

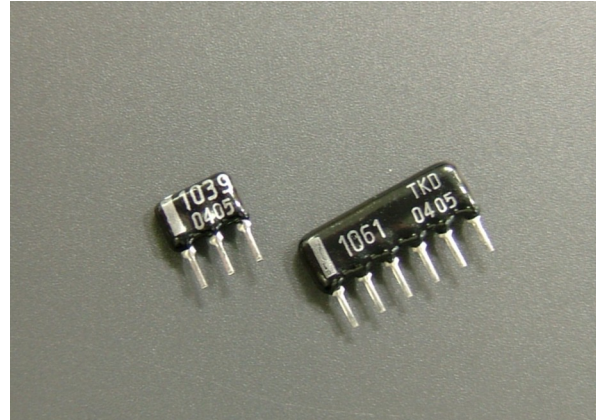
# Correctohm-TNP Series

# RESISTOR

Thin Film Network Resistor

Custom supported products

Molding insulation



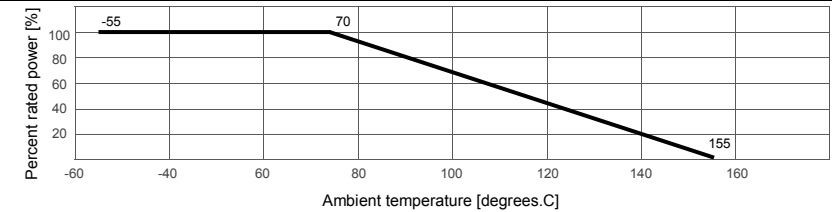
Model number

**TNP**      **8P(S)**      **5016**

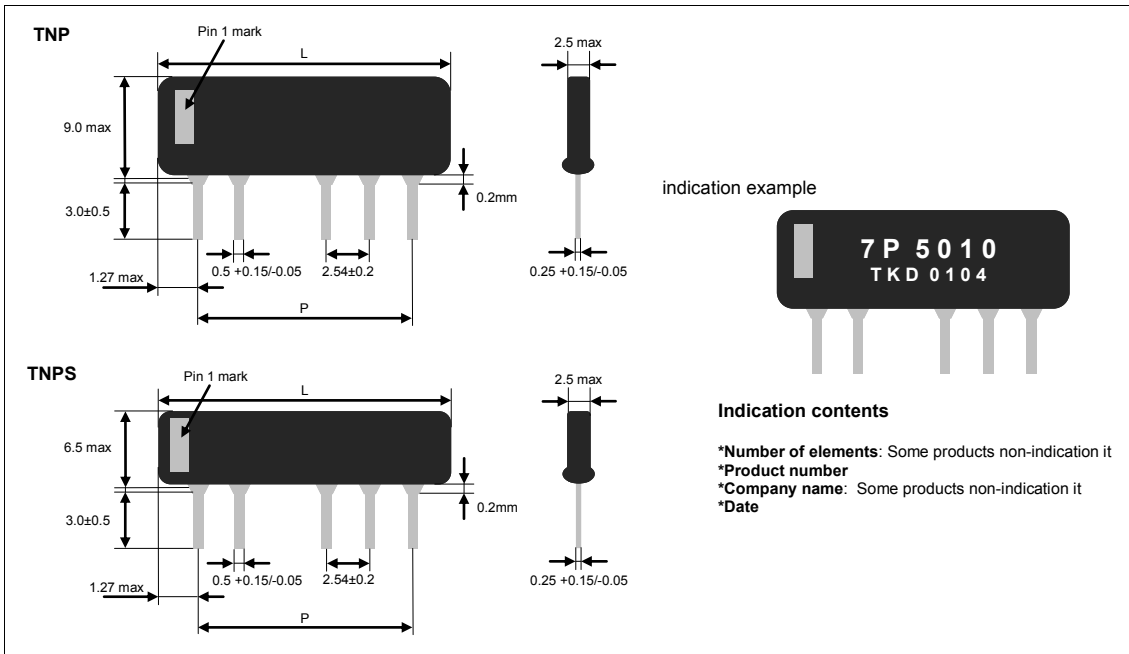
Product type      Number of elements      Product Number  
Acquire a number at the time of specifications decision in us.

Rating

Type	Rated power (70degs. C)		Highest usable voltage [V]	Extreme highest overload voltage [V]	Applicable temperature range [degs C]
	mW / Element	mW / Network			
3P	100	200	100	200	-55~155 [degs.C]
4P		300			
5P		400			
6P		500			
7P		600			
8P		700			
9P		700			
10P		700			
11P		700			
12P		700			
13P		700			
14P		700			
15P		700			



Dimensions



Dimensions [mm]

Dim	Type	3P	4P	5P	6P	7P	8P	9P
L-Max	TNP	8.98	11.52	14.06	16.6	19.14	21.68	24.22
	TNPS	7.62	10.16	12.7	15.24	17.78	20.32	22.86
P	Common	5.08	7.62	10.16	12.7	15.24	17.78	20.32
Dim	Type	10P	11P	12P	13P	14P	15P	-
L-Max	RN50	26.76	29.3	31.84	34.38	36.92	39.46	-
	Common	25.4	27.94	30.48	33.02	35.56	38.1	-
P	Common	22.86	25.4	27.94	30.48	33.02	35.56	-

Materials

Insulation molding	epoxy resin
Resistive film	Ni-Cr type
Lead frame	phosphor treatment (tin plating)
Core	ceramic

Temperature coefficient of resistance [ppm/degs.C]

Symbol	R	S	E	C
absolute	±5	±10	±25	±50
relative	1, 2, 5	1, 2, 5, 10	1, 2, 5, 10, 25	1, 2, 5, 10, 25

\* Relative value "1ppm" is a same resistance value.

