

WMZ11A 型预热启动用 PTC 热敏电阻器
WMZ11A TYPE PREHEAT STARTING PTC THERMISTOR

● **产品编号 (PARTY NUMBER CODE):**

WMZ11 A 75s HV 331 N U
 ① ② ③ ④ ⑤

①开关温度 Temperature of switch:

50—50°C 75—75°C, 85—85°C, 105—105°C, 120—120°C

②类型 Type:

HV-高压型 High voltage type ($\phi 6 \times 5$)

A-基本型 Basic type ($\phi 5.5 \times 4.5$)

B-加强型 Strengthen type ($\phi 8 \times 4.5$)

S-微型 Small type ($\phi 4.0 \times 4.5$)

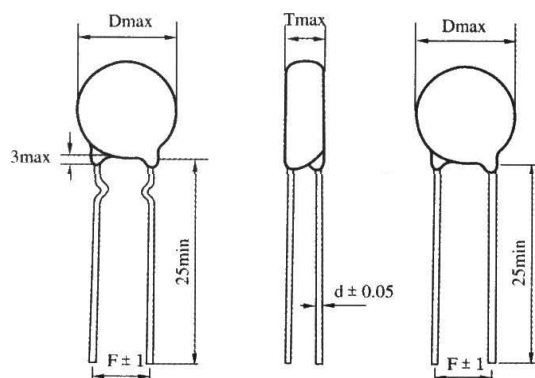
BHV-超强型 Super strong type ($\phi 8 \times 5$)

③额定零功率电阻 Rated zero power resistance: 331—330 Ω 68R—68 Ω

④电阻误差 Resistance tolerance: N— $\pm 30\%$ V— $\pm 25\%$ M— $\pm 20\%$ K— $\pm 10\%$

⑤引线形状 Shape of lead: U-In-formed 内弯 S-Straight 直形 A-Axis wind 轴弯

● **外形尺寸 (DIMENSION):**

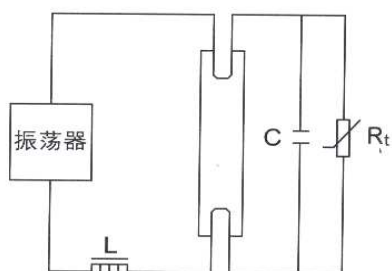


● **产品应用 (APPLICATION):**

用于电子镇流器 / 节能灯预热启动

For preheating of the Ballast / CFL

应用实例及外形图



应用实例

● 主要技术参数 SPECIFICATION

规格 Part No.	额定零功率电阻 Rated Zero Power Resistance Rn (Ω)	耐电压 BREAK Down Voltage V _b (V _{AC})	最大工作电流 Max. Work current I _{max} (mA)	开关温度 Switch Temp. T _k (°C)	尺寸 Dimension (mm)			
					Dmax	Tmax	d	
WMZ11A-50S68RNU	68±30%	360	200	50±7	4	4.5	0.5	
WMZ11A-50S101NU	100±30%	400						
WMZ11A-50S151NU	150±30%	400						
WMZ11A-50S221NU	220±30%	500						
WMZ11A-50S331NU	330±30%	500						
WMZ11A-50S471NU	470±30%	600						
WMZ11A-50S681NU	680±30%	600						
WMZ11A-50S102NU	1000±30%	600						
WMZ11A-50S152NU	1500±30%	600						100
WMZ11A-50S222NU	2200±30%	600						100
WMZ11A-50S332NU	3300±30%	600						70
WMZ11A-50S472NU	4700±30%	600						50
WMZ11A-75S68RNU	68±30%	360	200	75±7	4	4.5	0.5	
WMZ11A-75S101NU	100±30%	400						
WMZ11A-75S151NU	150±30%	400						
WMZ11A-75S221NU	220±30%	500						
WMZ11A-75S331NU	330±30%	500						
WMZ11A-75S471NU	470±30%	600						
WMZ11A-75S681NU	680±30%	600						
WMZ11A-75S102NU	1000±30%	600						
WMZ11A-75S152NU	1500±30%	600						100
WMZ11A-75S222NU	2200±30%	600						100
WMZ11A-75S332NU	3300±30%	600						70
WMZ11A-75S472NU	4700±30%	600						50
WMZ11A-105S68RNU	68±30%	360	200	105±7	4	4.5	0.5	
WMZ11A-105S101NU	100±30%	400						
WMZ11A-105S151NU	150±30%	400						
WMZ11A-105S221NU	220±30%	500						
WMZ11A-105S331NU	330±30%	500						
WMZ11A-105S471NU	470±30%	500						
WMZ11A-105S681NU	680±30%	600						
WMZ11A-105S102NU	1000±30%	600						100
WMZ11A-120S68RNU	68±30%	360	200	120±7	4	4.5	0.5	
WMZ11A-120S101NU	100±30%	400						
WMZ11A-120S151NU	150±30%	400						
WMZ11A-120S221NU	220±30%	500						
WMZ11A-120S331NU	330±30%	500						
WMZ11A-120S471NU	470±30%	500						
WMZ11A-120S681NU	680±30%	600						

