

**STANDARD ELECTRICAL SPECIFICATIONS**

MODEL	RESISTANCE RANGE Ω	RATED POWER $P_{25^{\circ}\text{C}}$ W	TOLERANCE \pm %
RLP1	0.05 to 2K	1	0.1, 0.2, 0.5, 1, 2, 5
RLP2	0.025 to 6.8K	2	0.1, 0.2, 0.5, 1, 2, 5
RLP3	0.01 to 15K	3	0.1, 0.2, 0.5, 1, 2, 5
RLP6	0.02 to 59K	6	0.1, 0.2, 0.5, 1, 2, 5
RLP10	0.06 to 150K	10	0.1, 0.2, 0.5, 1, 2, 5

MECHANICAL SPECIFICATIONS

Series and Style	RLP1, RLP2	RLP3, RLP6, RLP10
Encapsulant	High temperature mold compound	High temperature silicone coating
Resistive Element	CuNi or NiCr	
Ceramic Substrate	Alumina or steatite	
Termination	Pure matte tin or Sn/Ag/Cu	

ENVIRONMENTAL SPECIFICATIONS

Temperature Range	-55 °C to 275 °C
Climatic Category (LCT/UCT/days)	55/200/56

PERFORMANCE

TESTS	CONDITIONS	REQUIREMENTS ($\Delta R/R$ OR INDICATED PARAMETER) CECC 40-201-006
Short Time Overload	IEC 60115-1 6.25 $P_{\text{Extended Sfernice Power}}$ or $U = 2 U_{\text{max.}}/5$ s for RLP1, RLP2, RLP3 12 $P_{\text{Extended Sfernice Power}}$ or $U = 2 U_{\text{max.}}/5$ s for RLP6, RLP10	\pm (0.25 % + 0.05 Ω)
Load Life	IEC 60115-1 90'/30' cycles 1000 h $P_{\text{Extended Sfernice Power}}$ + 25 °C	\pm (0.5 % + 0.05 Ω) Insulation $R \geq 1 \text{ G}\Omega$
Dielectric w/s Voltage	IEC 60115-1 $U_{\text{RMS}} = 500 \text{ V}/60 \text{ s}$	No flashover or breakdown Leakage current < 10 μA
Rapid Change of Temperature	IEC 60115-1 IEC 60068-2-14 Test Na 5 cycles (30' at LCT/30' at UCT) -55 °C / +200 °C	\pm (0.25 % + 0.05 Ω)
Climatic Sequence	IEC 60115-1 -55 °C / +200 °C/56 days	\pm (0.5 % + 0.05 Ω)
Humidity (Steady State)	IEC 60115-1 IEC 60068-2-3 Test Ca 95 % HR/40 °C 56 days	\pm (0.5 % + 0.05 Ω) Insulation $R \geq 100 \text{ M}\Omega$
Shock	IEC 60115-1 IEC 60068-2-27 Test Ea 50 g's/half sine/ 3 times by direction (i.e. 18 shocks)	\pm (0.25 % + 0.05 Ω)
Vibration	IEC 60115-1 IEC 60068-2-6 Test Fc 10 Hz / 55 Hz	\pm (0.25 % + 0.05 Ω)
Load Life at Upper Category Temperature	IEC 60115-1 90' / 30' cycles 1000 h $P_{\text{Extended Sfernice Power}}$ +200 °C	\pm (0.5 % + 0.05 Ω) Insulation $R \geq 1 \text{ G}\Omega$



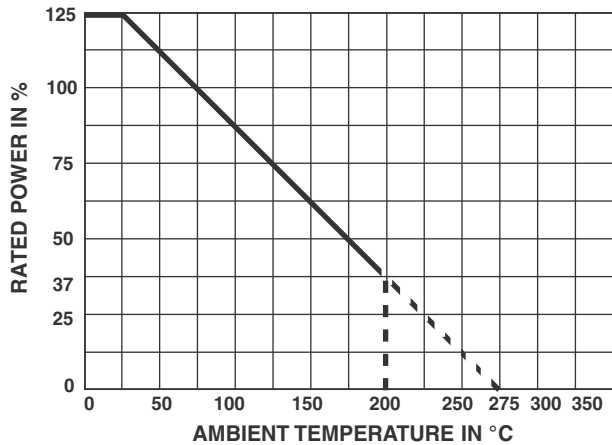
TEMPERATURE COEFFICIENT in the range -55 °C to +200 °C	
OHMIC RANGE	REQUIREMENT CECC 40-201-006
< 1 Ω	± 100 ppm/°C
1 Ω to < 10 Ω	± 50 ppm/°C
≥ 10 Ω	± 25 ppm/°C

