

WPZ25S Series

(Thermally Protected Varistor)



WPZ25S Series – Thermally Protected Varistors

WPZ25S Series

Thermally Protected Varistors

APPLICATIONS

- TVSS products
- AC panel protection modules
- AC line power supplies
- Surge protected strip connectors
- AC power meters
- Relocatable AC power taps
- UPS (Uninterruptible Power Supply)
- White goods
- GFCI (Ground Fault Current Interrupter)
- Plug-in TVSS
- Inverters
- AC/DC power supplies



FEATURES

- RoHS compliant
- Low leakage
- -55°C to +85°C operating temp range
- Wave solderable
- Available with remote signal function micro switch.

AGENCY APPROVALS

- UL/CUL Recognized File # E321567

ABSOLUTE MAXIMUM RATINGS

CONTINUOUS	VALUE	UNITS
Operating Ambient Temperature Range (TA)	-40~+85	°C
Storage Temperature Range (TSTG)	-55~+125	°C
Temperature Coefficient (αV) of Clamping Voltage (V_C) at Specified Test Current	<0.01	%/°C
Hi-Pot Encapsulation (COATING Isolation Voltage Capability)	2500	V
Thermal Protection Isolation Voltage Capability (when operated)	1000	V
COATING Insulation Resistance	100	MΩ

Date Code (i.e.: 1625) = First two digits represent year (16 = 2016).
Remaining digits represent the week of the year (25 = week 25).

* All specs and applications shown above subject to change without prior notice.

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Specifications

PART NUMBER	Maximum Allowable Voltage		Varistor Voltage		Clamping Voltage (max.)		Maximum peak Current 8/20us		Maximum Energy (Joule)	Typical Capacitance (Reference)			
	AC.Rms (V)	DC (V)	V1.0mA (V)		VC (V)	IP (A)	In.10 times (KA)	I max. (KA)	10/1000 μs	@ 1KHz (pf)			
			Min.	Max.									
WPZ25S270K*	17	22	24	31	53	35	3	6	33	30000			
WPZ25S330K*	20	26	30	37	65				4	8	42	24500	
WPZ25S390K*	25	31	35	44	77						5	10	49
WPZ25S470K*	30	38	42	52	93		175	8	16	60			17250
WPZ25S560K*	35	45	50	63	110					10	25	72	14500
WPZ25S680K*	40	56	61	75	135							10	25
WPZ25S820K*	50	65	74	90	135	10				25	98		
WPZ25S101K*	60	85	90	110	165						10	25	122
WPZ25S121K*	75	100	108	132	200	10				25			146
WPZ25S151K*	95	125	135	165	250			10	25		185	4400	
WPZ25S181K*	115	150	162	198	300	10				25	218	3650	
WPZ25S201K*	130	170	185	225	340			10	25		252	3300	
WPZ25S221K*	140	180	198	242	360	10				25	280	3000	
WPZ25S241K*	150	200	222	270	395			10	25		302	2800	
WPZ25S271K*	180	225	256	310	455	10				25	340	2450	
WPZ25S301K*	190	250	270	330	500			10	25		375	2200	
WPZ25S331K*	210	275	297	363	550	10				25	410	2050	
WPZ25S361K*	230	300	324	396	595			10	25		465	1850	
WPZ25S391K*	250	320	362	440	650	10				25	520	1700	
WPZ25S431K*	275	350	387	473	710			10	25		575	1600	
WPZ25S471K*	300	385	423	517	775	10				25	630	1450	
WPZ25S511K*	320	415	459	561	845		10	25	665		1300		
WPZ25S561K*	350	460	504	616	925	10			25	720	1200		
WPZ25S621K*	385	505	558	682	1025		10	25		790	1100		
WPZ25S681K*	420	560	612	748	1120	10			25	790	1000		
WPZ25S751K*	460	615	675	825	1240		10	25		825	900		
WPZ25S781K*	485	640	702	858	1290	10			25	860	850		
WPZ25S821K*	510	670	738	902	1355		10	25		900	810		
WPZ25S911K*	550	745	819	1001	1500	10			25	950	750		
WPZ25S102K*	625	825	900	1100	1650		10	25		1040	660		
WPZ25S112K*	680	895	990	1210	1815	10			25	1130	605		
WPZ25S122K*	750	980	1150	1320	1980		10	25		1170	555		