规格 Part No.	额定零功率电阻 Rated Zero Power Resistance Rn (Ω)	耐电压 BREAK Down Voltage V _b (V _{AC})	最大工作电 流 Max. Work current I _{max} (mA)	开关温度 Switch Temp. T _k (°C)	尺寸 Dimension (mm)		
					Dmax	Tmax	d
WMZ11A-50S68RNU	68 ± 30%	420	400	50 ± 7	5	4.5	0.6
WMZ11A-50S101NU	100 ± 30%	420					
WMZ11A-50S151NU	150 ± 30%	500					
WMZ11A-50S221NU	220 ± 30%	500					
WMZ11A-50S331NU	330 ± 30%	600					
WMZ11A-50S471NU	470 ± 30%	600					
WMZ11A-50S681NU	680 ± 30%	600	300				
WMZ11A-50S102NU	1000 ± 30%	600					
WMZ11A-50A152NU	1500 ± 30%	600	150				
WMZ11A-50A222NU	2200 ± 30%	600	100				
WMZ11A-75A68RNU	68 ± 30%	420	400	75 ± 7	5	4.5	0.6
WMZ11A-75A101NU	100 ± 30%	420					
WMZ11A-75A151NU	150 ± 30%	500					
WMZ11A-75A221NU	220 ± 30%	500					
WMZ11A-75A331NU	330 ± 30%	600					
WMZ11A-75A471NU	470 ± 30%	600					
WMZ11A-75A681NU	680 ± 30%	600	300				
WMZ11A-75A102NU	1000 ± 30%	600					
WMZ11A-75A152NU	1500 ± 30%	600	150				
WMZ11A-75A222NU	2200 ± 30%	600	100				
WMZ11A-105A68RNU	68 ± 30%	400	400	105 ± 7	5	4.5	0.6
WMZ11A-105A101NU	100 ± 30%	400					
WMZ11A-105A151NU	150 ± 30%	400					
WMZ11A-105A221NU	220 ± 30%	500					
WMZ11A-105A331NU	330 ± 30%	600					
WMZ11A-105A471NU	470 ± 30%	600					
WMZ11A-105A681NU	680 ± 30%	600	300				
WMZ11A-105A102NU	1000 ± 30%	600					
WMZ11A-120A68RNU	68 ± 30%	400	400	120 ± 7	5	4.5	0.6
WMZ11A-120A101NU	100 ± 30%	400					
WMZ11A-120A151NU	150 ± 30%	400					
WMZ11A-120A221NU	220 ± 30%	500					
WMZ11A-120A331NU	330 ± 30%	600					
WMZ11A-120A471NU	470 ± 30%	600					
WMZ11A-50HV68RNU	68 ± 30%	600	400	50 ± 7	5	4.5	0.6
WMZ11A-50SHV101NU	100 ± 30%	600					
WMZ11A-50HV151NU	150 ± 30%	750					
WMZ11A-50HV221NU	220 ± 30%	750					
WMZ11A-50HV331NU	330 ± 30%	800					
WMZ11A-50HV471NU	470 ± 30%	900					

