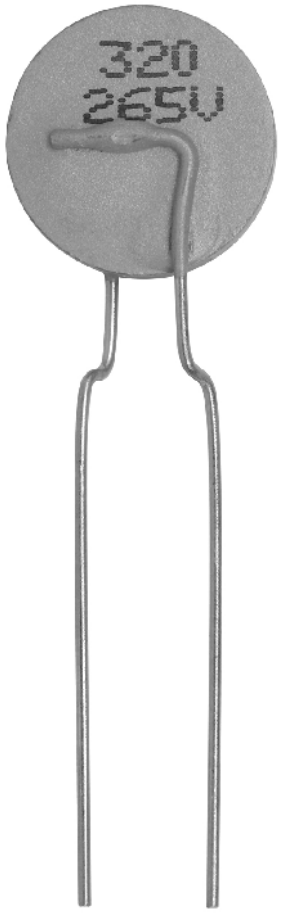
265 V PTC Thermistors For Overload Protection



FEATURES

- Wide range of trip and non-trip currents: from 11 mA up to 800 mA for the trip current
- Wide range of resistance: from 2.1 Ω up to 3 KΩ
- Small ratio between trip and non-trip currents (I_t/I_{nt} = 1.5 at 25 °C)
- High maximum inrush current
- Excellent long term behaviour, also in humidity
- Leaded parts withstand mechanical stresses and vibration
- UL file E148885 according to XGPU standard UL1434
- UL approved PTCs are guaranteed to withstande severe test programmes
  - Long-life cycle tests (over 5000 trip cycles)
  - Long-life storage tests (3000 hours at 250°C
  - Electrical cycle tests at low ambient temperatures (- 40°C or 0°C)
  - Damp-heat and water immersion tests
  - Overvoltage tests at up to 200% of rated voltage

APPLICATIONS

- Telecommunications
- Automotive systems
- Industrial electronics
- Consumer electronics
- Electronic data processing.

DESCRIPTION

These directly heated thermistors have a positive temperature coefficient and are primarily intended for overload protection. They consist of a naked disc with two tinned brass or copper clad steel leads and coated. Leadless disks and leaded disks without coating are available on request.

QUICK REFERENCE DATA		
PARAMETER	**VALUE**	**UNIT**
Switch temperature	140	°C
Maximum voltage (RMS)	265	V
Temperature range	0 to 70	°C
Climatic category	25/125/56	

MOUNTING

The PTC Thermistors are suitable for processing on automatic insertion equipment.

Soldering
< 240 °C; duration < 5 s.

Resistamnce to heat
< 260 °C; duration < 5 s.

MARKING

Only the grey lacquered thermistors with a diameter of 8.5 to 20.5 mm are marked with BC, R25 value (example 1R9) on one side and Int, V_{max} on the other side.

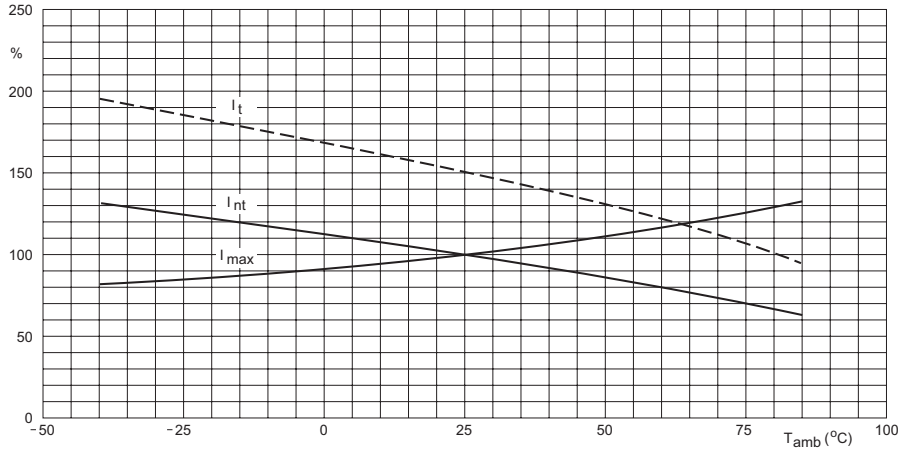
ELECTRICAL DATA AND ORDERING INFORMATION for 2322 66. 5...3; max. voltage = 265 V (ac or dc)(1)

