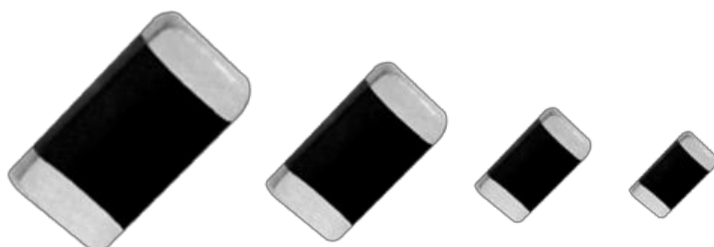


片式感温型负温度系数热敏电阻器

Chip Temperature Sensing NTC Thermistor**■ 特征**

- 瓷体表面采用玻璃包封，耐潮湿性能好，可靠性与稳定性高；
- 体积小，无引线，焊接性能优良，适合高密度表面贴装；
- 工作温度范围广：-55℃~+125℃；
- 多种 B 值可满足各种应用；

■ 应用

- 通讯设备如手机，汽车电话等；
- 办公设备如打印机，传真机，投影仪，台式电脑等；
- 消费类电子设备如录像机，手提电脑，智能穿戴设备等；
- 其他，如电源，二次电池和充电器，LED 照明设备等

■ Features

- Coated with glass layer, excellent humidity resistance, high reliability and stability
- Miniature size, no lead, excellent solderability, ideal for high density SMT installation
- Wide operating temperature range: -55℃~+125℃;
- Series of B constant for various applications

■ Application

- Telecommunication equipment such as cellphone, automobile phone, etc.
- Office automation such as printer, Fax machine, projector, desktop computer, etc.
- Consumer electronics such as video recorder, laptop, wearable devices, etc.
- Others such as power supplies, rechargeable batteries and chargers, LED lighting fields, etc.

■ 外形尺寸

- 尺寸：见图 1 和表 1
- PCB 焊盘：见图 2 和表 1

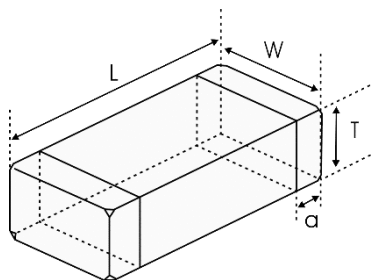


图 1 Fig.1

■ Shape and Dimensions

- Dimensions: See Fig.1 and Table 1.
- Recommended PCB pattern for reflow soldering: See Fig.2 and Table 1.

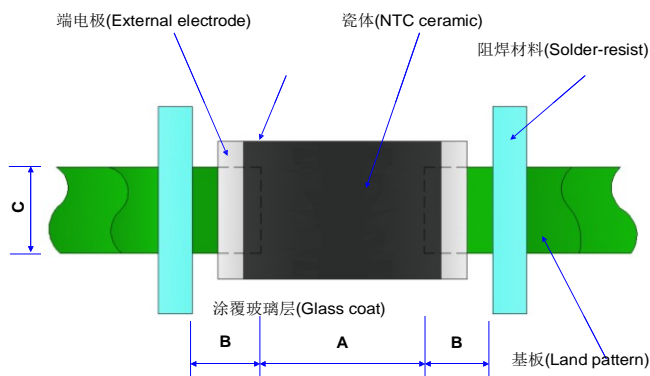


图 2 Fig.2

表 1 Table 1

Unit: inch[mm]

类别 Type	L	W	T	a	A	B	C
0201 [0603]	0.024±0.002 [0.6±0.05]	0.012±0.002 [0.3±0.05]	0.012±0.002 [0.3±0.05]	0.006±0.002 [0.15±0.05]	[0.2-0.3]	[0.25-0.35]	[0.25-0.35]
0402 [1005]	0.039±0.006 [1.0±0.15]	0.020±0.006 [0.5±0.15]	0.020±0.006 [0.5±0.15]	0.010±0.004 [0.25±0.1]	[0.45-0.55]	[0.4-0.5]	[0.45-0.55]
0603 [1608]	0.063±0.006 [1.6±0.15]	0.031±0.006 [0.8±0.15]	0.031±0.006 [0.8±0.15]	0.012±0.008 [0.3±0.2]	[0.6-0.8]	[0.6-0.7]	[0.6-0.8]
0805 [2012]	0.079±0.008 [2.0±0.2]	0.049±0.008 [1.25±0.2]	0.033±0.008 [0.85±0.2]	0.020±0.012 [0.5±0.3]	[1.0-1.1]	[0.6-0.7]	[1.0-1.2]

