



JOURNAL OF MODIFICATION FOR PTC

Code number

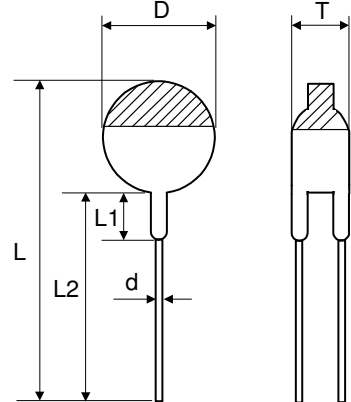
2381 660 91007-9

PTCZL05SxxxDBExxx

ED.	DATE	ISSUED- REVISED PAGES	REMARKS
1	2005.10.27	190-1 to 190-4 191-1 to 191-2	Final specification created according to CP 3472 - Release situation identical to 2322 660 91007-9
2	2005.12.14	190-2	PQ removed according to CP3485 Outline and dimensions in mm
3	2006.05.05	190-2	- Packing information Evere removed Changed according to CP 3591

Approved by : T. Laurent

Date : 05-May-2006

<p>ELECTRONIC COMPONENTS OF ASSESSED QUALITY MEASURED IN ACCORDANCE WITH IEC 60738-1</p>	<p>Number of detail specification : 2381 660 91007-9</p> <p>PTCZL05SxxxDBExxx</p>
<p>Outline and dimensions in mm</p>  <p> $D : 5.0 \pm 1$ $d : 0.5 \pm 10\%$ L : not specified. $L1 : 5.0 \text{ max.}$ $L2 : 47 \pm 3$ $T : 3.5 \pm 1$ </p>	<p>DIRECTLY HEATED POSITIVE TEMPERATURE COEFFICIENT THERMISTORS PRIMARILY INTENDED FOR USE IN GENERAL APPLICATIONS</p> <hr/> <p>DISC TYPE Modified Ferro-electric materials</p> <hr/> <p>NON INSULATED</p> <hr/>

NOTES

1. The non-dimensioned details do not affect the performance of the device.
2. The parts are ROHS compliant.
3. The leads are 100% Sn plated.
4. The leads are suitable for Pb-bearing and Pb-free soldering.
5. The leads are suitable for printed wiring applications.

1. RATINGS AND CHARACTERISTICS

- Resistance at 25°C	: see table 1
- Resistance at other temperatures	: see table 1
- Maximum resistance at switch temperatures	: see table 1
- Switch-temperature (Ts) (for information)	: see table 1
- Temperature coefficient (α)(for information)	: see table 1
- Maximum voltage	: 25 Vdc
- Dissipation factor (δ) (for information)	: 7 mW/K
- Thermal time constant (τ)(for information)	: see table 1
- Heat capacity (H) (for information)	: see table 1
- Operating temperature range at zero power for 2381 660 91007-8	: -25°C to 125°C
2381 660 91009	: -25°C to 155°C
at maximum voltage	: 0°C to 55°C



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TABLE 1

Code number 2381	R at 25°C ±30%	Rmax at Ts	R at 125°C	R at 150°C	Ts	α	τ	H
	Ω	Ω	k Ω min	M Ω	°C	%/K	S	J/K
660 91007	50	300	100		50	16	18	0.13
660 91008	50	400	50		80	23	18	0.13
660 91009	50	400		0.1 to 1.2	105	40	18	0.13

SAP codification

12 NC 2381	SAP Coding
2381 660 91007	PTCZL05S501DBE007
2381 660 91008	PTCZL05S081DBE008
2381 660 91009	PTCZL05S105DBE009

2. Marking : Component body grey lacquered with a colour band on the top.

Colour band : 2381 660 91007 : orange
2381 660 91008 : yellow
2381 660 91009 : green

3. Weight : 0.4 g approx.

4. Packing : SPQ : 500 items

A label on the cardboard-box is provided with the following data:

- Name of manufacturer
- MADE IN PRC
- PROD. INFO : 1) RoHS compliant
- 2) Ref.: European directive in force at the manufacturing date (see packing label)
- ORIG : N260
- TYPE : PTC
- BATCH :
- QTY
- CODE NO : 12 NC
- RPC : VS
- DATE : (YYWW)