规格 Part No.	额定零功率电阻 Rated Zero Power Resistance Rn (Ω)	耐电压 BREAK Down Voltage V _b (V _{AC})	最大工作电流 Max. Work current I _{max} (mA)	开关温度 Switch Temp. T _k (°C)	尺寸 Dimension (mm)			
					Dmax	Tmax	d	
WMZ11A-50HV681NU	680±30%	900	250	50±7	5	4.55	0.6	
WMZ11A-50HV102NU	1000±30%	900						
WMZ11A-75HV68RNU	68±30%	600	400	75±7	6	5	0.6	
WMZ11A-75HV101NU	100±30%	600						
WMZ11A-75HV151NU	150±30%	750						
WMZ11A-75HV221NU	220±30%	750						
WMZ11A-75HV331NU	330±30%	800						
WMZ11A-75HV471NU	470±30%	900						
WMZ11A-75HV681NU	680±30%	900						
WMZ11A-75HV102NU	1000±30%	900	250					
WMZ11A-50B68RNU	68±30%	400	800	50±7	8	4.5	0.6	
WMZ11A-50B101NU	100±30%	500						
WMZ11A-50B151NU	150±30%	500						
WMZ11A-50B221NU	220±30%	600						
WMZ11A-50B331NU	330±30%	600						600
WMZ11A-50B471NU	470±30%	600						450
WMZ11A-50B681NU	680±30%	600						300
WMZ11A-50B102NU	1000±30%	600	200					
WMZ11A-85B68RNU	68±30%	400	800	85±7	8	4.5	0.6	
WMZ11A-85B101NU	100±30%	500						
WMZ11A-85B151NU	150±30%	500						
WMZ11A-85B221NU	220±30%	600						
WMZ11A-85B331NU	330±30%	600						600
WMZ11A-85B471NU	470±30%	600						450
WMZ11A-85B681NU	680±30%	600						300
WMZ11A-105B101NU	100±30%	500	800	105±7	8	4.5	0.6	
WMZ11A-105B151NU	150±30%	500						
WMZ11A-105B221NU	220±30%	500						
WMZ11A-105B331NU	330±30%	600						600
WMZ11A-105B471NU	470±30%	600						450
WMZ11A-105B681NU	680±30%	600						300
WMZ11A-105B102NU	1000±30%	600						200
WMZ11A-75BHV68RNU	68±30%	600	800	75±7	8	5	0.6	
WMZ11A-75A101NU	100±30%	600						
WMZ11A-75A151NU	150±30%	750						
WMZ11A-75A221NU	220±30%	900						
WMZ11A-75A331NU	330±30%	900						600
WMZ11A-75A471NU	470±30%	900						450
WMZ11A-75A681NU	680±30%	900						300
WMZ11A-75A102NU	1000±30%	900						200
WMZ11A-75A152NU	1500±30%	900						140

WMZ11B 型智能 PTC（热敏/压敏复合电阻器） WMZ11B series PTC Thermistor /Varistor Complex

产品简介（GENERAL）:

WMZ11B 系列是由一个 PTC 热敏电阻 R_t 和一个压敏电阻 R_v 串联而成的复合元件。启动时，电压高于 R_v 压敏电压， R_v 处于导通状态，其预热启动过程基本是由 R_t 来独立完成的。灯管启动点亮处于正常工作状态后， R_v 端电压迅速降低到其压敏电压以下， R_v 跃居高阻态，断开 R_t ，从而使零功耗，零温升预热启动得以实现。

WMZ11B 系列 R_t 部分之选型与 WMZ11A 系列基本类似，压敏电阻 R_v 部分之选型主要考虑 R_v 压敏电压应略高于灯管电压、 R_v 通流容量足以应付重复通断的启动电流的频繁冲击。

WMZ11B series is a kind of complex components , which includes a thermistor R_t and a varistor R_v in series .when the voltage of the circuit is high than R_v 's varistor voltage at starting , R_v is at short state . so the process of preheating is finished almost by R_t independently .after the tube lights and work normally , the R_v 's voltage will decrease quickly to the level under its varistor voltage , then R_v will change into high-resistance state. So R_t will be at open state and the preheating which is zero thermal / zero power dissipation will be realized.

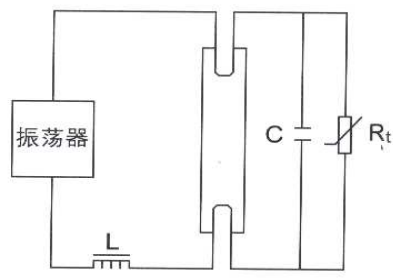
The specification of WMZ11B series' R_t is similar to WMZ11A series. While as to the specification of R_v , two things must be considered: R_v 's varistor voltage must be higher than tube's voltage ; R_v 's max peak current must be able to endure the inrush of repetitive turn over current .

