

# PRODUCT DATA



## ■ Temperature Compensation/Sensing TTC05 Series

### ● Features

1. Body size  $\phi$  5mm
2. Radial lead resin coated
3.  $-30 \sim +125^{\circ}\text{C}$  operating temperature range
4. Wide resistance range
5. Cost effective

### ● Recommended applications

1. Home appliances (air conditioner, refrigerator, electric fan, electric cooker, washing machine, microwave oven, drinking machine, CTV, radio.)
2. Automotive electronic
3. Computer
4. Digital meter



### ● Approvals

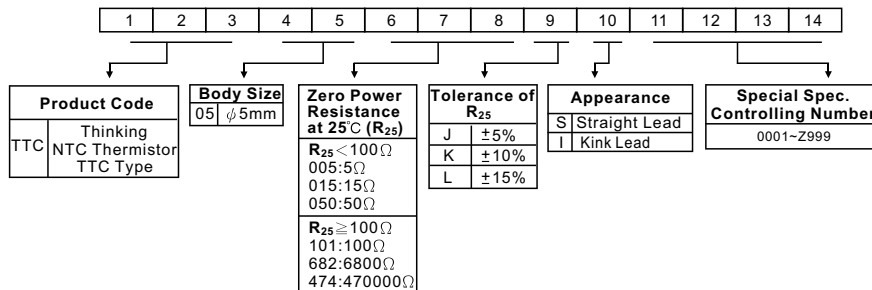


\* UL 1434 recognized (File#E138827)



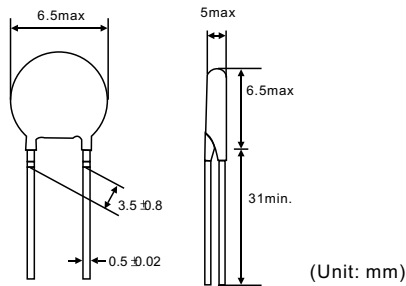
\* CSA recognized (File#97495)

### ● Part number code

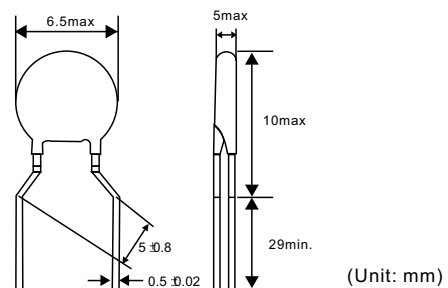


### ● Dimensions

S type (straight lead)



I type (inner kink lead)

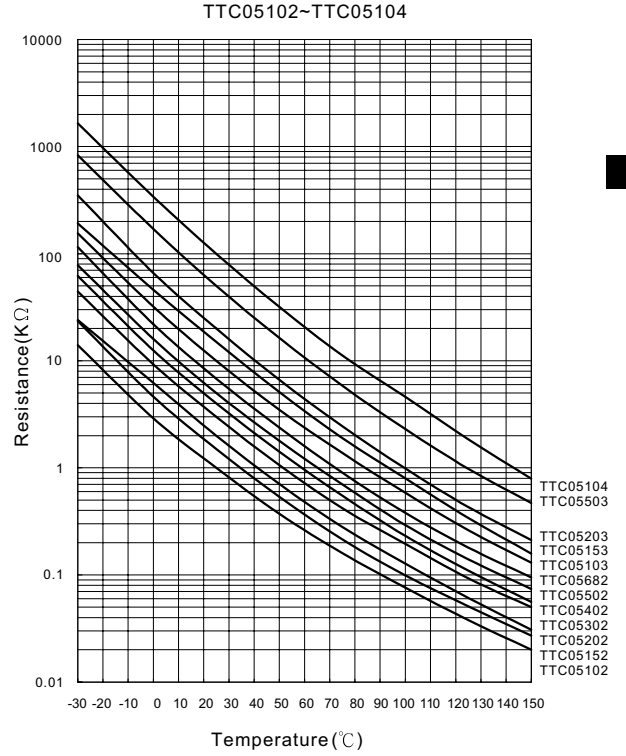
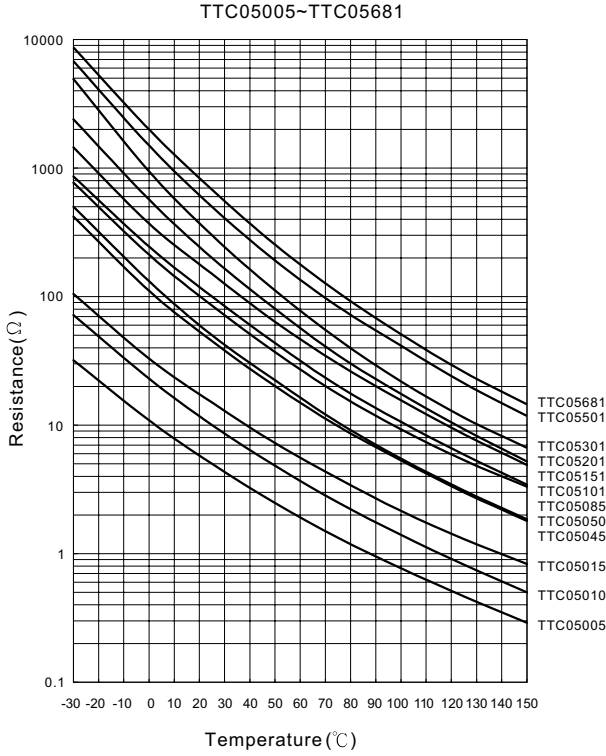


