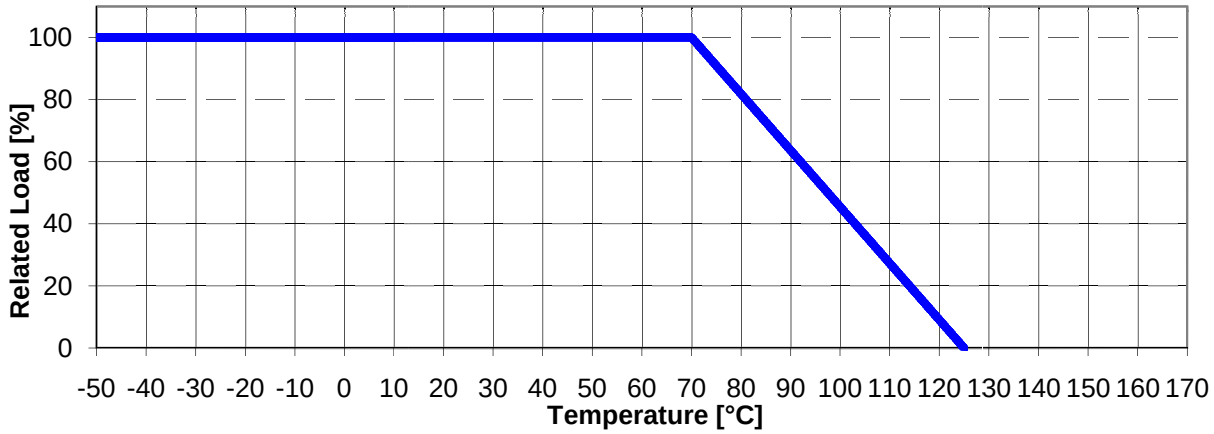
Type	L (Max.)	H (Max.)	T (Max.)	C + 0.3 - 0.2	d ± 0,1	f ± 0,2
4 pin	10,2					
5 pin	12,7					
6 pin	15,3					
7 pin	17,8					
8 pin	20,4					
9 pin	22,9	5,08	2,5	3,2	0,5	2,54
10 pin	25,4					
11 pin	28,2					
12 pin	30,5					
13 pin	31,1					
14 pin	35,6					

Circuits construction :

A	B	C	D
 R1=R2=.....=Rn	 R1=R2=.....=Rn	 R1=R2=.....=Rn	 R1=R2=.....=Rn
E	**P**	**T**	**R**
 R1=R2 or R1≠R2	 R1=R2 or R1≠R2	 R1=R2=.....=Rn	 R1=R2 or R1≠R2

Power Derating Curve

For resistors in ambient temperatures above 70℃, power rating must be derated in accordance with the curve below. Operating temperature -55°C to +125°C



Voltage Rating:

Rated Voltage: The resistor shall have a DC continuous working voltage or a rms AC continuous working voltage at commercial-line frequency and wave form corresponding to the power rating, as determined from the following:

E= Rated voltage [V]

P= Power rating [W]

R= Nominal resistance [Ω]

$$E = \sqrt{R \bullet P}$$

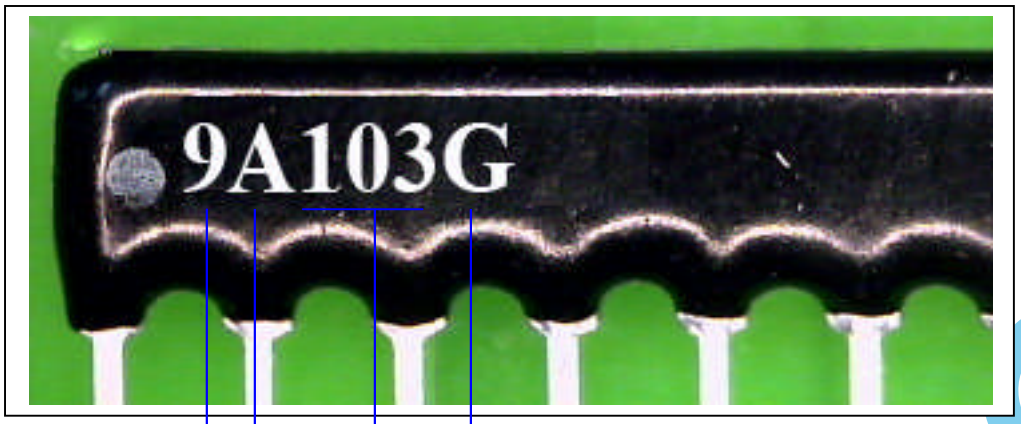
RESISTORS Network

Rating

042 *Series*

Type	Rated Power at 70°C	Max. Working Voltage	Dielectric With Standing Voltage	Max. Over-load Voltage	Temperature Coefficient [ppm/°C]	Resistance Range	
						G (±2%) E-24	J(± 5%) E-24
B	1/5W	100 V	200 V	150 V	± 200	50 Ω ~ 1 MΩ	
					± 250	10 Ω ~ 50 Ω	
other	1/8W	100 V	200 V	150 V	± 200	50 Ω~1 MΩ	
					± 250	10 Ω ~ 50 Ω	