产品应用（APPLACITION）:

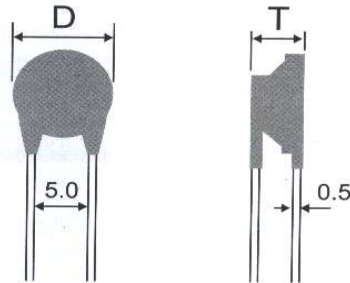
用于高端电子镇流器 / 节能灯零温升 、零功耗预热启动

For preheating of the High Property Ballast / CFL (Zero Thermal / Zero Power Dissipation)

应用实例及外形图

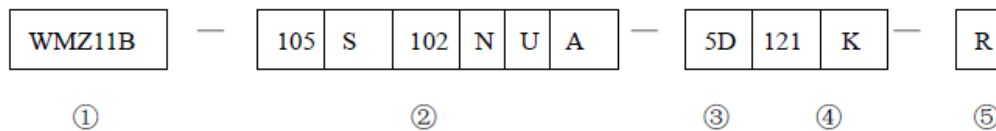


应用实例



外形图

产品编号（PARTY NUMBER CODE）:



① series 系列

② SPC. of PTC Thermistor (Similar as WMZ11A series) PTC 热敏电阻规格参数（与 WMZ11A 系列类似）

③ of Varistor 压敏电阻尺寸： 5D-Φ5 7D-Φ7 10D-Φ10

④ Varistor vol.&tol. of Varistor 压敏电阻的压敏电压及其允许公差范围： 820-82V 101-100V

⑤ Spec Code (RoHS) 特别代码： R-Compliance with RoHS 符合 RoHS 要求

主要技术参数:

型号 (WMZ11B)	零功率电阻 R_N (Ω)	居里温度 T_c ($^{\circ}C$)	压敏电压 V (at 1mA)	最大可重复 通断电流 I_{max} (mA)	外形尺寸 (mm)			
					D_{max}	T_{max}	$d \pm 0.05$	$F \pm 1$
50S681NS-5D101K/121K/151K/201K	680±30%	50±7	100±10% 120±10% 150±10% 200±10%	200	6.0	6.5	06	5.0
50S102NS-5D101K/121K/151K/201K	1000±30%							
50S152NS-5D101K/121K/151K/201K	1500±30%							
50S222NS-5D101K/121K/151K/201K	2200±30%							
50S332NS-5D101K/121K/151K/201K	3300±30%							
75S471NS-5D101K/121K/151K/201K	470±30%	75±7	100±10% 120±10% 150±10% 200±10%	200	6.0	6.5	06	5.0
75S681NS-5D101K/121K/151K/201K	680±30%							
75S102NS-5D101K/121K/151K/201K	1000±30%							
75S152NS-5D101K/121K/151K/201K	1500±30%							
75S222NS-5D101K/121K/151K/201K	2200±30%							
75S332NS-5D101K/121K/151K/201K	3300±30%							
105S471NS-5D101K/121K/151K/201K	470±30%	105±7	100±10% 120±10% 150±10% 200±10%	200	6.0	6.5	06	5.0
105S681NS-5D101K/121K/151K/201K	680±30%							
105S102NS-5D101K/121K/151K/201K	1000±30%							
105S152NS-5D101K/121K/151K/201K	1500±30%							
105S222NS-5D101K/121K/151K/201K	2200±30%							
105S332NS-5D101K/121K/151K/201K	3300±30%							
105S471NS-7D101K/121K/151K/201K	470±30%	105±7	100±10% 120±10% 150±10% 200±10%	200	8.5	6.5	06	5.0
105S681NS-7D101K/121K/151K/201K	680±30%							
105S102NS-7D101K/121K/151K/201K	1000±30%							
105S152NS-7D101K/121K/151K/201K	1500±30%							
85L471NS-5D101K/121K/151K/201K	470±30%							
85L 681NS-5D101K/121K/151K/201K	680±30%							
85L 102NS-5D101K/121K/151K/201K	1000±30%							
85L 152NS-5D101K/121K/151K/201K	1500±30%							
85L471NS-7D101K/121K/151K/201K	470±30%	85±7	100±10% 120±10% 150±10% 200±10%	300	8.5	6.5	06	5.0
85L 681NS-7D101K/121K/151K/201K	680±30%							
85L 102NS-7D101K/121K/151K/201K	1000±30%							
85L 152NS-7D101K/121K/151K/201K	1500±30%							
75A471NS-7D101K/121K/151K/201K	470±30%							
75A 681NS-7D101K/121K/151K/201K	680±30%							
75A 102NS-7D101K/121K/151K/201K	1000±30%							
75A 152NS-7D101K/121K/151K/201K	1500±30%							
75A 471NS-10D101K/121K/151K/201K	470±30%	75±7	100±10% 120±10% 150±10% 200±10%	400	11.5	6.5	06	7.5
75A 681NS-10D101K/121K/151K/201K	680±30%							
75A 102NS-10D101K/121K/151K/201K	1000±30%							
75A 152NS-10D101K/121K/151K/201K	1500±30%							
105A 471NS-7D101K/121K/151K/201K	470±30%	105±7	100±10% 120±10% 150±10% 200±10%	400	8.5	6.5	06	5.0
105A 681NS-7D101K/121K/151K/201K	680±30%							
105A 102NS-7D101K/121K/151K/201K	1000±30%							
105A 152NS-7D101K/121K/151K/201K	1500±30%							