I_{nt} MAX. at 25 °C (mA)	I_t MIN. at 25 °C (mA)	R_{25} ±20% (Ω)	$I^{(2)}$ MAX. at 25 °C (mA)	I_{res} MAX. at V_{max} and 25 °C (mA)	DISSIP. FACTOR (mW/K)	∅D MAX. (mm)	CATALOG NUMBERS	
							BULK	TAPE ON REEL
11	17	3000	80	6.5	7.3	5	2322 660 51193	2322 660 61193
15	23	1900	110	6.5	7.3	5	2322 660 51593	2322 660 61593
19	29	1200	140	6.5	7.3	5	2322 660 51993	2322 660 61993
28	42	500	200	6.8	7.3	5	2322 660 52893	2322 660 62893
39	59	260	300	6.8	7.3	5	2322 660 53993	2322 660 63993
63	95	120	450	7	7.3	5	2322 660 56393	2322 660 66393
76	115	85	550	7	7.3	5	2322 660 57693	2322 660 67693
95	143	56	600	7	7.3	5	2322 660 59593	2322 660 69593
110	165	48	650	7.5	8.3	7	2322 661 5113	2322 661 61113
140	210	29	800	8	8.3	7	2322 661 51413	2322 661 61413
170	255	22	900	9	9	8.5	2322 661 51713	2322 661 61713
190	285	18	1000	9.5	9	8.5	2322 661 51913	2322 661 61913
210	315	17	1300	10	10.5	10.5	2322 662 52113	2322 662 62113
250	375	12	1500	11	10.5	10.5	2322 662 52513	2322 662 62513
280	420	11	1800	12	11.7	12.5	2322 662 52813	2322 662 62813
320	480	8.4	2200	13	11.7	12.5	2322 662 53213	2322 662 63213
400	600	6.6	3000	15	15.5	16.5	2322 663 54013	-
490	735	4.4	3500	16	15.5	16.5	2322 663 54913	-
590	855	4	4500	19.5	19.8	20.5	2322 664 55913	-
700	1050	2.8	5500	21	19.8	20.5	2322 664 57013	-
800	1200	2.1	5500	22.5	19.8	20.5	2322 664 58013(3)	-

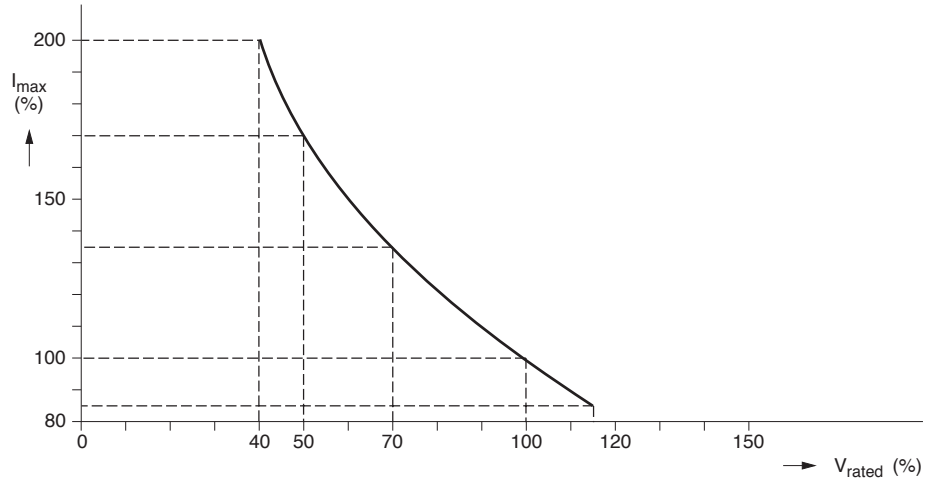
Notes

1. The thermistors are clamped at the seating plane.
2. I_{max} is the maximum overload current that may flow through the PTC when it passes from the low ohmic to the high ohmic state UL approval: I_{max} *0.75.
3. Not UL approved.

