### **MEGGITT HOLSWORTHY**

HYBRID CIRCUITS ELECTRONIC ASSEMBLIES PRECISION RESISTORS SMD PRECISION RESISTORS PRECISION NETWORKS

## High Precision Resistors (SMD) TYPE RN73 SERIES



The RN73 series is a stable precision chip resistor range offering various power dissipation relating to chip size, TCR's down to 10ppm/°C and resistor tolerances to 0.1%. The resistor is produced with three sputtered layers giving better performance. Values are restricted to the E96 grid and the RN73 has accurate and uniform physical dimensions to facilitate placement. They are of course packaged on tape and reeled.

#### MEGGITT HOLSWORTHY KEY FEATURES

- HIGH PRECISION TCR 10 PPM/°C
- TOLERANCES DOWN TO 0.1%
- THIN FILM (NICHROME)
- CHOICE OF PACKAGES (08:05 STD)
- SUPPLIED ON REELS OF 5000, 4000 or 1000
- STABLE HIGH FREQUENCY PERFORMANCE
- 100V DC OPERATING VOLTAGE
- TEMPERATURE RANGE -55°C to +125°C



#### SPECIFICATION

#### TYPE RP73 SERIES (Page 2 of 2)

#### ELECTRICAL

	1J	2A	2B	2E
Rated Power	0.063W	0.1W	0.125W	0.25W
Maximum working voltage	75V	100V	150V	200V
Maximum overload voltage	100V	200V	300V	400V
Working temperature range		-55°C ~	·+125°C	
Rated ambient temperature	70° C			

#### **Resistance Value Range**

Туре	T.C.R. (ppm/°C)	Resistance tolerance E-24, E-96 series				
1J	F (± 25) G (± 50) H (±100)	B (±0.1%) 100 ~ 33K 10 ~ 33K 10 ~ 330K	C (±0.25%)   	D (±0.5%) 100 ~ 33K 10 ~ 33K 10 ~ 330K	E (±1.0%)  	
2A	C (± 10) D (± 15) F (± 25) G (± 50) H (±100)	100 ~ 100K 100 ~ 100K 100 ~ 100K 	100 ~ 100K 100 ~ 100K 51 ~ 100K 51 ~ 150K 	100 ~ 100K 100 ~ 100K 10 ~ 100K 10 ~ 150K 160K ~ 1M	 10 ~ 100K 10 ~ 150K 160K ~ 1M	
2B	C (± 10) D (± 15) F (± 25) G (± 50) H (±100)	100 ~ 130K 100 ~ 130K 100 ~ 130K  	100 ~ 130K 100 ~ 130K 51 ~ 130K 51 ~ 360K 	100 ~ 130K 100 ~ 130K 10 ~ 130K 10 ~ 360K 390K ~ 1M	 10 ~ 130K 10 ~ 360K 390K ~ 1M	
2E	C (± 10) D (± 15) F (± 25) G (± 50) H (±100)	100 ~ 240K 100 ~ 240K 100 ~ 240K 	100 ~ 240K 100 ~ 240K 51 ~ 240K 51 ~ 510K 	100 ~ 240K 100 ~ 240K 10 ~ 240K 10 ~ 510K 560K ~ 1M	 10 ~ 240K 10 ~ 510K 560K ~ 1M	

#### ENVIRONMENTAL/MECHANICAL

# ItemCharacteristicsDC resistance valueWithin allowanceShort-time overloadC, F, G $\pm$ (0.1% + 0.05 ohm) H $\pm$ (0.25%Insulation resistanceMore than 10³ MegDielectric withstanding voltage $\pm$ (0.25% + 0.05 ohm)Resistance to soldering heatC, F, G $\pm$ (0.1% + 0.05 ohm) H $\pm$ (0.25%Solderability95% minimumTerminal strength bend $\pm$ (0.1% + 0.05 ohm)Resistance to solventNo damage or marking must remain leg

C, F, G  $\pm$  (0.1% + 0.05 ohm) H  $\pm$  (0.25% + 0.05 ohm) More than 10<sup>3</sup> Meg  $\pm$  (0.25% + 0.05 ohm) C, F, G  $\pm$  (0.1% + 0.05 ohm) H  $\pm$  (0.25% + 0.05 ohm) 95% minimum  $\pm$  (0.1% + 0.05 ohm) No damage or marking must remain legible  $\pm$  (0.25% + 0.05 ohm)  $\pm$  (0.5% + 0.05 ohm) C, F, G  $\pm$  (0.25% + 0.05 ohm) H  $\pm$  (0.5% + 0.05 ohm) (0.5% - 0.05 ohm)

C, F, G  $\pm$  (0.1% +0.05 ohm) H  $\pm$  (0.2% + 0.05 ohm)

#### DIMENSIONS

Moisture resistance (Load)

Room temperature exposure

Temperature cycle

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Туре	L ± 0.2	$W \pm 0.2$	D	$d \pm \frac{0.2}{0.1}$	H ± 0.1
RN73 1J	1.6	0.8	$0.3 \pm 0.2$	0.3	0.4
RN 732A*	2.0	1.25	$0.4 \pm 0.2$	0.3	0.5
RN 732B	3.2	1.6	$0.5 \pm 0.3$	0.4	0.6
RN 732E	3.2	2.5	$0.5\pm 0.3$	0.4	0.6

#### Power Derating Curve

For temperartures in excess of 70°C the load shall be derated in accordance with the following figure.



#### Voltage Rating

 $E = \sqrt{P x R}$ 

Where,		
	E : Rated voltage (V)	
	P : Power Rating (W)	

R : Nominal Resistance (ohms)

In no case shall the rated DC or R.M.S. continuous working voltage be greater than the applicable maximum value.

#### Test Method JIS C 5202

Item 5.1 condition A Item 5.5 condition A, (2.5 x RCWV for 5 seconds) Item 5.6 500V DC Item 5.7 500V DC 60  $\pm$  10 seconds. Item 6.4 260  $\pm$  5° C 10  $\pm$  1 second. Item 6.4 235  $\pm$  5° C 3  $\pm$  0.5 second. Item 6.1.4, 3mm Defiection in either direction for 10 seconds. Item 6.9 condition A Item 7.4 -55° C/+125° C 5 cycles. Item 7.9 40  $\pm$  2° C 90  $\sim$  95% RH 1000 hours. Item 7.10, 70  $\pm$  3° C 1000 hours. 365  $\pm$  0.5 day @ 25  $\pm$  10° C C, F, G, H relate to TCR

-++- D	See Table
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RN73	c	2A	100K		B 	TDF	
COMMON PART	TEMP. COEFFICIENT	CHIP SIZE	RESISTANCE VALUE		TOLERANCE	PACK QTY	
RN73 - Series Part Number	OF RESISTANCE C ± 10 ppm/°C* D ± 15 ppm/°C F ± 25 ppm/°C G ± 50 ppm/°C H ± 100 ppm/°C	1J - 06:03 2A - 08.05* 2B - 12.06 2E - 12.10	100 ohms 1 K ohm 100 K ohm	(100 ohms) (1000 ohms) (100,000 ohms)	100R 1K0 100K	$B \pm 0.1\%^{*} \\ C \pm 0.25\% \\ D \pm 0.5\% \\ F \pm 1.0\% \\ \label{eq:basic}$	TG - Cut tape lengths (2A only) TDF - 1000 (Paper) (2A Only) TDG - 2000 (Paper) TE - 4000 (Plastic) TD - 5000 (Plastic)

\* Preferred - Stocked Item

HOW TO ORDER

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