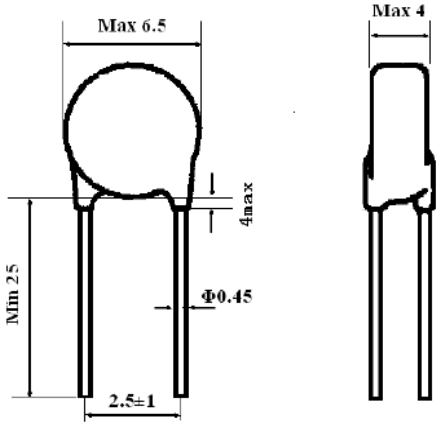
Main Technical Parameters of NCT for Temperature Compensation

Specifications	WMF11-203J
Product standard	Q/320115SHD02-2014

1.Outline Dimension

(Unit:mm)



2.Material

Coating	Leads	Color	Marking Color
Epoxy	Tin-plated steel wire	Green	Black

3.Demonstration

WMF11	203	J
Temperature Compensation type NTC	Resistance Value	Tolerance
	20×10^3=20KΩ	±5%

4.Electrical Properties

	Item	Symbol	Test conditions	Unit	Performance requiremen
4.1	25℃ Rated Zero-power Resistance	R_{25}	Ta=25±0.05℃ Test Power ≤0.1mW	KΩ	20±5%
4.2	B Value	$R_{25/50}$	B=[(Ta×Tb)/(Tb-Ta)] × ln(Ra/Rb)	K	4250±10%
4.3	Dissipation Factor	δ	Tb=50℃±0.1℃	mW/℃	About 4.5
4.4	Time Constant	τ	Tb=50℃±0.1℃	sec	About 20
4.5	Insulation Resistance	/	1000V/DC 1min	MΩ	≥500
4.6	Temperature Range	/	/	℃	−30 ~ 125

5.Mechanical Characteristics

	Item	Test conditions & Method	Specification
5.1	Solder-ability	Dipping the PTC terminals to a depth of 15mm in a soldering bath of 245℃±5℃ and to the place of 2mm far from PTC body for 2±0.5s	The terminals shall be uniformly tinned, and its area≥95%
5.2	Resistance To Soldering Heat	Dipping the terminals to a depth of 15mm in a soldering bath of 260℃±5℃ and to the place of 6mm far from PTC body for10±1s.	No visible mechanical damage. R25 Δ R/R≤±3%
5.3	Strength of lead terminal	Line Diameter (mm) / Force (Kg) 0.35<d≤0.5 — 0.5 0.5<d≤0.8 — 1.0 Time：: 10±1 sec	No visible mechanical damage. R25 Δ R/R≤±3%
5.4	Rapid temperature changes	－30℃30min→25℃5min→125℃30min →25℃5min, Repeatedly5 times	No visible mechanical damage.Mark clear R25 Δ R/R ≤±3%
5.5	steady-state Tepidity	Temperature：40±2℃ Humidity：90-95% Time：1000±24h	No visible mechanical damage.Mark clear R25 Δ R/R ≤±3%
5.6	Durability under Room Temperature	Power：（Pmax）450mW Time：1000±24h	No visible mechanical damage.Mark clear R25 Δ R/R ≤±5%
5.7	Durability under Upper limit Temperature	Temperature: 125℃±2℃, Time:1000±24H	No visible mechanical damage.Mark clear R25 Δ R/R ≤±5%

6.Welding Conditions

Welding from the coating is not less than 6mm,temperature should be less than 350℃,operating time should be short.

