

规 格 书

SPECIFICATION

客户 CUSTOMER	立创商城
客户料号 CUSTOMER P/N	C2921247
规格描述 DESCRIPTION	150K/F/4370/F1.7/直脚/L3.5/镀锡线
产品编码 PART NUMBER	NTSN1503FA437Z14A00
日期 DATE	2021-11-15

德尔创承认栏 APPROVED BY DERSONIC			客户承认栏 APPROVED BY CUSTOMER	
批 准 APPROVED BY	审 核 CHECK BY	制 订 FORMULATE BY	批 准 APPROVED BY	审 核 CHECK BY
				

东莞市德尔创电子有限公司

DONGGUAN DERSONIC ELECTRONIC CO., LTD.

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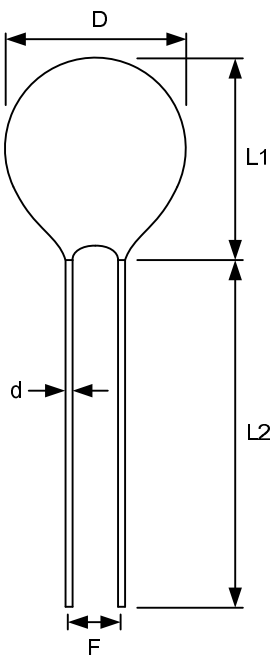
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1. APPEARANCE 外观

1-1. Dimensions (mm)尺寸



1-2. Marking 标志

1-3. Coating 包封

- No coating 无包封
 Coating 包封

Material 包封材料

- PF resin 酚醛树脂
 Silicon 硅树脂
 Epoxy 环氧树脂
 Others 其他

Color 颜色

- Green 绿色
 Red 红色
 Tan 黄色
 Black 黑色
 Blue 蓝色

1-4. Leads 引线

- Tin-plated copper wire 镀锡铜线
 Tin-plated steel wire 镀锡钢线
 Straight 直形 Axis-formed 轴弯
 In-Forming 内弯 Out-Forming 外弯

D: ≤2.2

L1: ≤3.5

F: 1.7 ± 0.5

d: 0.38 ± 0.05

L2: 3.5 ± 1

2. Parameters of Technology 主要技术参数

Rated Zero-Power Resistance 额定零功率电阻值 R25 (KΩ)	150KΩ	详细见附录说明
Material Constant 材料常数 B25/85 (K)	4370K	详细见附录说明
Thermal Dissipation Constant 耗散系数(mW/°C)	≥2.0	详细见附录说明
Thermal Time Constant 热时间常数τ(s)	≤7	
Operating Temperature Range 工作温度范围 (°C)	-40°C—125°C	

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3. INSPECTION 检验方法					
3-1. Lot Inspection 批量检验					
Sampling with IEC410 / DIN ISO 2859-1 (GB/T2828.1-2012); Testing with SPEC.NO.: R154F4370FP81EBOB 抽样方法按 IEC410/ DIN ISO 2859-1 (GB/T2828.1-2012); 试验方法按 SPEC.NO.: R154F4370FP81EBOB.					
Item 指标项目	IL	AQL	Item 指标项目	IL	AQL
Appearance 外观	II	0.65	Rated Zero-Power Resistance 额定零功率电阻 R _N	II	0.65
Soldering-ability 可焊性	S-2	2.5	Rated Power 额定功率	II	0.65
4. STORAGE CONDITIONS 存储环境条件:					
4-1. Temperature 温度: -10℃~+40℃					
4-2. Humidity 湿度: ≤70%RH					
4-3. Term 期限: ≤6 months (First-in/ First-out 先进先出)					
4-4. Place 地点:					
Do not exposing the components to the following conditions, otherwise, it may result in deterioration of characteristics.					
不要暴露在下列环境条件下, 否则将导致性能衰退或参数漂移:					
1) Corrosive gas or deoxidizing gas. 腐蚀性或易氧化气体					
2) Flammable and explosive gases. 易燃易爆气体					
3) Oil, water and chemical liquid. 油、水和化学溶液					
4) Under the sunlight. 太阳光下					
4-5. Handling after seal open: After unpacking of the minimum package, reseal it promptly or store it inside a sealed container with a drying agent.					
尽量保证开口最小化, 立即重新封好, 并贮存在密封、带有干燥剂的容器中。					
5. WARNING 注意、警告 					
Do not apply the components under the following conditions, otherwise, it may result in deterioration of characteristics, destruction of components or in the worst case, to catching fire.					
请不要在下列条件下使用本元件, 否则将可能导致产品性能衰退或产品损毁, 甚至引发火灾:					
1) Exceeding Rated Power 超过额定功率					
2) Exceeding rated temperature range. 超过许可工作温度范围					
3) Inferior thermal dissipation (Due to badly inferior thermal dissipation, some part of the components body will become overheated and then be damaged.)					
散热不良 (由于散热不良, 本元件可能因部分过热而导致破坏)					