**■ Characteristics**

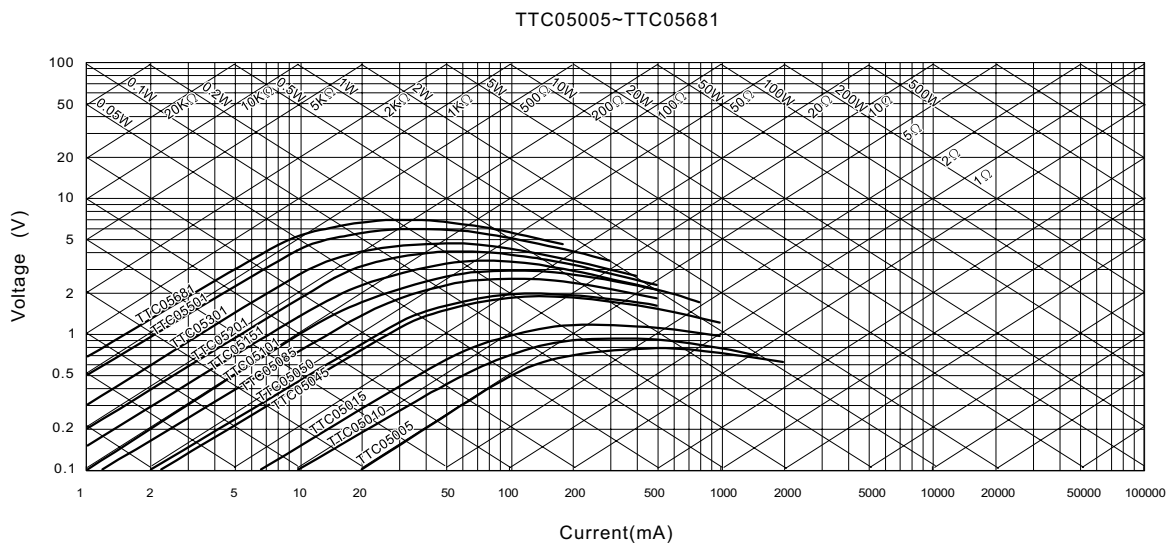
Part no.	Zero power resistance at 25 °C (Ω)	Tolerance of resistance (±%)	B value (K)	Max. power rating at 25 °C (mW)	Thermal dissipation constant (mW/ °C)	Thermal time constant (Sec.)	Operating temperature range (°C)	
TTC05005□	5	5 · 10	25/50	2400	900	9	20	-30 ~ +125
TTC05010□	10			2800				
TTC05015□	15			2800				
TTC05020□	20			2800				
TTC05025□	25			2900				
TTC05045□	45			3100				
TTC05050□	50			3100				
TTC05060□	60			3100				
TTC05085□	85			3200				
TTC05090□	90			3200				
TTC05101□	100			3200				
TTC05121□	120			3300				
TTC05151□	150			3300				
TTC05201□	200			3500				
TTC05221□	220			3500				
TTC05251□	250			3500				
TTC05301□	300			3800				
TTC05471□	470			3500				
TTC05501□	500			3700				
TTC05681□	680			3800				
TTC05701□	700			3800				
TTC05102□	1000			3800				
TTC05152□	1500			3950				
TTC05202□	2000			4000				
TTC05222□	2200			4000				
TTC05252□	2500			4000				
TTC05302□	3000			4000				
TTC05332□	3300			4000				
TTC05402□	4000			4000				
TTC05472□	4700			4050				
TTC05502□	5000			3950				
TTC05602□	6000			4050				
TTC05682□	6800			4050				
TTC05802□	8000			4050				
TTC05103□	10000			4050				
TTC05123□	12000			4050				
TTC05153□	15000			4150				
TTC05203□	20000			4250				
TTC05303□	30000			4250				
TTC05473□	47000			4300				
TTC05503□	50000			4300				
TTC05104□	100000			4400				
TTC05154□	150000			4500				
TTC05204□	200000			4600				
TTC05224□	220000			4600				
TTC05474□	470000			4750				