ELECTRICAL CHARACTERISTICS I_{MAX} AS A FUNCTION OF VOLTAGE.



CURRENT DEVIATION AS A FUNCTION OF THE AMBIENT TEMPERATURE.



I_{max} as stated in the Electrical data and ordering information tables, is the maximum overload current that may flow through the PTC when passing from the low ohmic to high ohmic state at rated voltage.
When other voltages are present after tripping, the I_{max} value can be derived from the above I_{max} as a function of voltage graph. Voltages below V_{rated} will allow higher overload currents to pass the PTC.

COMPONENTS OUTLINE, PACKAGING AND CATALOG NUMBERS

CODE NUMBER 2322		PACKAGING		OUTLINE
		S.P.Q	P.Q.	
660	5...3	500	2000	Fig. 1a, 1b
	6...3	3000	6000	Fig. 1c, 1d
661	5...3	250	2000	Fig. 1a, 1b
	6...3	3000	6000	Fig. 1c, 1d
662	5...3	200	2000	Fig. 1a, 1b
	62813 - 63213	1500	6000	Fig. 1e, 1f
	6...3	3000	6000	Fig. 1c, 1d
663	5...3	100	800	Fig. 1a
664	5...3	50	400	Fig. 1a

PTC THERMISTORS IN BULK

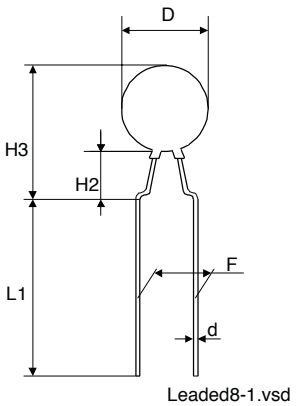


Fig. 1a

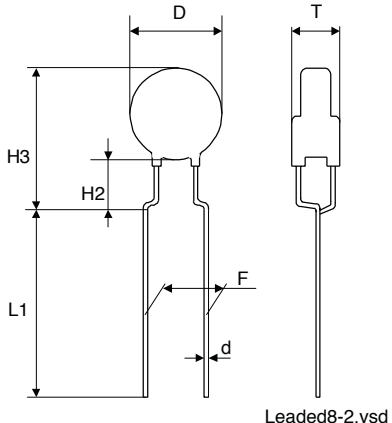