7.Storage Conditions

7-1.Temperature : -10℃～+40℃

7-2. Humidity : ≤70%RH

7-3.Do not exposing Corrosive gas or deoxidizing gas and light

7-4.After unpacking of the minimum package, reseal it promptly

8.Certification

8.1 ISO9001:2008 (01112Q20216R4M)

8.2 ISO14001:2004 (01113E20060R2M)

8.3 ROSH (ECL01G020883002E)

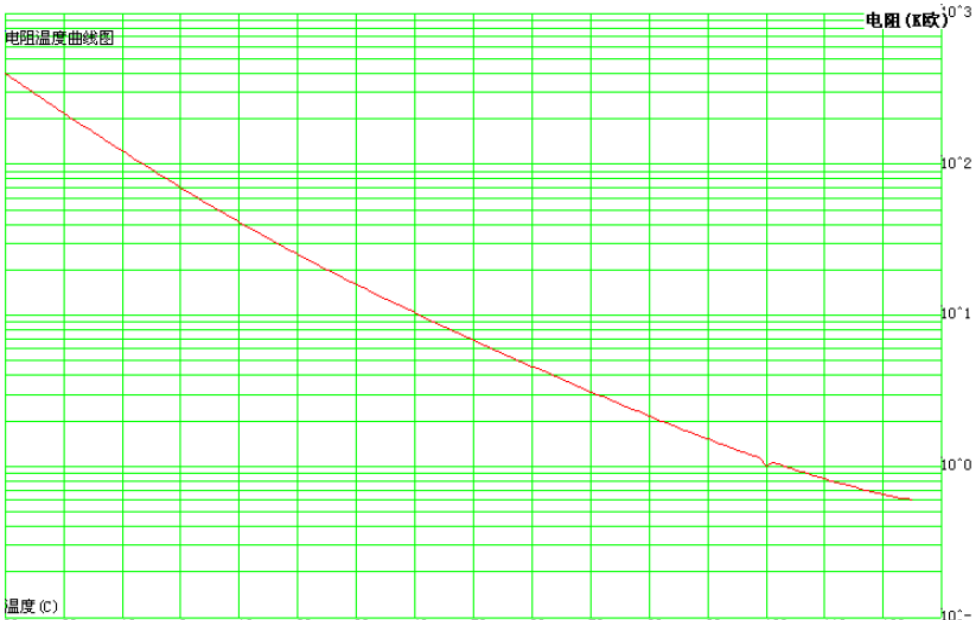
8.4 (CQC13001089724)

8.5 (R50245892)

Resistance Thermometer

R25=20KΩ　　B25/50=4250K

T	R	T	R	T	R	T	R	T	R	T	R
-30	401.8	-4	87.555	22	22.989	48	7.432	74	2.687	100	1
-29	376.372	-3	82.836	23	21.939	49	7.136	75	2.588	101	1.062
-28	353.039	-2	78.391	24	20.943	50	6.852	76	2.494	102	1.031
-27	331.539	-1	74.203	25	20	51	6.581	77	2.403	103	1.001
-26	311.652	0	69.6	26	19.104	52	6.321	78	2.316	104	0.973
-25	293.2	1	66.543	27	18.255	53	6.072	79	2.233	105	0.945
-24	276.028	2	63.042	28	17.448	54	5.834	80	2.153	106	0.919
-23	260.011	3	59.744	29	16.682	55	5.605	81	2.076	107	0.894
-22	245.04	4	56.637	30	15.954	56	5.387	82	2.003	108	0.87
-21	231.023	5	53.709	31	15.262	57	5.177	83	1.932	109	0.847
-20	217.879	6	50.949	32	14.604	58	4.976	84	1.864	110	0.825
-19	205.54	7	48.347	33	13.978	59	4.784	85	1.8	111	0.804
-18	193.945	8	45.894	34	13.382	60	4.6	86	1.737	112	0.785
-17	183.042	9	43.581	35	12.814	61	4.423	87	1.678	113	0.766
-16	172.782	10	41.4	36	12.274	62	4.253	88	1.621	114	0.748
-15	163.125	11	39.341	37	11.759	63	4.091	89	1.566	115	0.73
-14	154.03	12	37.399	38	11.268	64	3.935	90	1.513	116	0.714
-13	145.464	13	35.565	39	10.8	65	3.785	91	1.463	117	0.698
-12	137.394	14	33.833	40	10.353	66	3.642	92	1.415	118	0.684
-11	129.791	15	32.198	41	9.927	67	3.504	93	1.368	119	0.67
-10	122.627	16	30.652	42	9.52	68	3.372	94	1.324	120	0.656
-9	115.877	17	29.192	43	9.131	69	3.246	95	1.282	121	0.644
-8	109.518	18	27.81	44	8.76	70	3.125	96	1.241	122	0.632
-7	103.527	19	26.504	45	8.406	71	3.008	97	1.202	123	0.62
-6	97.882	20	25.268	46	8.067	72	2.897	98	1.165	124	0.61
-5	92.564	21	24.097	47	7.742	73	2.79	99	1.129	125	0.6



-30
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-10
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80
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100
110
120
130