

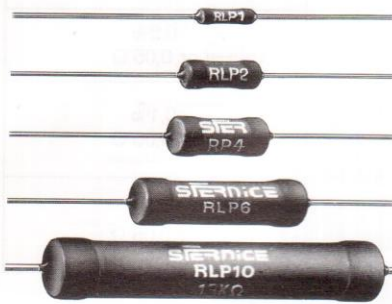
RLP

Data sheet 501E

insulated precision wirewound resistors

1W to 10W
at 25°C

CCTU 04-09
MIL-R-26E



Among wirewound precision resistors, the RLP Series holds a leading position in professional applications whenever an excellent stability of the ohmic value and a coherently low temperature coefficient are required at the same time.

Resistors of the RLP Series comply with the most stringent requirements of the CCTU 04-09 and MIL-R-26E specifications.

The Series consists of 5 models covering the power range from 1 to 10 W. Non-inductive versions can be supplied on request by specifying RLP-NI. For higher power dissipations, the use of the RH Series resistors is recommended.

- EXCELLENT STABILITY
- HIGH SPECIFIC POWER
- LOW OHMIC VALUES
- LOW TEMPERATURE COEFFICIENT
- ELECTRICAL INSULATION
- CLIMATIC PROTECTION

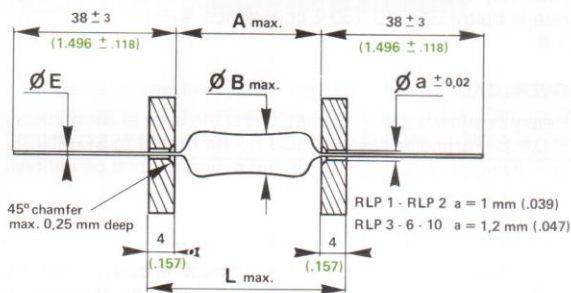


Table 1

Series and style	RLP1	RLP2	RLP3	RLP6	RLP10
A maxi	8,90 (.350)	11,1 (.437)	14 (.551)	23,82 (.937)	46,78 (1.841)
$\varnothing B \text{ maxi}$	2,67 (.105)	3,18 (.125)	5,54 (.218)	8,71 (.343)	10,32 (.406)
E	0,6±0,1 (.023±.004)	0,6±0,1 (.023±.004)	0,8±0,1 (0.31±.004)	0,8±0,1 (.031±.004)	0,8±0,1 (0.31±.004)
Weight in: g	0,26 g	0,3 g	1,3 g	3,4 g	8,6 g

FEATURES

Table 2

SFERNICE SERIES AND STYLES		▲ RLP1	▲ RLP2	▲ RLP3	▲ RLP6	▲ RLP10
CCTU 04-09 STYLES		—	RP7	RP4	RP5	RP6
MIL-R-26E STYLES		RW 81	RW 80	RW 79	RW 74	RW 78
POWER RATING AT +25°C	SFER limits	1 W	2 W	3 W	6 W	10 W
	CCTU limits	1 W	1,5 W	2,5 W	5 W	9 W
	MIL limits	1 W	2 W	3 W	5 W	10 W
OHMIC RANGE IN RELATION TO TOLERANCE	± 5% E24	0,1 Ω 2 Ω	0,1 Ω 4,5 Ω	0,05 Ω 12,3Ω	0,1 Ω 35 Ω	0,1 Ω 126 Ω
	± 2% E48	0,1 Ω 2 KΩ	0,1 Ω 4,5 KΩ	0,08 Ω 12,3 KΩ	0,1 Ω 35 KΩ	0,1 Ω 126 KΩ
	± 1% E96	0,2 Ω 2 KΩ	0,2 Ω 4,5 KΩ	0,15 Ω 12,3 KΩ	0,15 Ω 35 KΩ	0,15 Ω 126 KΩ
	± 0,5% E96	0,4 Ω 2 KΩ	0,4 Ω 4,5 KΩ	0,3 Ω 12,3 KΩ	0,3 Ω 35 KΩ	0,3 Ω 126 KΩ
	± 0,1% E 96	Please consult SFERNICE				
LIMITING ELEMENT VOLTAGE		50 V	120 V	200 V	300 V	720 V
CRITICAL RESISTANCE		out of nominal ohmic range			17800 Ω	51100 Ω