Fig. 1b

PTC THERMISTORS ON TAPE ON REEL

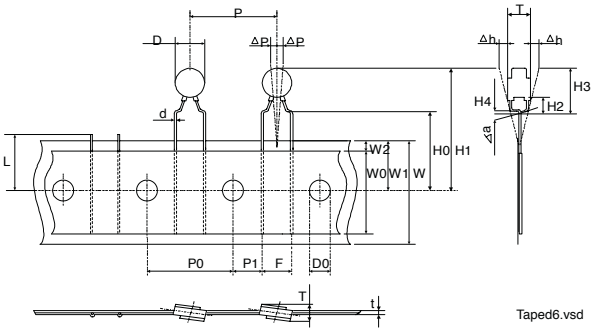


Fig. 1c

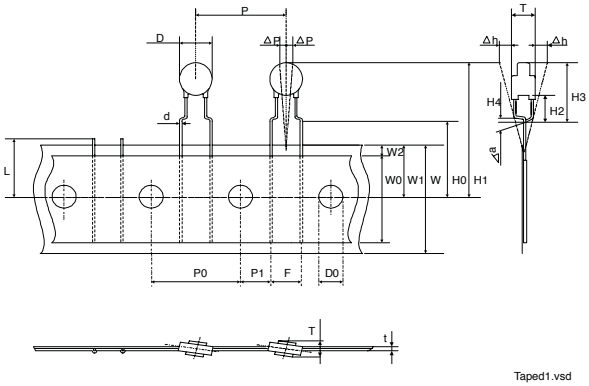


Fig. 1d

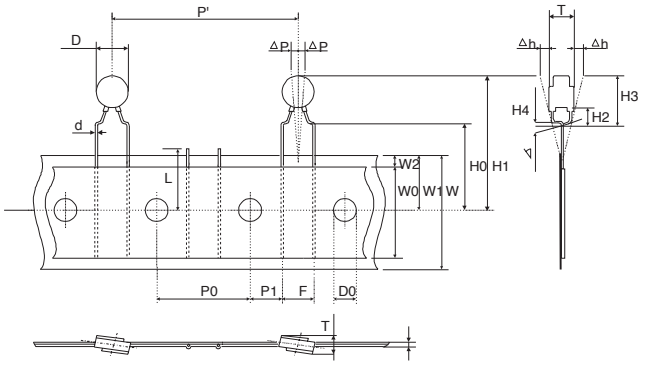


Fig. 1e

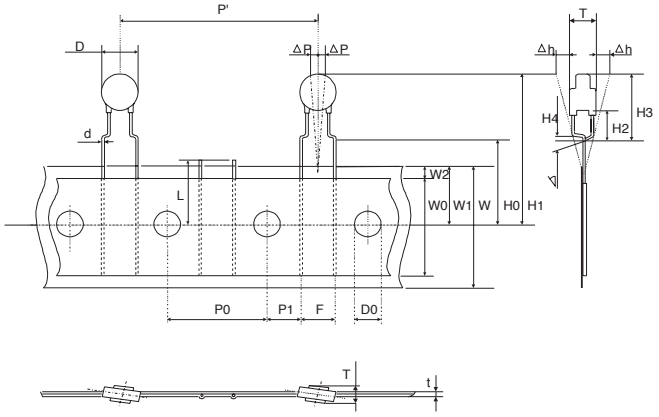
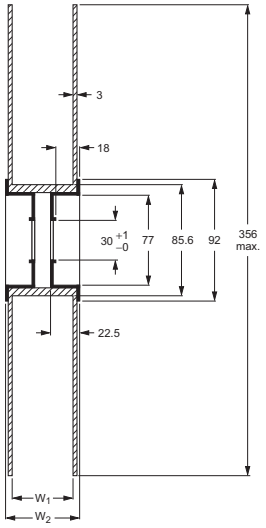


Fig. 1f

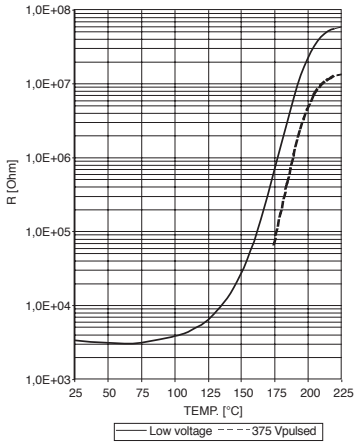
TAPE AND REEL ACCORDING TO IEC60286-2 dimensions in millimeters				
SYMBOL	**PARAMETER**	**DIMENSIONS**	**TOLERANCE**	**REMARKS**
< α	seating plane angle	15°	± 5.0°	
D d D0	body diameter lead diameter feed hole diameter	see table 0.6 4.0	max ± 10 % ± 0.2	
F	lead to lead distance	5.0	+ 0.6 - 0.1	guaranteed between component and tape
H0 H2 H3 H4 Δh	lead wire clinch height component bottom to seating plane component top to seating plane seating plane difference (left-right lead) component alignment	16.0 4.0 D + 5 0 0	± 0.5 ± 1.0 max. ± 0.2 ± 2.0	
L1	lead length	20	min.	
T t	total thinkness total tape thickness	5.5 0.9	max. max.	 with cardboard tape 0.5 ± 0.1