105A471NS-10D101K/121K/151K/201K	470±30%	105±7	100±10% 120±10% 150±10% 200±10%	400	11.5	6.5	06	7.5
105A681NS-10D101K/121K/151K/201K	680±30%							
105A102NS-10D101K/121K/151K/201K	1000±30%							
105A152NS-10D101K/121K/151K/201K	1500±30%							
85B 331NS-7D101K/121K/151K/201K	330±30%	85±7	100±10% 120±10% 150±10% 200±10%	800	8.5	6.5	06	7.5
85B 471NS-7D101K/121K/151K/201K	470±30%							
85B 681NS-7D101K/121K/151K/201K	680±30%							
85B 102NS-7D101K/121K/151K/201K	1000±30%							
85B 331NS-10D101K/121K/151K/201K	330±30%	85±7	100±10% 120±10% 150±10% 200±10%	800	11.5	6.5	06	7.5
85B 471NS-10D101K/121K/151K/201K	470±30%							
85B 681NS-10D101K/121K/151K/201K	680±30%							
85B 102NS-10D101K/121K/151K/201K	1000±30%							

WMZ12A 过热过流保护用 PTC 热敏电阻器
TYPE WMZ12A OVER-CURRENT & HEAT PROTECTION PTC THERMISTOR

- 适用于变压器、充电器、电能表、万用表、微电机、晶体管等过热流保护。

This type PTC thermistor is suitable for the circuit which needs over-current and & over-heat protection .
 Such as adaptors, charger, E-meter, multi-meter, micro-motor, transistor etc.

规格 Party No.	最大不动作电流 Non-trip current at 60°C (mA)	动作电流 Trip current (mA)	额定零功率电阻 Rated zero power resistance at 25°C (Ω)	最大工作电 流 Max. work current at 25 °C (A)	外形尺寸 Dimension			
					D _{max}	T _{max}	d± 0.05	F ±1
WMZ12A-75S102M004	4	16	1000±20%	0.2	4	4.5	0.5	5
WMZ12A-75S681M005	5	20	680±20%	0.2	4	4.5	0.5	5
WMZ12A-85S151M025	25	50	150	0.8	8	4.5	0.6	5
WMZ12A-85B121M030	30	60	120	0.8	8	4.5	0.6	5
WMZ12A-85B82RM040	40	80	82	0.8	8	4.5	0.6	5
WMZ12A-105B121M050	50	100	120	0.8	8	4.5	0.6	5
WMZ12A-105B82RM060	60	120	82	0.8	8	4.5	0.6	5
WMZ12A-105M22RM120	120	240	22	1.5	11	1.5	0.6	5
WMZ12A-105M8R2M150	150	300	8.2	1.5	11	4.5	0.6	5
WMZ12A-105SL6R8M200	200	400	15	2.0	14	5	0.8	7.5

- 适用于通讯设备过热过流保护

Suitable for telecom. device over-current and over-heat protection

规格 Party No.	额定零功率电阻 Rated zero power resistance at 25°C (Ω)	最大不动作电 流 Non-trip current at 60°C (mA)	最大动作时间 Max. operating time (Sec.)				外形尺寸 Dimension			
			3A	1A	0.5A	0.2A	D	T	F	d
			↓ 0.5A	↓ 0.5A	↓ 0.15A	↓ 0.1A				
WMZ12A-12RM090	12	90	0.3	1.2	20	50	9	4.5	5	0.6
WMZ12A-15RM070	15	70	0.2	1.0	12	20	9	4.5	5	0.6
WMZ12A-18RM110	18	110	0.2	1.4	15	30	8	2.5	5	0.6
WMZ12A-20RM070	20	70	0.2	1.0	12	20	9	4.5	5	0.6
WMZ12A-35RM060	35	60	0.2	0.8	3	15	11	4.5	5	0.6
WMZ12A-50RM060	50	50	0.1	0.8	3	15	11	4.5	5	0.6
WMZ12A-55RM060	55	60	0.1	0.5	2	15	11	4.5	5	0.6
WMZ12A-101M050	100	50	0.1	0.5	2	8	9	4.5	5	0.6