STABILITY AND POWER RATING

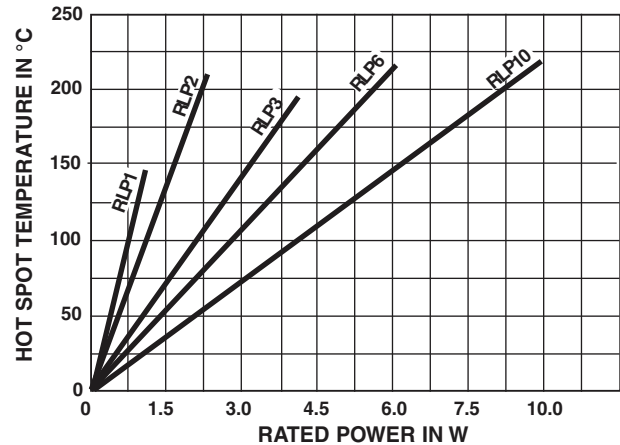
Stability changes slightly according to power rating and ambient temperature. This fact is especially important for users needing a life drift lower than the initial resistance tolerance. Typical drifts, after 2000 h life test made under the 90' / 30' conditions and at an ambient temperature of 25 °C, are:

OHMIC RANGE	RLP1	RLP2	RLP3	RLP6	RLP10	ΔR %/R %
Pr	1 W	2 W	3 W	5 W	10 W	0.3
0.5 Pr	0.5 W	1 W	1.5 W	2.5 W	5 W	0.15

POWER RATING



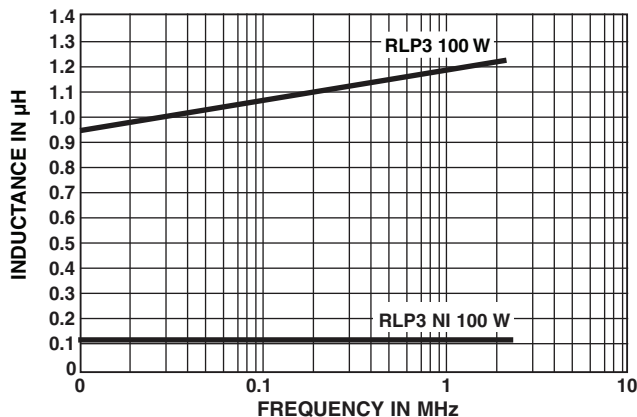
TEMPERATURE RISE



NON INDUCTIVE WINDING (NI)

Non inductive (Ayrton Perry) winding available. Please consult Vishay Sfernice.

INDUCTANCE (Example)



PACKAGING (see datasheet 50032 and 50033)

- Reel of 1000 units for RLP1, RLP2, RLP3
- Ammopack of 500 units for RLP1, RLP2, RLP3
- Bag of 100 units for RLP1, RLP2
- Blister of 20 units for RLP3
- Box of 50 units for RLP6, RLP10

MARKING

Vishay Sfernice trademark, series, style, CECC style (if applicable) nominal resistance (in Ω, kΩ), tolerance (in %), manufacturing date.



ORDERING INFORMATION				
RLP	01	5R500	J	R15
MODEL	STYLE	OHMIC VALUE	TOLERANCE	PACKAGING

GLOBAL PART NUMBER INFORMATION						
<div style="display: flex; justify-content: space-around; font-weight: bold; font-size: 1.2em;"> RLP06150R0JB00 </div>						
GLOBAL MODEL	SIZE	OPTION	OHMIC VALUE	TOLERANCE	PACKAGING	SPECIAL
RLP	01 02 03 06 10	N = non inductive winding	The first four digits are significant figures and the last digit specifies the number of zeros to follow. R designates decimal point. 680R0 = 680 Ω 20301 = 20.3 kΩ 88R88 = 88.88 Ω ...	B = 0.1 % C = 0.2 % D = 0.5 % F = 1 % G = 2 % J = 5 %	Standard packaging: Size 01 and 02: S14 = bag, 100 pieces size 03: B15 = bulk, 20 pieces size 06 and 10: B25 = box, 50 pieces	As applicable Ex = MEX



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.