REEL SPECIFICATIONS in millimeters



REEL DIMENSIONS in millimeters		
DIAMETER ∅	W_1	W_2 MAX.
<12	42 ±1	56
12	46 ±1	60

TYPICAL RESISTANCE/TEMPERATURE CHARACTERISTIC for 2322 660 .1193



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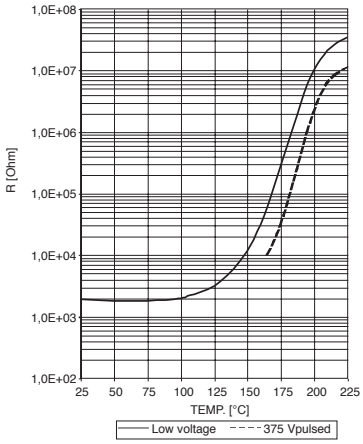

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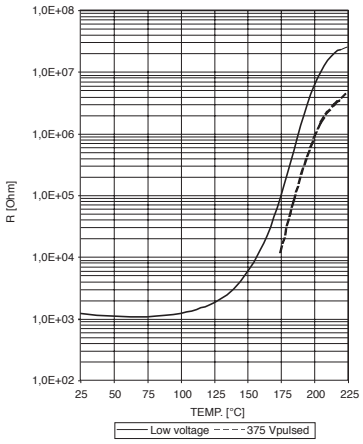
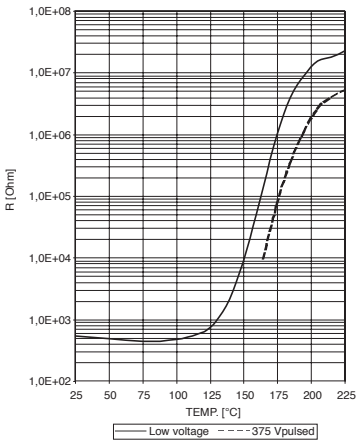


TYPICAL RESISTANCE/TEMPERATURE CHARACTERISTIC for 2322 660 .2893



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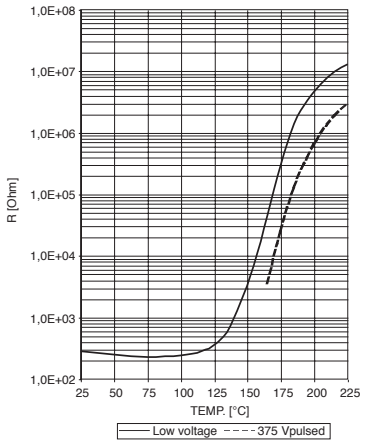

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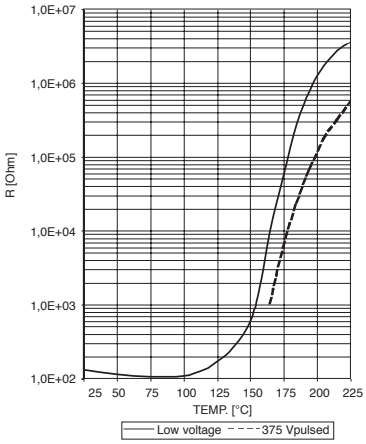