▲ Undergoes the Centralized Quality Control

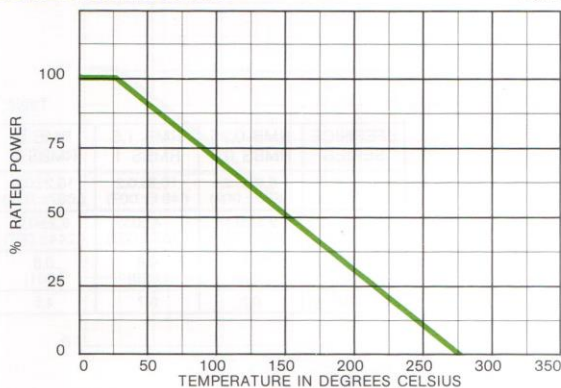
PERFORMANCES

Table 3

TEST	CONDITIONS	REQUIREMENTS		TYPICAL VALUES AND DRIFTS
		MIL-R-26E	CCTU04-09	
DIELECTRIC W/ S VOLTAGE	1000VRMS for RW74-78 500VRMS for RW79-80-81	$\pm(0,1\% + 0,05 \Omega)$	$\pm 0,1\%$ or $0,05\Omega$	0,05%
SHORT TIME OVERLOAD	5Pn/ 5s with $P_n < 5W$ 10Pn/ 5s with $P_n \geq 5W$	$\pm(0,2\% + 0,05\Omega)$	$\pm 0,5\%$ or $0,05\Omega$	0,1%
CLIMATIC SEQUENCE	CCTU 01-01A fasc. 19A -65°C/ +200°C 5 cycles	—	$\pm 0,5\%$ or $0,05\Omega$ Insulation R > 100M Ω	0,2% Insulation resistance > 10 ³ M Ω
HUMIDITY (STEADY STATE)	CCTU 01-01A fasc. 3A 56 days 95% R.H	—	$\pm 1\%$ or $0,05\Omega$ Insulation R > 100M Ω	0,3% Insulation resistance > 10 ³ M Ω
THERMAL SHOCK	Load at 100% P followed by cold temp. exposure at -55°C	$\pm(0,2\% + 0,05\Omega)$	$\pm 0,5\%$ or $0,05\Omega$	0,1%
VIBRATIONS	MIL-STD-202 Method 204-Test D: 20 g 10/ 2000Hz	$\pm(0,1\%+0,95\Omega)$	$\pm 1\%$ or $0,05\Omega$	0,05%
LOAD LIFE	MIL-STD-202 Method 108 Pn 2000 hours	$\pm (0,5\% + 0,05\Omega)$	$\pm 0,5\%$ or $0,05\Omega$	0,3%
MOISTURE RESISTANCE	MIL-STD-202 Method 106	$\pm(0,2\% + 0,05\Omega)$ Insulation resistance > 100M Ω	—	0,1% Insulation resistance > 10 ³ M Ω
HIGH TEMPERATURE	250 hours at +275°C	$\pm(0,5\% + 0,05\Omega)$	—	0,3%
SHOCKS	MIL-STD-202 100 g Method 205 Test C	$\pm(0,1\% + 0,05\Omega)$	$\pm 0,1\%$ or $0,05\Omega$	0,05%

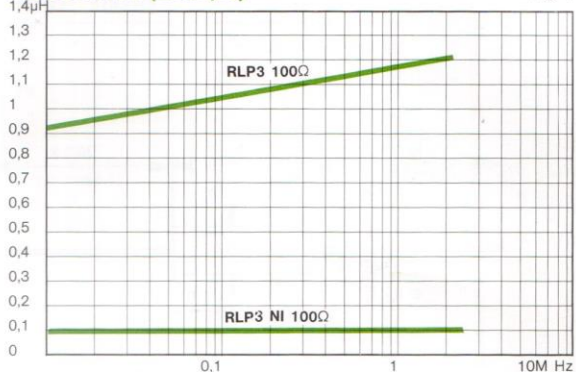
POWER RATING CHART

Fig. 2



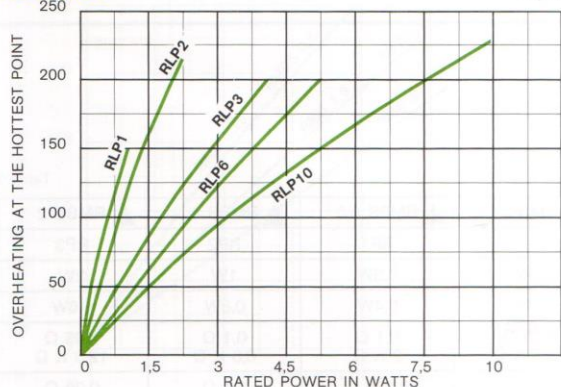
INDUCTANCE (Example)

Fig. 4



HEAT RISE

Fig. 3



TEMPERATURE COEFFICIENT IN THE RANGE -65° +275°C

Table 4

Ohmic range	LIMITS		Typical value
	CCTU	MIL	
<1Ω	$\pm 100\text{ppm}/^\circ\text{C}$	$\pm 90\text{ppm}/^\circ\text{C}$	$\pm 50\text{ppm}/^\circ\text{C}$
1Ω...<10Ω	$\pm 50\text{ppm}/^\circ\text{C}$	$\pm 50\text{ppm}/^\circ\text{C}$	
$\geq 10\Omega$	$\pm 30\text{ppm}/^\circ\text{C}$	$\pm 30\text{ppm}/^\circ\text{C}$	+0 to -20ppm/°C

MARKING

SFERNICE trade mark, series, style, CCTU style (if applicable) nominal resistance (in Ω), tolerance (in %), manufacturing date. Because of the lack of space RLP1 style is expressed as LP1, tolerance in code, ohmic value (in Ω).

STABILITY AND POWER RATING

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

Table 5

Pn	RLP1	RLP2	RLP3	RLP6	RLP10	$\Delta R/R$ %
	1W	1W	2W	3W	5W	10W
0,5Pn	0,5W	1W	1,5W	2,5W	5W	0,15

ORDERING PROCEDURE

