

WWAB7.3-13

## SPECIFICATION FOR APPROVAL

Spec. No.: WWSMF21-11-01

Issued Date: Dec. 3rd, 03

CUSTOMER: \_\_\_\_\_

Part Name: Power model NTC Thermistors

Application: \_\_\_\_\_

Customer Part No.: \_\_\_\_\_

Weilin / Zhonghao Part No. : WMF21-25D-11

### FOR CUSTOMER APPROVAL

We have approved the attached specification.

Representative : \_\_\_\_\_ Date: \_\_\_\_\_

Title : \_\_\_\_\_

Division : \_\_\_\_\_

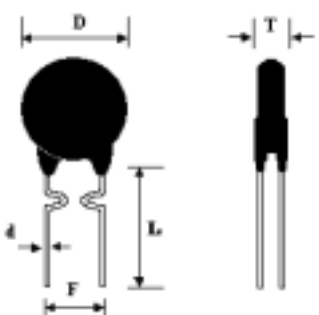
Customer : \_\_\_\_\_

\_\_\_\_\_  
Prepared by Amy Yue

\_\_\_\_\_  
Recognized by Tongjiang Zhu

\_\_\_\_\_  
Authorized by Bob Bao

Part No.:	NTC THERMISTOR 25 2A	Rev:
WMF21-25D-11		3/A (Dec. 3 <sup>rd</sup> , 03)

1. APPEARANCE		
1-1. Dimensions (mm)  	1-2. Marking NTC 25D-11 No marking Other	
	1-3. Coating No coating Coating	
	Material PF resin Silicon Epoxy Others	Color Green Red Tan Black Blue
	1-4. Leads Tin – plated copper wire Straight                      In-Forming No Lead	
$D_{max} : 12.5 \pm 2$	$T_{max} : 5.5$	$L_{min} : 25.0$
$d^{\pm 0.05} : 0.8 \pm 0.05$	$F^{\pm 1.0} : 7.5 \pm 1.0$	

2. MECHANICAL CHARACTERISTICS

Item	Specification	Test Conditions & Methods
2-1. Solder-ability	The terminals shall be uniformly tinned, and its area 95%	Dipping the NTC terminals to a depth of 15mm in a soldering bath of $230 \pm 5$ and to the place of 6mm far from NTC body for $5 \pm 0.5s$ (See IEC68-2-20 /GB2423.28 Ta )
2-2. Resistance To Soldering Heat	No visible mechanical damage. $R/RN \pm 20\%$ ( $R = RN - RN'$ )	Dipping the terminals to a depth of 15mm in a soldering bath of $230 \pm 5$ and to the place of 6mm far from NTC body for $5 \pm 0.5s$ . After recovering for 4~5 hours under normal temperature. The resistance ( $RN'$ ) shall be measured. (See IEC68-2-20 /GB2423.28 Tb)
2-3. Strength of lead terminal	No break out	Fasten the body and apply a force gradually to each lead until 10 N and then keep for 10sec, Hold the body and apply a force to each lead until $90^\circ$ slowly at 5 N in the direction of lead axis and then keep for 10sec, and do this in the opposite direction repeat for other terminal. (See IEC68-2-21/GB2423.29 Ua / Ub)

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**3. ELECTRICAL CHARACTERISTICS**

Item	Specification	Test Conditions & Methods
3-1. Rated Zero-Power Resistance (R <sub>N</sub> )	25 ± 20%	Ambient temp. range : 25 ± 1 Testing voltage : ≤1.5VDC
3-2. B-value (K)	3000K ± 10%	$B = \ln(R_1 / R_2) (T_1 \cdot T_2) / (T_2 - T_1)$ $T_1 = 273.15 + 25K$ $T_2 = 273.15 + 85K$
3-3. Thermal Dissipation Constant (mW )	15mW/	
3-4. Thermal Time Constant (Sec)	52 sec	
3-5. Max Steady State Current I <sub>max</sub> (A)	2.0A	Current : 2.0A    Test Cycle : 60s / on, 300s / off, 1000times

**4. INSPECTION**

Sampling with IEC410 / DIN ISO 2859-1 (GB2828-87) ; Testing with IEC60738-1 / QC 440000 (GB7153-2002) ,

Spec. No. WWSMF21-11-01.

Item	IL	AQL	Item	IL	AQL
4-1. Appearance		0.65	4-3. Solder-ability	S-3	0.65
4-2. Rated Zero-Power Resistance R <sub>N</sub>		0.65			

**4. PART NUMBERING**

WMF21 - 25 D-11

Series

Rated zero power resistance 25 : 25 ± 20% ... 68: 68 ± 20%

Disk diameter D11 : 11mm

