VISHAY.

Conformal, Single In-Line Resistor Networks (Custom)

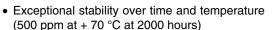


Wirewound or metal film performance in a space saving package.

SIP networks available in 3 - 10 pin sizes can obtain important performance parameters in an economical, mass producible style. SIPs take up the least amount of board space and are the easiest possible configuration to hand-insert into printed circuit boards. Standard pin centers are 0.100". Passivation coatings plus a conformal coating of epoxy protect the active element from the outside environment.

FEATURES

- Lead (Pb)-free available
- Minimal PC board space
- Standard 100 mil centers

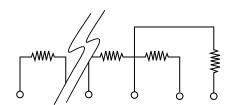


- Integrated construction
- Conformal coating flame resistant (UL94V-0 rating)

TYPICAL PERFORMANCE

A		
	ABS	TRACKING
TCR	10	2
	ABS	RATIO
TOL	0.05	0.02

SCHEMATIC



Custom schematics available. Please consult factory

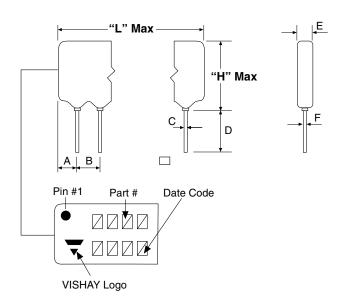
TEST		SPECIFICATIONS	CONDITIONS
Material		Passivated Nichrome	
Resistance Rang	е	20 Ω to 2 M Ω total	
TOD:	Tracking	± 5 ppm/°C to ± 2 ppm/°C	- 55 °C to + 125 °C
TCR:	Absolute	± 25 ppm/°C to + 10 ppm/°C	- 55 °C to + 125 °C
Tolerance:	Ratio	± 0.5 % to ± 0.01 %	+ 25 °C
Tolerance:	Absolute	± 1.0 % to ± 0.05 %	+ 25 °C
Power Rating:	Resistor	100 mW per element	Max. at + 70 °C
Stability:	∆R Absolute	500 ppm	2000 h at + 70 °C
	∆ <i>R</i> Ratio	150 ppm	2000 h at + 70 °C
Voltage Coefficie	nt	< 0.1 ppm/Volt	
Working Voltage		100 Volts	
Operating Tempe	rature Range	- 55 °C to + 125 °C	
Storage Tempera	ture Range	- 55 °C to + 150 °C	
Noise		< - 30 dB	
Thermal EMF		< 0.10 μV/°C	
Absolute		< 100 ppm	1 year at + 25 °C
Shelf Life Stabilit	Ratio	20 ppm	1 year at + 25 °C

^{*} Pb containing terminations are not RoHS compliant, exemptions may apply



Conformal, Single In-Line Resistor Networks (Custom) Vishay Thin Film

DIMENSIONS AND IMPRINTING in inches and millimeters



DIMENSION	INCHES	ММ
Α	0.058 Typ.	1.47 Typ.
В	0.100 Typ.	2.54 Typ.
С	0.020 ± 0.003	0.51 ± 0.08
D	0.125 Min.	3.18 Min.
E	0.110 Max.	2.79 Max.
F	0.010 Typ.	0.25 Typ.

NUMBER	LENGTH (L)		HEIGHT (H)	
OF PINS	INCHES	ММ	INCHES	ММ
3	0.320	8.13		
4	0.420	10.67		
5	0.520	13.21		
6	0.620	15.75	0.280*	7.11*
7	0.720	18.29		
8	0.820	20.83		
9	0.920	23.37		
10	1.020	25.91		

^{*} H dimension, R-Value and Schematic dependent

MECHANICAL SPECIFICATIONS		
Resistive Elements	Passivated Nichrome	
Substrate Material	Alumina	
Body	Ероху	
Terminals	Copper	
Plating	Sn60	
Marking Resistance to Solvents	per MIL-PRF-8340	
Lead (Pb)-free Option	96.5 % Sn, 3.0 % Ag, 0.5 % Cu	
Lead (Pb)-free Finish	Hot Solder Dip	

ORDERING INFORMATION CHECK LIST (CUSTOMS)

Special requirements should be identified in advance, but as a minimum, you should have the following information ready.

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ELECTRICAL	MECHANICAL		
Resistors, by value and tolerance Reference resistor(s) and matching of which resistors to which reference resistors	Maximum allowable seated height (from PC board to top of network) Special marking concerns		
3. Resistance by ratio	3. Schematic pin out of package		
4. Absolute temperature coefficient of resistivity	4. Specify if lead (Pb)-free		
Temperature tracking of subordinate resistors to reference resistor(s)			
6. Maximum operating voltage			
7. Resistor power ratings			
8. Operating temperature range			

For additional assistance refer to VISHAY Thin Film's Guide to Understanding Thin Film Precision, Resistor Networks or call Applications Engineering.

All standard products may be ordered directly from VISHAY Thin Film.

Vishay Thin Film Conformal, Single In-Line Resistor Networks (Custom)



GLOBAL PART NUMBER INFORMATION			
New Global Part Numbering: VTF211BX (preferred part number format)			
GLOBAL MODEL VTF	PART NUMBER (3 or 4 digits) xxx or xxxx Example: 214 1004	1 1 B O 4 S B LEAD (Pb)-FREE (0 or 1 digits) S = Lead (Pb)-free (e1) Non Tin lead	PACKAGING BX = Conductive Foam Box
Historical Part Number example: V VTF Cust MODE	TF Custom 211 (will conti		211 L NUMBER



Vishay

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