R-T 表

温度 (°C)	R (KΩ)	温度 (°C)	R (KΩ)	温度 (°C)	R (KΩ)	温度 (°C)	R (KΩ)
-40	6654.408	2	482.245	44	63.197	86	12.438
-39	6185.045	3	456.851	45	60.503	87	12.019
-38	5753.245	4	432.935	46	57.934	88	11.615
-37	5355.544	5	410.403	47	55.482	89	11.226
-36	4988.850	6	389.168	48	53.142	90	10.852
-35	4650.399	7	369.148	49	50.909	91	10.490
-34	4337.709	8	350.266	50	48.776	92	10.142
-33	4048.552	9	332.453	51	46.750	93	9.806
-32	3780.924	10	315.643	52	44.821	94	9.482
-31	3533.013	11	299.773	53	42.984	95	9.169
-30	3303.189	12	284.786	54	41.233	96	8.867
-29	3089.970	13	270.629	55	39.564	97	8.575
-28	2892.014	14	257.250	56	37.974	98	8.293
-27	2708.103	15	244.604	57	36.458	99	8.021
-26	2537.128	16	232.645	58	35.012	100	7.758
-25	2378.082	17	221.334	59	33.633	101	7.504
-24	2230.042	18	210.631	60	32.317	102	7.258
-23	2092.167	19	200.501	61	31.061	103	7.020
-22	1963.688	20	190.910	62	29.862	104	6.791
-21	1843.901	21	181.826	63	28.717	105	6.568
-20	1732.159	22	173.220	64	27.623	106	6.353
-19	1627.871	23	165.064	65	26.578	107	6.145
-18	1530.491	24	157.332	66	25.579	108	5.943
-17	1439.520	25	150.000	67	24.624	109	5.748
-16	1354.496	26	143.045	68	23.710	110	5.559
-15	1274.995	27	136.446	69	22.836	111	5.376
-14	1200.627	28	130.183	70	21.999	112	5.199
-13	1131.029	29	124.236	71	21.197	113	5.027
-12	1065.869	30	118.589	72	20.430	114	4.861
-11	1004.839	31	113.224	73	19.694	115	4.700
-10	947.654	32	108.125	74	18.990	116	4.544
-9	894.051	33	103.279	75	18.314	117	4.392
-8	843.785	34	98.672	76	17.665	118	4.246
-7	796.632	35	94.289	77	17.043	119	4.103
-6	752.381	36	90.120	78	16.446	120	3.966
-5	710.838	37	86.153	79	15.873	121	3.832
-4	671.823	38	82.377	80	15.323	122	3.703
-3	635.169	39	78.781	81	14.794	123	3.577
-2	600.721	40	75.356	82	14.285	124	3.455
-1	568.334	41	72.094	83	13.796	125	3.337
0	537.874	42	68.985	84	13.326		
1	509.216	43	66.022	85	12.874		