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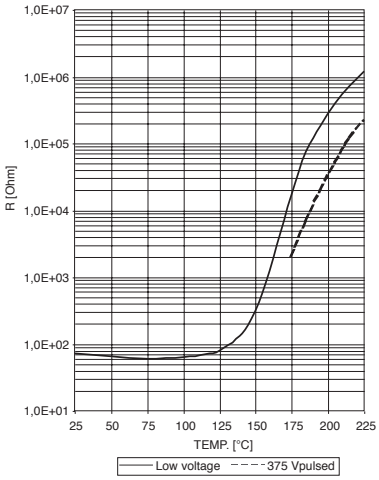

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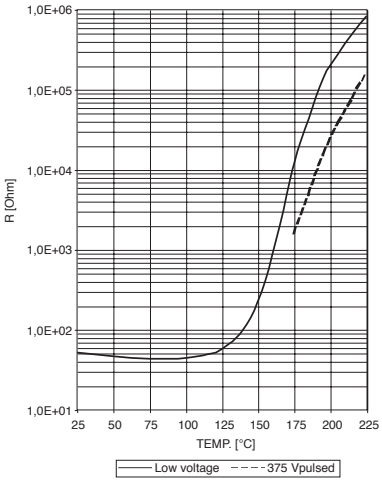

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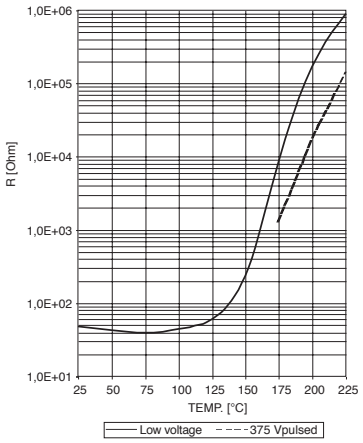

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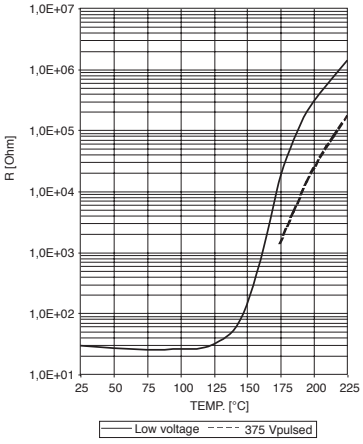

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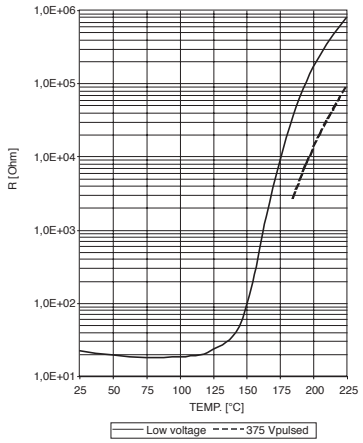

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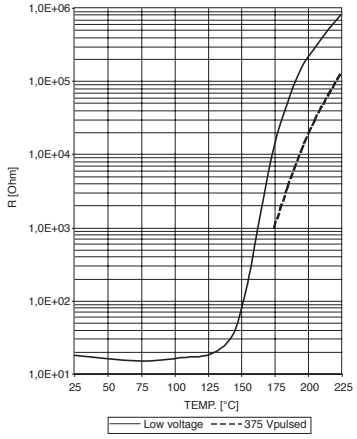

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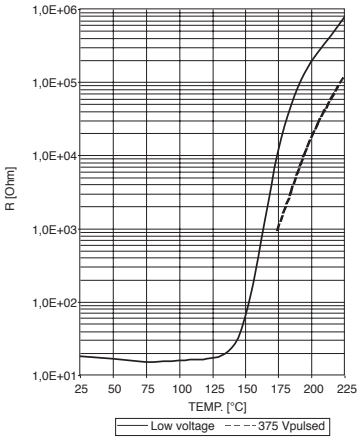