■ 产品标识 (料号) **Product Identification(Part Number)**

HYNS		0402	X	103	F	3380	F	B
①		②	③	④	⑤	⑥	⑦	⑧

①类别 Type	④25℃的零功率电阻 Nominal Zero-Power Resistance	⑥B 值常数 B Constant
HYNS 片式 NTC 热敏电阻器 Chip NTC Thermistor	222 2.2kΩ	3380 3380K
② 外形尺寸(mm) External Dimensions (L×W)	103 10kΩ	3950 3950K
0201[0603] 0.6×0.3	104 100kΩ	4250 4250K
0402[1005] 1.0×0.5	⑤电阻值公差 Tolerance of Resistance	⑦B 值公差 Tolerance of B Constant
0603[1608] 1.6×0.8	F ±1%	F ±1%
0805[2012] 2.0×1.2	G ±2%	
③ 分隔符 Delimiter	H ±3%	⑧B 值计算方式 B constant calculation method
X	J ±5%	A 25℃&85℃
		B 25℃&50℃

■ 主要技术参数 **Main Techno-Parameters** (静止空气中 **In static air**)

(1) **HYNS0201 系列 HYNS0201Series**

型号 Part No	电阻值 Resistance (25℃) (kΩ)	B 常数 B Constant (25/50℃) (K)	B 常数 B Constant (25/85℃) (K)	允许工作电流 Permissible Operating Current (25℃) (mA)	耗散系数 Dissipation Factor (mW/℃)	热时间常数 Thermal Time Constant (s)	额定功率 Rated Electric Power (25℃) (mW)
HYNS0201X102□3500FB	1.0	3500±1%	3545	1.00	1.0	<3	100
HYNS0201X152□3500FB	1.5	3500±1%	3545	0.81			
HYNS0201X222□3500FB	2.2	3500±1%	3545	0.67			
HYNS0201X332□3500FB	3.3	3500±1%	3545	0.55			
HYNS0201X472□3500FB	4.7	3500±1%	3545	0.46			
HYNS0201X682□3380FB	6.8	3380±1%	3435	0.38			
HYNS0201X103□3380FB	10	3380±1%	3435	0.31			
HYNS0201X103□3900FB	10	3900±1%	3935	0.31			
HYNS0201X153□3380FB	15	3380±1%	3435	0.25			
HYNS0201X223□3380FB	22	3380±1%	3435	0.21			
HYNS0201X333□4250FB	33	4250±1%	4310	0.17			
HYNS0201X473□4050FB	47	4050±1%	4100	0.14			
HYNS0201X473□4485FB	47	4485±1%	4545	0.14			
HYNS0201X683□4250FB	68	4250±1%	4310	0.12			

型号 Part No	电阻值 Resistance (25°C) (kΩ)	B 常数 B Constant (25/50°C) (K)	B 常数 B Constant (25/85°C) (K)	允许工作电流 Permissible Operating Current (25°C) (mA)	耗散系数 Dissipation Factor(mW/°C)	热时间常数 Thermal Time Constant(s)	额定功率 Rated Electric Power(25°C) (mW)
HYNS0201X683□4485FB	68	4485±1%	4545	0.12	1.0	<3	100
HYNS0201X104□4250FB	100	4250±1%	4310	0.10			
HYNS0201X104□4485FB	100	4485±1%	4545	0.10			
HYNS0201X154□4485FB	150	4485±1%	4545	0.08			
HYNS0201X224□4485FB	220	4485±1%	4545	0.06			

- 我司可根据客户需求定制任何特殊规格产品。
- We can produce any special specifications products according to customer's requests.
- □请注明电阻值公差 (F=±1%, G=±2%, H=±3%, J=±5%)
- □Please specify Resistance Tolerance (F=±1%, G=±2%, H=±3%, J=±5%)