Appendix 附录

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1. MECHANICAL CHARACTERISTICS 机械性能				
Item 指标项目	Specification 技术要求	Test Conditions & Methods 测试条件/方法		
1-1. Solder-ability 可焊性	The terminals shall be uniformly tinned, and its area $\geq 95\%$ 浸润部分上锡均匀, 上锡面积 $\geq 95\%$	Dipping the NTC terminals to a depth of 15mm in a soldering bath of $235 \pm 5^\circ\text{C}$ and to the place of 6mm far from NTC body for 2-3s (See IEC68-2-20 /GB2423.28 Ta) 将引出端沾助焊剂后, 浸入到温度为 $235 \pm 5^\circ\text{C}$ 、深度为 15mm 的锡槽中锡面距 NTC 本体下端 6mm 处, 持续 2-3 秒。(参见 IEC68-2-20 /GB2423.28 试验 Ta)		
1-2. Resistance To Soldering Heat 耐焊接热	No visible mechanical damage. 无可见损伤 $\Delta R/R_N \leq 20\%$ ($\Delta R = R_N - R_N' $)	Dipping the NTC terminals to a depth of 15mm in a soldering bath of $260 \pm 5^\circ\text{C}$ and to the place for 6mm below from NTC body for $10 \pm 1\text{s}$. After recovering 4-5h under $25 \pm 2^\circ\text{C}$. The rated zero power resistance value R_N' shall be measured. (See IEC68-2-20 /GB2423.28 Tb) 根据 IEC68-2-20 (GB2423.28) 试验 Tb 进行试验。采用焊槽法, 将引出端沾助焊剂后, 浸入到温度为 $260 \pm 5^\circ\text{C}$ 、深度为 15mm 的锡槽中, 锡面距 NTC 本体下端 6mm 处, 维持 10 ± 1 秒。在 $25 \pm 2^\circ\text{C}$ 条件下恢复 4-5h 后, 复测额定零功率电阻 R_N' 。		
1-3. Strength of lead terminal 引出端强度	No break out 无损坏 $\Delta R/R_N \leq 20\%$ ($\Delta R = R_N - R_N' $)	Fasten the body and apply a force gradually to each lead until 10N and then keep for 10sec, Hold body and apply a force to each lead until 90° slowly at 5N in the direction of lead axis and then keep for 10sec, and do this in the opposite direction repeat for other terminal. After recovering 4~5h under $25 \pm 2^\circ\text{C}$, the rated zero power resistance value R_N' shall be measured. (See IEC68-2-21/GB2423.29 Ua / Ub) 根据 IEC68-2-21 (GB2423.29) 试验 U 进行试验。 试验 Ua: 拉力 10N, 持续 10 S; 试验 Ub: 弯曲 90° , 拉力 5N, 持续 10 S; 扭转 180° , 拉力 5N, 持续 10 S。 在 $25 \pm 2^\circ\text{C}$ 条件下恢复 4~5 h 后, 复测额定零功率电阻 R_N'		

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2.ELECTRICAL CHARACTERISTICS 电气性能

2-1.Test Conditions & Method 测试条件/方法

Items 指标项目	Spec. 技术要求	Test Conditions & Methods 测试条件/方法
2-1-1.Rated Zero-Power Resistance 额定零功率电阻 R_N (K Ω)	150K Ω ±1%	Ambient temp. Range:25°C ± 2°C (T _A). Testing voltage: 1.5VDC After placing for 1~2 hours under T _A , the resistance value shall be measured. 环境温度 T _A : 25°C ± 2°C 测试电压: 1.5VDC 在常温 T _A 条件下, 放置 1~2 小时 后测得阻值 R _N 。
2-1-2.Thermal Dissipation Constant 热耗散系数 (mW/°C)	≥2.0	The thermal dissipation constant(δ) could be calculated by the ratio of a change in power dissipation(ΔP) of the thermistor to a change in temperature(ΔT) of the thermistor at a specified ambient temperature 在特定的环境温度下, 热耗散系数(δ)为热敏电阻电功率消耗(ΔP)与本体温度变化量 (ΔT)的比值。
2-1-3.Thermal Time Constant 热时间常数 τ (s)	≤7	The time(τ) shall be measured within which the temperature change of NTC thermistor is reached at 63.2% of the ambient temperature change under zero power condition 热时间常数(τ)为在零功率条件下, 热敏电阻的温度下降到其最初温度与最终温度之差为 63.2% 时所需要的时间
2-1-4.Material Constant 材料常数 B (K)	4370K±1% $B=T_1T_2/(T_2-T_1) \times \ln(R_1/R_2)$	R ₁ , R ₂ is zero-power resistance at T ₁ , T ₂ R ₁ , R ₂ 分别为 T ₁ , T ₂ 温度下的零功率电阻 T ₁ = 298.15K(25°C) T ₂ = 358.15K(85°C)