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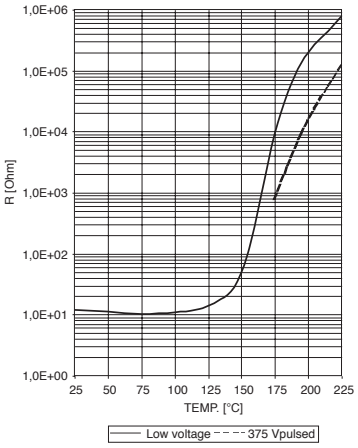

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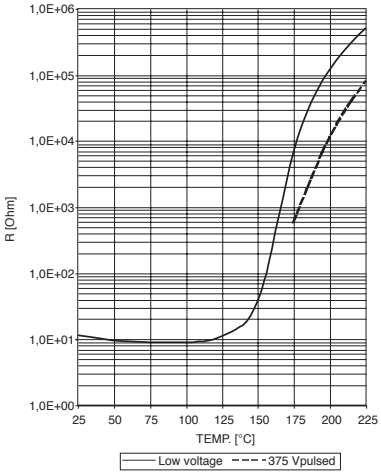

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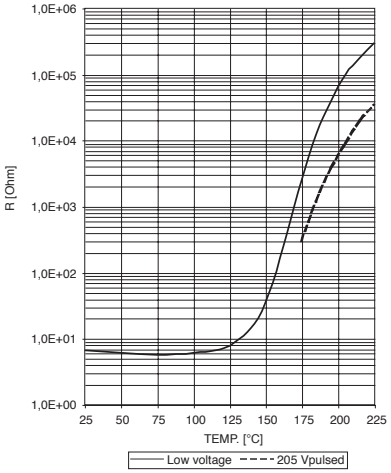

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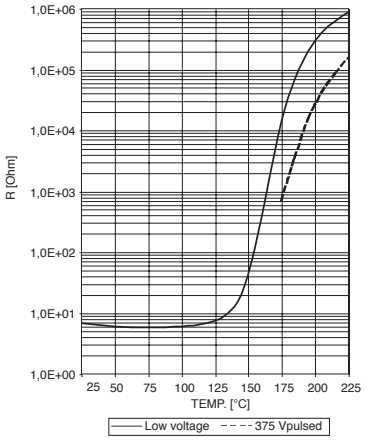

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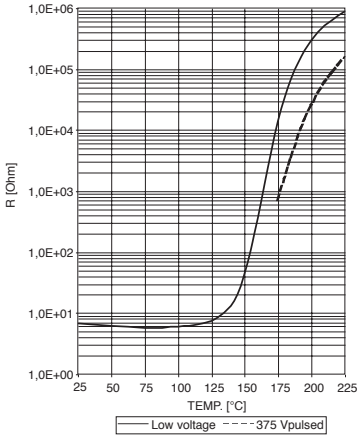

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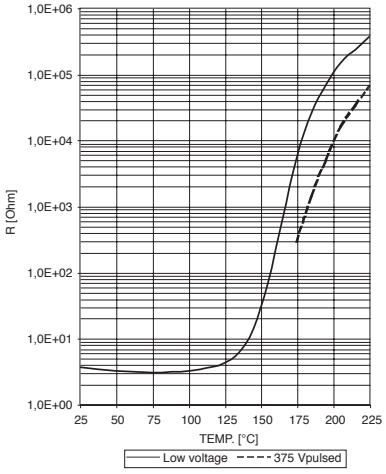

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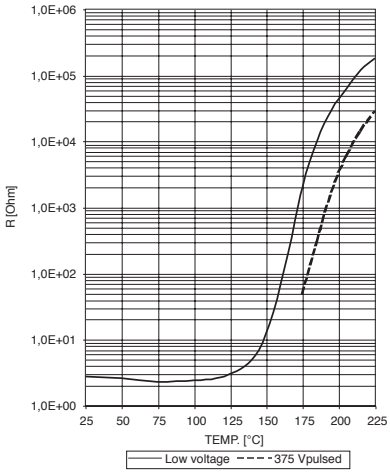

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