(2) HYNS0402 系列 HYNS0402 Series

型号 Part No	电阻值 Resistance (25°C) (kΩ)	B 常数 B Constant (25/50°C) (K)	B 常数 B Constant (25/85°C) (K)	允许工作电流 Permissible Operating Current (25°C) (mA)	耗散系数 Dissipation Factor (mW/°C)	热时间常数 Thermal Time Constant (s)	额定功率 Rated Electric Power (25°C) (mW)
HYNS0402X102□3450FB	1.0	3450±1%	3500	1.00	1.0	<3	100
HYNS0402X152□3950FB	1.5	3950±1%	3987	0.81			
HYNS0402X222□3450FB	2.2	3450±1%	3500	0.67			
HYNS0402X222□3950FB	2.2	3950±1%	3987	0.67			
HYNS0402X332□3450FB	3.3	3450±1%	3500	0.55			
HYNS0402X332□3950FB	3.3	3950±1%	3987	0.55			
HYNS0402X472□3500FB	4.7	3500±1%	3545	0.46			
HYNS0402X472□3950FB	4.7	3950±1%	3987	0.46			
HYNS0402X682□3500FB	6.8	3500±1%	3545	0.38			
HYNS0402X682□3950FB	6.8	3950±1%	3987	0.38			
HYNS0402X103□3380FB	10	3380±1%	3435	0.31			
HYNS0402X103□3900FB	10	3900±1%	3935	0.31			
HYNS0402X153□3950FB	15	3950±1%	3987	0.25			
HYNS0402X223□3950FB	22	3950±1%	3987	0.21			

型号 Part No	电阻值 Resistance (25℃) (kΩ)	B 常数 B Constant (25/50℃) (K)	B 常数 B Constant (25/85℃) (K)	允许工作电流 Permissible Operating Current (25℃) (mA)	耗散系数 Dissipation Factor (mW/℃)	热时间常数 Thermal Time Constant (s)	额定功率 Rated Electric Power (25℃) (mW)
HYNS0402X333□4050FB	33	4050±1%	4100	0.17	1.0	<3	100
HYNS0402X473□4050FB	47	4050±1%	4100	0.14			
HYNS0402X473□4485FB	47	4485±1%	4545	0.14			
HYNS0402X493□3937FB	49.1	3937±1%	3973	0.13			
HYNS0402X503□4100FA	50	4050	4100±1%	0.13			
HYNS0402X683□4150FB	68	4150±1%	4210	0.12			
HYNS0402X683□4485FB	68	4485±1%	4545	0.12			
HYNS0402X104□4250FB	100	4250±1%	4310	0.10			
HYNS0402X104□4360FB	100	4360±1%	4403	0.10			
HYNS0402X104□4485FB	100	4485±1%	4545	0.10			
HYNS0402X154□4500FB	150	4500±1%	4582	0.08			
HYNS0402X224□3950FB	220	3950±1%	3987	0.06			
HYNS0402X224□4250FB	220	4250±1%	4310	0.06			
HYNS0402X224□4500FB	220	4500±1%	4582	0.06			
HYNS0402X334□3950FB	330	3950±1%	3987	0.05			
HYNS0402X334□4500FB	330	4500±1%	4582	0.05			
HYNS0402X474□4000FB	470	4000±1%	4045	0.04			
HYNS0402X474□4500FB	470	4500±1%	4582	0.04			
HYNS0402X684□4100FB	680	4100±1%	4135	0.03			
HYNS0402X684□4500FB	680	4500±1%	4582	0.03			

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- We can produce any special specifications products according to customer's requests.
- □请注明电阻值公差 (F=±1%, G=±2%, H=±3%, J=±5%)
- □Please specify Resistance Tolerance (F=±1%, G=±2%, H=±3%, J=±5%)

