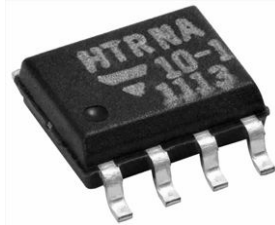
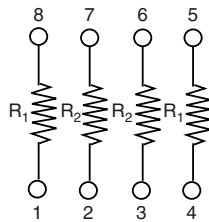


## Molded, 50 mil Pitch, High Temperature (215 °C); Thin Film Surface Mount, Dual-In-Line Resistor Network



HTRN series resistor networks feature four isolated resistors with standard 50 mil pitch lead spacing. HTRN is ideal to be used in oil/gas exploration industry, automotive under the hood applications, and aerospace engine control high temperature applications. The networks feature close TCR tracking and tight ratio tolerance and are ideally suited for unity gain operational amplifier circuitry. The standard resistance offering listed are available for immediate delivery.

### SCHEMATIC



### FEATURES

- Ratio tolerance to  $\pm 0.05\%$
- Ratio stability  $\pm 0.1\%$
- - 55 °C to 215 °C operating temperature range
- 0.068" (1.73 mm) maximum seated height
- Rugged molded case construction with no internal solder
- Low temperature coefficient ( $\pm 25$  ppm/°C)
- JEDEC MS-012 STD variation AA package
- Gold terminations for durable attach bonds
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.05

### STANDARD RESISTANCE OFFERING (R<sub>1</sub>/R<sub>2</sub>)

RATIO	R <sub>1</sub>	R <sub>2</sub>
100:1	100K	1K
50:1	50K	1K
25:1	25K	1K
20:1	20K	1K
10:1	10K	1K
5:1	10K	2K
2:1	10K	5K
4:1	4K	1K

### Note

- Consult factory for additional values and schematics

STANDARD ELECTRICAL SPECIFICATIONS		
TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin/Lead Number	8	-
Resistance Range	1000 $\Omega$ to 100 k $\Omega$ per resistor	-
TCR: Absolute	$\pm 25$ ppm/°C	- 55 °C to + 125 °C
TCR: Tracking	$\pm 5$ ppm/°C	- 55 °C to + 125 °C
Tolerance: Absolute	0.1 %	+ 25 °C
Tolerance: Ratio	0.05 %	+ 25 °C
Power Rating: Resistor	100 mW	Maximum at + 70 °C
Power Rating: Package	400 mW	Maximum at + 70 °C
Stability: Absolute	$\Delta R \pm 0.5\%$	2000 h at + 215 °C at 25 % rated power
Stability: Ratio	$\Delta R \pm 0.1\%$	2000 h at + 215 °C at 25 % rated power
Voltage Coefficient	0.1 ppm/V (typical)	-
Working Voltage	100 V max. not to exceed $\sqrt{P \times R}$	-
Operating Temperature Range	- 55 °C to + 215 °C	-
Storage Temperature Range	- 55 °C to + 215 °C	-
Noise	< - 30 dB	-
Thermal EMF	0.08 $\mu$ V/°C	-
Shelf Life Stability: Absolute	$\Delta R \pm 0.01\%$	1 year at + 25 °C
Shelf Life Stability: Ratio	$\Delta R \pm 0.002\%$	1 year at + 25 °C

DIMENSIONS AND IMPRINTING in inches and millimeters			
	<b>DIMENSION</b>	<b>INCHES</b>	<b>MILLIMETERS</b>
	A	0.157	3.99
	B	0.0165 ± 0.0025	0.4 ± 0.06
	C	0.050	1.27
	D	0.195 max.	4.93
	E	0.008 ± 0.001	0.20 ± 0.03
	F	0.028 ± 0.001	0.71 ± 0.02
	G	0.239 ± 0.005	6.07 ± 0.13
	H	0.068 max.	1.73
	I	0.008 ± 0.002	0.22 ± 0.06
Ø	2° to 6°	2° to 6°	

**Note**

- Marking - Vishay symbol, part number from ordering information

MECHANICAL SPECIFICATIONS	
<b>Resistive Element</b>	Passivated nichrome
<b>Substrate Material</b>	Silicon
<b>Body</b>	Molded epoxy
<b>Terminals</b>	Copper
<b>Termination Finish</b>	Plated Ni/Pd/Au



GLOBAL PART NUMBER INFORMATION			
New Global Part Numbering: HTRN5-1UF			
H	T	R	N
5	-	1	U
F			
GLOBAL MODEL (4 digits)	RESISTANCE (3, 4 or 5 digits)	PACKAGING	
HTRN	2-1 4-1 5-1 10-1 20-1 25-1 50-1 100-1	TAPE AND REEL T0 = 100 min., 100 mult T1 = 1000 min., 1000 mult T3 = 300 min., 300 mult T5 = 500 min., 500 mult TF = Full reel 3000 TS = 100 min., 1 mult  UF = TUBED	



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