Explanation of Network Marking:



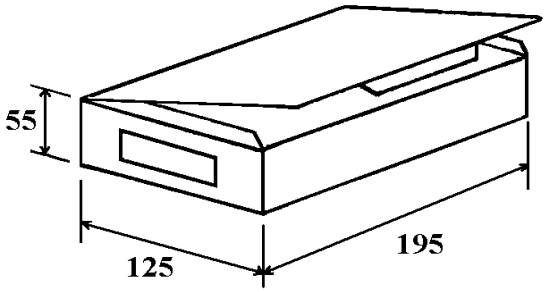
Refers to the number of Pins

Refers to ohmic value

Refers to type, A or B

Refers to tolerance

Packing Specification:



Carton Dimension (mm)

Bag in box packing (B/B)			
Pin	Quantity Per Bag (Pcs)	Quantity Per Box (Pcs)	Quantity Per Carton (Pcs)
4	500	5.000	100.000
5	400	4.000	80.000
6	300	3.000	60.000
7	200	2.000	40.000
8	200	2.000	40.000
9	150	1.500	30.000
10	150	1.500	30.000
11	100	1.000	20.000
12	100	1.000	20.000
13	100	1.000	20.000
14	100	1.000	20.000

Dual Terminators (R1/R2) (Ohm)

160/240	220/270	330/390	1.5K/3.3K
180/390	220/330	330/470	3.0K/6.2K

Test

<table>
<tr><th>ITEM</th><th>Limit</th><th>TEST METHOD
JIS C 5201-1</th></tr>
<tr><td>Temperature cycling</td><td>△R≦ ± (0,5% + 0,1Ω)</td><td>
<table>
<tr><th>Step</th><th>Temperature</th><th>Time</th></tr>
<tr><td>1</td><td>-55℃ ±3℃</td><td>30 mins</td></tr>
<tr><td>2</td><td>Room temp.</td><td>10～15 mins</td></tr>
<tr><td>3</td><td>+125℃ ±3℃</td><td>30 mins</td></tr>
<tr><td>4</td><td>Room temp.</td><td>10～15 mins</td></tr>
</table>
* Step 1-4 Continuous 5 Cycles
</td></tr>
<tr><td>Dielectric Withstanding Voltage</td><td>No evidence of flashover mechanical damage, arcing or insulation break down.</td><td>Resistors shall be clamped in the trough of a 90° metallic V -block and shall be tested at AC potential respectively specified in the above list for 60 +10/-0 seconds.</td></tr>
<tr><td>Short-time Overload</td><td>± (0,5% + 0,1Ω)</td><td>Rated Voltage x 2.5 for 5 seconds.</td></tr>
<tr><td>Resistance to Soldering Heat</td><td>± (0,5% + 0,1Ω)</td><td>350℃ ± 10℃ , for 3 seconds.</td></tr>
<tr><td>Insulation Resistance</td><td>10.000MΩ Min</td><td>100V DC for 1 min</td></tr>
<tr><td>Terminal Strength</td><td>± (0,5% + 0,1Ω)</td><td>Tensile : 1Kg , 30 seconds.
Bending : 500g , 2 Times</td></tr>
<tr><td>Thermal Shock</td><td>± (0,5% + 0,1Ω)</td><td>Load V,Room Temp , 30 minutes
Unload, -55℃, 15 minutes
Over 2 hrs. in room temp. before measuring.</td></tr>
<tr><td>Solderability</td><td>Covering 95 %</td><td>245℃ ± 3℃ , 2~3 seconds.</td></tr>
<tr><td>Load Life in Humidity</td><td>± (3% + 0,1Ω)</td><td>40℃ , 90-95% RH Rated Voltage for 1.000 hrs.(1,5 hour is "ON", 0,5 hour is "OFF")</td></tr>
<tr><td>Load Life</td><td>± (3% + 0,1Ω)</td><td>70 ℃ at Rated Voltage for 1.000 hrs. (1,5 hour is "ON", 0,5 hour is "OFF")</td></tr>
</table>

For this part: It does not use the materials that include the substances specified in RoHS, the detail refer to the part of prohibition or exclusion items in RoHS (2002/95/EC).

Cadmium and cadmium compounds (permissive content＜100 ppm)

Lead and lead compounds (permissive content＜1000 ppm)

Exceptions specified:

Lead contained in the glass of cathode ray tubes, electronic components and fluorescent tubes.

The glass material used in the electronic components, which includes resistor elements, conductive pastes (silver or copper ones), adhesives, glass frit and sealing materials.

Mercury and its mercury compounds (permissive content＜100 ppm)

Hexavalent chromium compounds (permissive content＜100 ppm)

Polybrominated biphenyls (PBB) (permissive content＜100 ppm)

Polybrominated diphenylethers (PBDE) (permissive content＜100 ppm)

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