(3) HYNS0603 系列 HYNS0603 Series

型号 Part No	电阻值 Resistance (25°C) (kΩ)	B 常数 B Constant (25/50°C) (K)	B 常数 B Constant (25/85°C) (K)	允许工作电流 Permissible Operating Current (25°C) (mA)	耗散系数 Dissipation Factor (mW/°C)	热时间常数 Thermal Time Constant (s)	额定功率 Rated Electric Power (25°C) (mW)
HYNS0603X102□3650FB	1.0	3650±1%	3700	1.00	1.0	<5	100
HYNS0603X152□3950FB	1.0	3950±1%	3987	0.81			
HYNS0603X222□3450FB	2.2	3450±1%	3500	0.67			
HYNS0603X222□3950FB	2.2	3950±1%	3987	0.67			
HYNS0603X302□3450FB	3.0	3450±1%	3500	0.58			
HYNS0603X302□3950FB	3.0	3950±1%	3987	0.58			
HYNS0603X332□3450FB	3.3	3450±1%	3500	0.55			
HYNS0603X332□3950FB	3.3	3950±1%	3987	0.55			
HYNS0603X472□3500FB	4.7	3500±1%	3545	0.46			
HYNS0603X472□3950FB	4.7	3950±1%	3987	0.46			
HYNS0603X502□3500FB	5.0	3500±1%	3545	0.44			
HYNS0603X502□3950FB	5.0	3950±1%	3987	0.44			
HYNS0603X682□3500FB	6.8	3500±1%	3545	0.38			
HYNS0603X682□3950FB	6.8	3950±1%	3987	0.38			
HYNS0603X103□3380FB	10	3380±1%	3435	0.31			
HYNS0603X103□3450FB	10	3450±1%	3500	0.31			
HYNS0603X103□3610FA	10	3550	3610±1%	0.31			
HYNS0603X103□3900FB	10	3900±1%	3935	0.31			
HYNS0603X103□3950FB	10	3950±1%	3987	0.31			
HYNS0603X153□3950FB	15	3950±1%	3987	0.25			
HYNS0603X223□3950FB	22	3950±1%	3987	0.21			
HYNS0603X223□4050FB	22	4050±1%	4100	0.21			
HYNS0603X333□4050FB	33	4050±1%	4100	0.17			
HYNS0603X473□3960FA	47	3920	3960±1%	0.14			
HYNS0603X473□4050FB	47	4050±1%	4100	0.14			
HYNS0603X473□4150FB	47	4150±1%	4210	0.14			
HYNS0603X503□4150FB	50	4150±1%	4210	0.13			

型号 Part No	电阻值 Resistance (25°C) (kΩ)	B 常数 B Constant (25/50°C) (K)	B 常数 B Constant (25/85°C) (K)	允许工作电流 Permissible Operating Current (25°C) (mA)	耗散系数 Dissipation Factor (mW/°C)	热时间常数 Thermal Time Constant (s)	额定功率 Rated Electric Power (25°C) (mW)
HYNS0603X683□4150FB	68	4150±1%	4210	0.12	1.0	<5	100
HYNS0603X104□3950FB	100	3950±1%	3987	0.10			
HYNS0603X104□4100FA	100	4050	4100±1%	0.10			
HYNS0603X104□4250FB	100	4250±1%	4310	0.10			
HYNS0603X154□4250FB	150	4250±1%	4310	0.08			
HYNS0603X154□4500FB	150	4500±1%	4582	0.08			
HYNS0603X224□4300FB	220	4300±1%	4343	0.06			
HYNS0603X224□4500FB	220	4500±1%	4582	0.06			
HYNS0603X334□3950FB	330	3950±1%	3987	0.05			
HYNS0603X334□4300FB	330	4300±1%	4343	0.05			
HYNS0603X474□4000FB	470	4000±1%	4045	0.04			
HYNS0603X474□4500FB	470	4500±1%	4582	0.04			
HYNS0603X684□4100FB	680	4100±1%	4135	0.03			
HYNS0603X684□4500FB	680	4500±1%	4582	0.03			
HYNS0603X135□4500FB	1300	4500±1%	4582	0.02			

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- □Please specify Resistance Tolerance (F=±1%, G=±2%, H=±3%, J=±5%)