\* Relative value "2ppm" is less than resistance ratio 50 times.

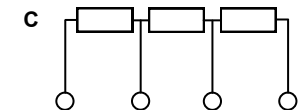
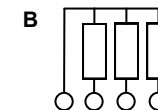
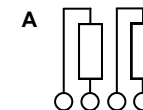
\* The guarantee temperature range of T.C.R is 0~70 degs.C about R, S.

Resistance tolerance [%]

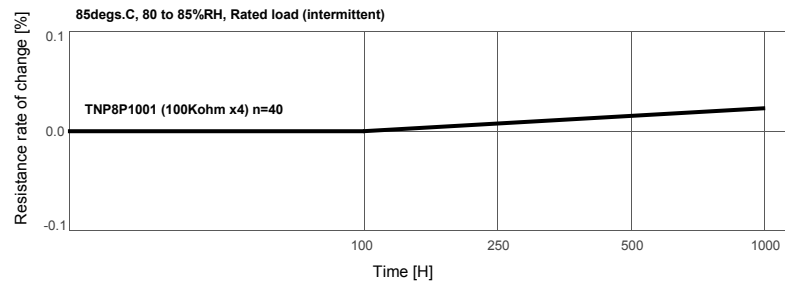
Symbol	A	B	C	D	F
absolute	±0.05	±0.1	±0.25	±0.5	±1
Relative	0.025, 0.05	0.025, 0.05, 0.1	0.025, 0.05, 0.1, 0.25	0.025, 0.05, 0.1, 0.25, 0.5	

Production resistance value range

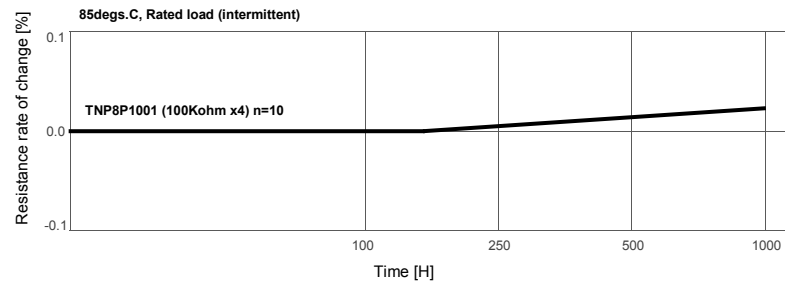
Circuit type	Production resistance value range [ohm]				Resistance ratio
	Temperature coefficient of resistance				
	R	S	E	C	
A	100~100K		40~250K		x1000
B	100~50K		40~100K		
C	100~75K		40~150K		



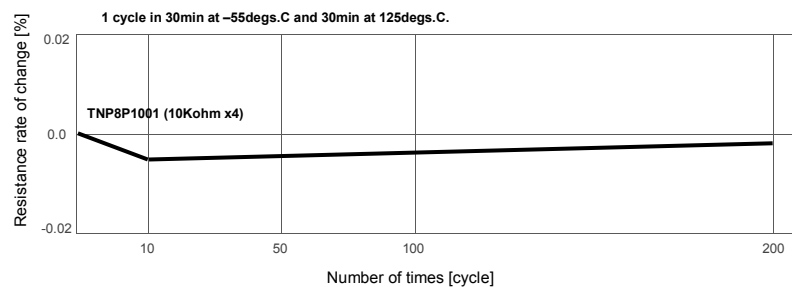
## Humidity load life test



## Load life test



## Thermal shock test



## Performance

Performance test contents		Performance of Correctohm-TNP	JIS C 5202
Electric	Resistance value	Rate value	5.1
	T.C.R	Rate value	5.2
	Overload (short time)	$\pm(0.01\%+0.01\text{ohm})$	5.5
	Insulation resistance	10,000Mohm Min.	5.6
Mechanic	Voltage proof	$\pm(0.01\%+0.01\text{ohm})$	5.7
	Terminal strength	$\pm(0.01\%+0.01\text{ohm})$	6.1
	Vibration resistance	$\pm(0.02\%+0.01\text{ohm})$	6.3
	Solder dip resistance	$\pm(0.02\%+0.01\text{ohm})$	6.4
	Solderability	95% Min.	6.5
	Solvent resistance	Appearance not having a problem.	6.9
Weatherability	Temperature cycling test	$\pm(0.02\%+0.01\text{ohm})$	7.4
	Humidity resistance	$\pm(0.02\%+0.01\text{ohm})$	7.9
	Rated load (70deg.C)	$\pm(0.02\%+0.01\text{ohm})$	7.10

## General specifications

TNP	
Storage temp. range	-10 to +50 degrees C
Relative humidity	85%RH (No condensation)

## Note

\* Use to the apparatus which may cause an in-vehicle apparatus (including the train), medical equipment, an aviation apparatus, an apparatus about human life including the ship apparatus and the serious damage; when is done, please talk by all means.