5. Curves : Resistance - Temperature
Voltage – Current

: see page 190-3

: see page 190-4

6. Inspection requirements

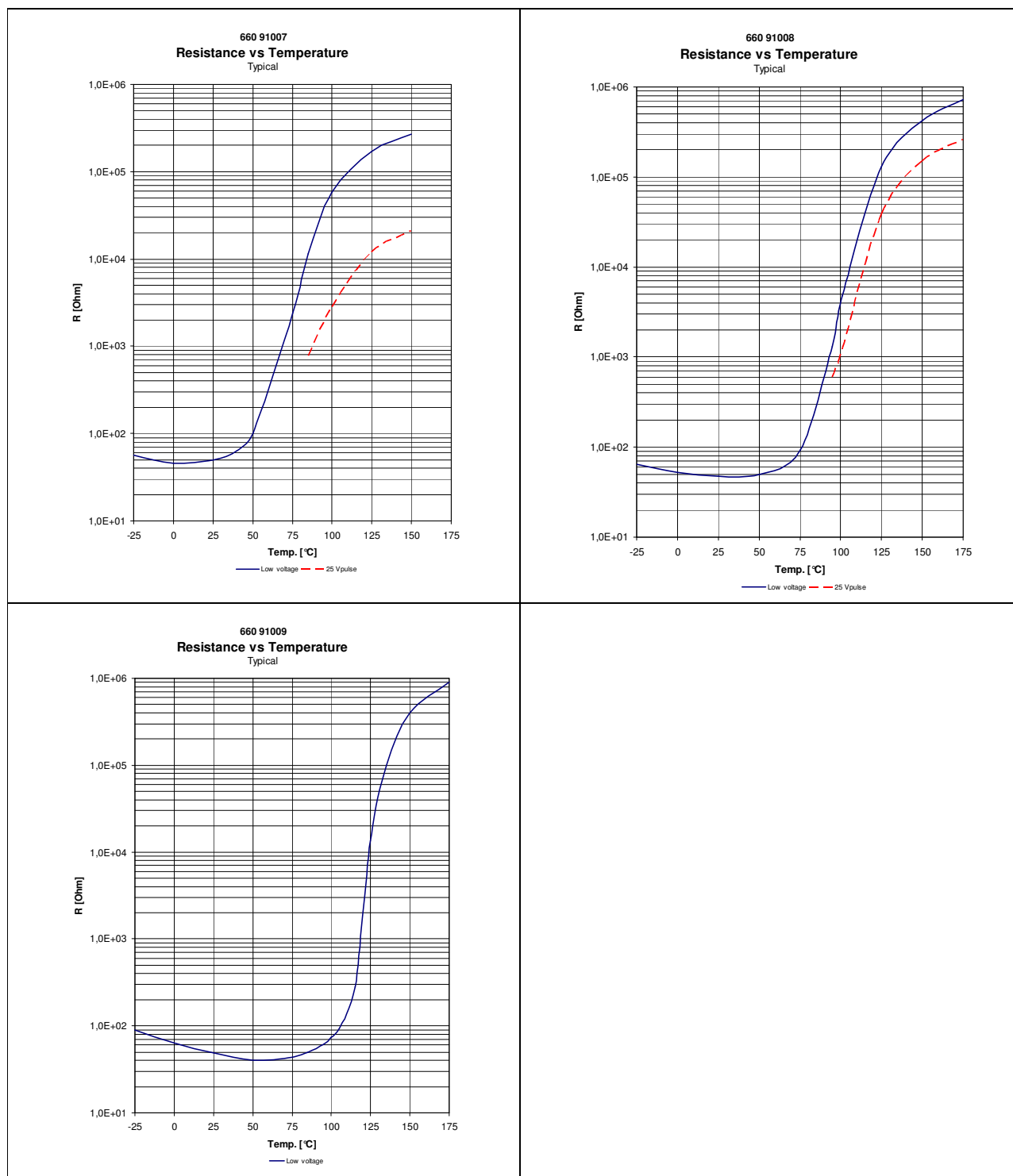
: see table 2



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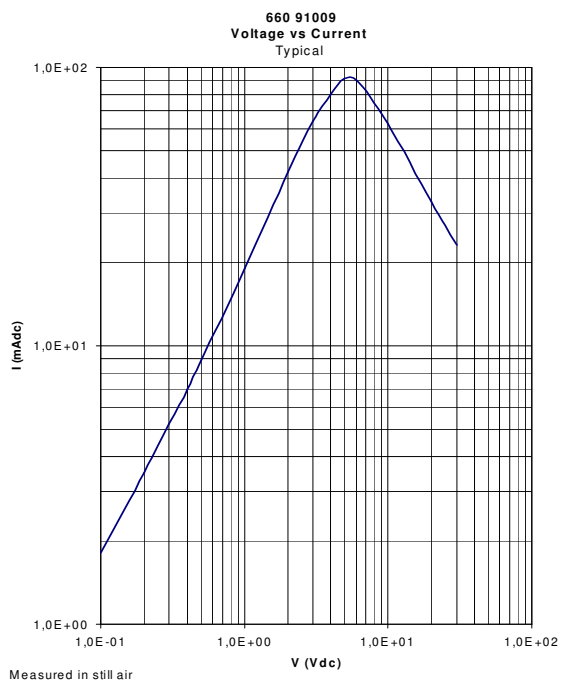
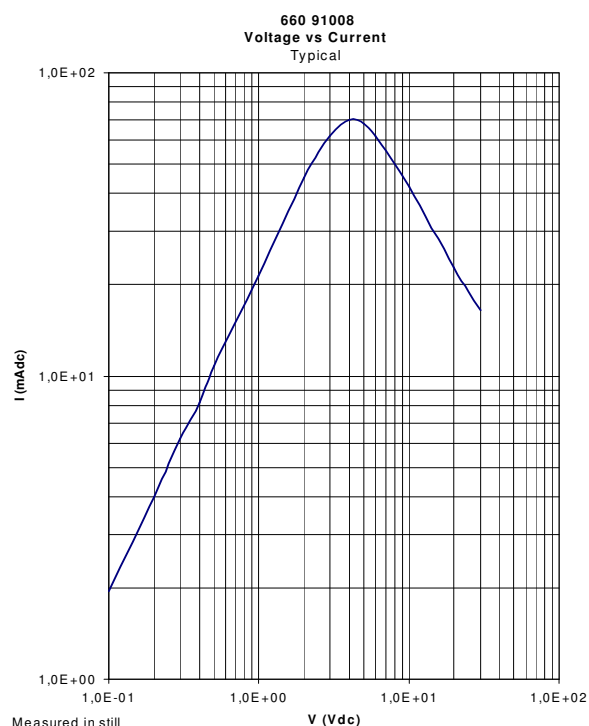
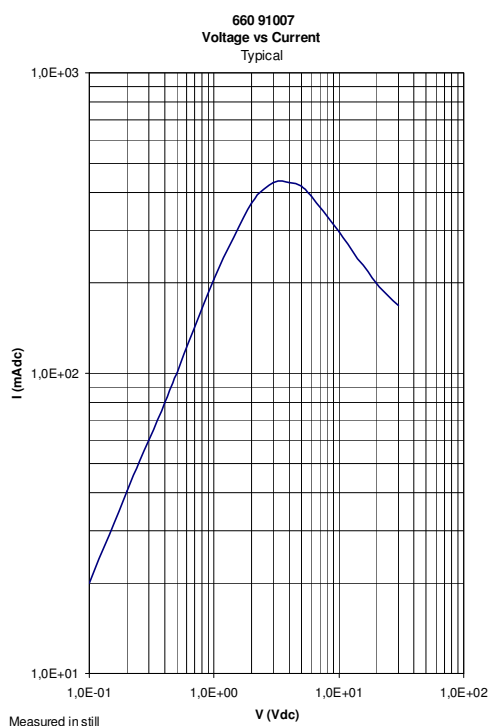


Table 2

- Notes
1. Clause numbers of tests and performance requirements refer to IEC 60738-1
 2. Inspection levels are selected from IEC publication 60410.
 3. In this table:
 - p = periodicity (in months)
 - n = sample size
 - c = acceptance criterion (permitted number of defectives)
 - D = destructive
 - ND = non-destructive
 4. Leads should neither come loose nor break.

Clause number and test (see note 1)	D or ND	Conditions of test (see note 1)	IL (see note 2)	Performance requirements (see note 1)
<u>GROUP 0 INSPECTION</u> (lot - by - lot) 4.4.1. Visual examination 4.4.2. Marking 4.4.3. Dimensions (gauging) 4.5. Zero power resistance	ND	 Temperature : 25°C 125°C 150°C	 S4 S2 S4	 No defect likely to impair function As specified As specified As specified As specified As specified