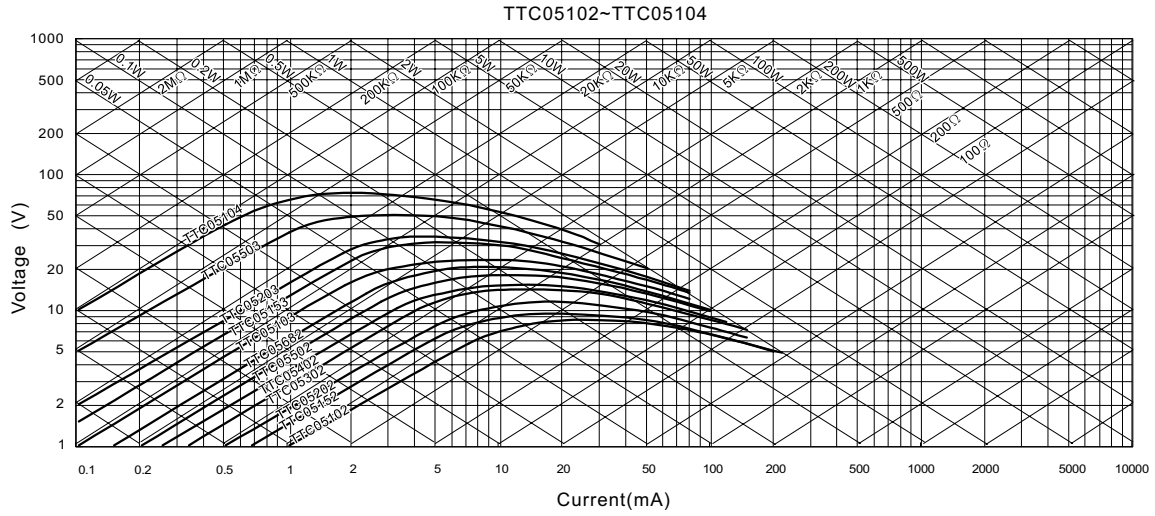
Note: □ = Tolerance of resistance

● R-T characteristic curve (representative)



● V-I characteristic curve (representative)





● Reliability test

Item	Test Conditions/Methods	Specifications		
Tensile Strength of Terminations	Gradually applying the force specified below to each terminal and keeping the unit fixed for 10±1 sec.	No visible damage		
	Terminal diameter (mm)		Force (Kg)	
	0.3<d≤0.5		0.5	
0.5<d≤0.8	1.0			
Bending Strength of Terminations	Hanging the force specified below to each terminal and gradually bending each terminal by 90° in one direction, then 90° in the opposite direction, and again back to the origin.	No visible damage		
	Terminal diameter (mm)		Force (Kg)	
	0.3<d≤0.5		0.25	
0.5<d≤0.8	0.5			
Solderability	235 ±5°C , 2 ±0.5 sec	At least 95% of terminal electrode is covered by new solder		
Resistance to Soldering Heat	260 ±5°C , 10 ±1 sec	No visible damage   ΔR/R   ≤ 3 %		
Damp Heat	40 ±2°C , 90 ~ 95 % RH, 1000 ±24 HRS	No visible damage   ΔR/R   ≤ 3 %		
Thermal Shock	The thermal shock conditions shown below shall be repeated 5 cycles		No visible damage   ΔR/R   ≤ 3 %	
	Step	Temperature(°C)		Period (minutes)
	1	-30 ±5		30±3
	2	Room temperature		5±3
	3	125 ±5		30±3
4	Room temperature	5±3		
Life Test	25 ±5°C , Pmax X 1000 HRS	No visible damage   ΔR/R   ≤ 5 %		