(4) HYNS0805 系列 HYNS0805 Series

型号 Part No	电阻值 Resistance (25°C) (kΩ)	B 常数 B Constant (25/50°C) (K)	B 常数 B Constant (25/85°C) (K)	允许工作电流 Permissible Operating Current (25°C) (mA)	耗散系数 Dissipation Factor (mW/°C)	热时间常数 Thermal Time Constant (s)	额定功率 Rated Electric Power (25°C) (mW)
HYNS0805X102□3650FB	1.0	3650±1%	3700	1.4	1.0	<5	100
HYNS0805X152□3950FB	1.5	3950±1%	3987	1.1			
HYNS0805X222□3450FB	2.2	3450±1%	3500	0.9			
HYNS0805X222□3950FB	2.2	3950±1%	3987	0.9			
HYNS0805X302□3450FB	3.0	3450±1%	3500	0.75			
HYNS0805X302□3950FB	3.0	3950±1%	3987	0.75			
HYNS0805X332□3450FB	3.3	3450±1%	3500	0.70			
HYNS0805X332□3950FB	3.3	3950±1%	3987	0.70			
HYNS0805X472□3500FB	4.7	3500±1%	3545	0.65			
HYNS0805X472□3950FB	4.7	3950±1%	3987	0.65			
HYNS0805X502□3500FB	5.0	3500±1%	3545	0.63			
HYNS0805X502□3950FB	5.0	3950±1%	3987	0.63			
HYNS0805X682□3500FB	6.8	3500±1%	3545	0.55			
HYNS0805X682□3950FB	6.8	3950±1%	3987	0.55			
HYNS0805X103□3380FB	10	3380±1%	3435	0.44			
HYNS0805X103□3450FB	10	3450±1%	3500	0.44			
HYNS0805X103□3570FA	10	3520	3570±1%	0.44			
HYNS0805X103□3900FB	10	3900±1%	3935	0.44			
HYNS0805X103□3950FB	10	3950±1%	3987	0.44			
HYNS0805X153□3950FB	15	3950±1%	3987	0.36			
HYNS0805X223□3950FB	22	3950±1%	3987	0.30			
HYNS0805X223□4050FB	22	4050±1%	4100	0.30			
HYNS0805X333□4050FB	33	4050±1%	4100	0.24			
HYNS0805X473□4050FB	47	4050±1%	4100	0.20			
HYNS0805X473□3960FA	47	3920	3960±1%	0.20			
HYNS0805X473□4150FB	47	4150±1%	4210	0.20			
HYNS0805X503□4150FB	50	4150±1%	4210	0.19			

型号 Part No	电阻值 Resistance (25°C) (kΩ)	B 常数 B Constant (25/50°C) (K)	B 常数 B Constant (25/85°C) (K)	允许工作电流 Permissible Operating Current (25°C) (mA)	耗散系数 Dissipation Factor (mW/°C)	热时间常数 Thermal Time Constant (s)	额定功率 Rated Electric Power (25°C) (mW)
HYNS0805X503□4150FB	50	4150±1%	4210	0.19	1.0	<5	100
HYNS0805X683□4150FB	68	4150±1%	4210	0.16			
HYNS0805X104□3590FB	100	3535	3590±1%	0.14			
HYNS0805X104□3950FB	100	3950±1%	3987	0.14			
HYNS0805X104□4100FA	100	4050	4100±1%	0.14			
HYNS0805X104□4250FB	100	4250±1%	4310	0.14			
HYNS0805X154□4250FB	150	4250±1%	4310	0.11			
HYNS0805X154□4500FB	150	4500±1%	4582	0.11			
HYNS0805X224□4300FB	220	4300±1%	4343	0.08			
HYNS0805X224□4500FB	220	4500±1%	4582	0.08			
HYNS0805X334□3950FB	330	3950±1%	3987	0.07			
HYNS0805X334□4300FB	330	4300±1%	4343	0.07			
HYNS0805X474□4000FB	470	4000±1%	4045	0.05			
HYNS0805X474□4500FB	470	4500±1%	4582	0.05			
HYNS0805X684□4100FB	680	4100±1%	4135	0.03			
HYNS0805X684□4500FB	680	4500±1%	4582	0.03			
HYNS0805X135□4500FB	1300	4500±1%	4582	0.02			

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- □Please specify Resistance Tolerance (F=±1%, G=±2%, H=±3%, J=±5%)

■ 电阻-温度特性曲线 R-T Characteristic Curves