<u>GROUP 1 INSPECTION</u> (lot - by - lot) 4.16.1. Soldering Solderability	D	 Solder bath method: 235 ± 5 °C (Pb-bearing) 245 ± 5 °C (Pb-free)	 S2	 The terminations shall be evenly tinned

Group 2-8 according to Quality Assurance Program except for following tests



Clause number and test (see note 1)	D or ND	Conditions of test (see note 1)	Sample size and criterion of acceptability (see note 3)			Performance Requirements (see note 1)
<u>GROUP 5 INSPECTION</u> (periodic) 4.23.1. Endurance at room temperature (Cycling)	D	<u>10 samples</u> Duration : 2000 cycles Voltage : 25 Vdc Temperature : 25 °C R series : 47 Ω Cycle : 1 min ON / 9 min. OFF Visual examination Zero power resistance at 25 °C <u>10 samples</u> Duration : 100 cycles Voltage : 25 Vdc Temperature : 0 °C R series : 47 Ω Cycle : 1 min ON / 9 min OFF Visual examination Zero power resistance at 25 °C	p 6	n 20	c 0	As in 4.23.1 ΔR/R: ±7.5% max. As in 4.23.1 ΔR/R: ±10% max.
<u>GROUP 7 INSPECTION</u> 4.23.3. Endurance at max. operating temperature and max. voltage	D	<u>10 samples</u> Duration: 1000 h at 55 °C and 25 Vdc Examination at 24 , 500 and 1000h Visual examination Zero power resistance at 25 °C	12	10	0	As in 4.23.3 ΔR/R: ±10% max.