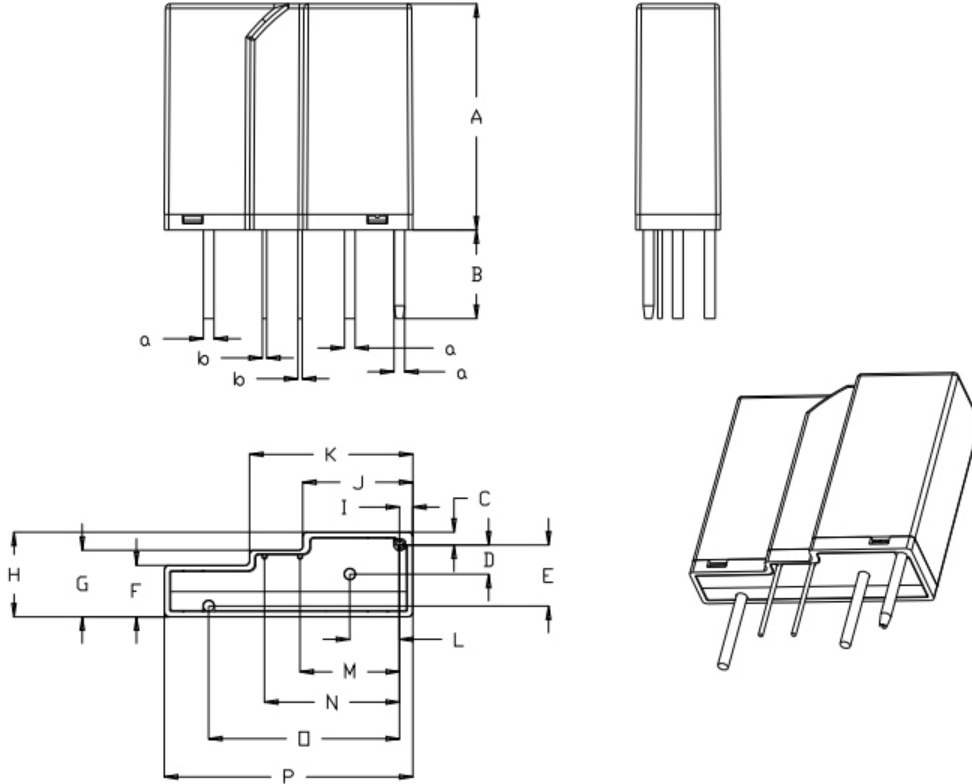
* = For Remote Signal Function/Micro Switch add suffix “-IT” to part number. Example: WPZ25S270K-IT.

WPZ25S Series – Thermally Protected Varistors

WPZ25S Series

Thermally Protected Varistors (with micro switch suffix “-IT” option)

Dimensions



WP25S270K - WP25S241K

A: 25.5±1.0	B: 10.0±0.5	C: 1.45±0.1	D: 3.3±0.5	E: 6.9±0.5	F: 5.8±0.5
G: 7.5±0.5	H: 9.55±1.0	I: 1.5±0.1	J: 12.4±0.5	K: 18.4±0.5	L: 5.6±0.5
M: 11.2±0.5	N: 15.2±0.5	O: 21.5±0.5	P: 28±1.0	a: 1.2±0.1	b: 0.5±0.1

WP25S271K - WP25S122K

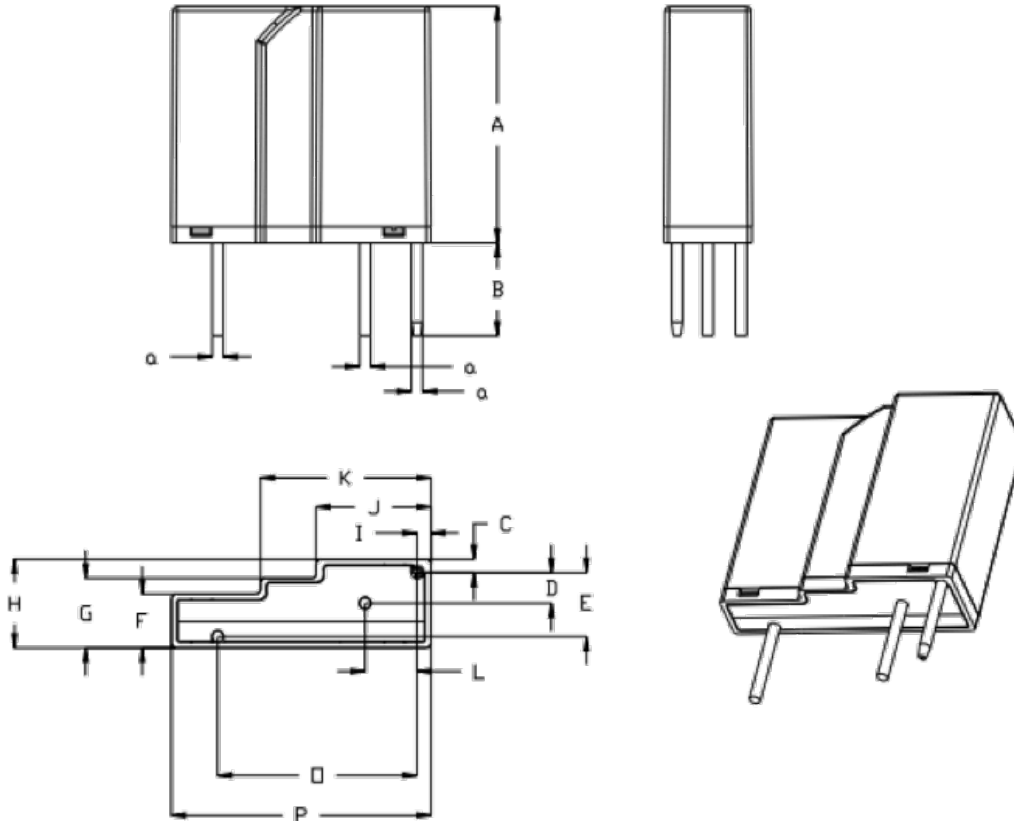
A: 25.5±1.0	B: 10.0±0.5	C: 1.45±0.1	D: 3.3±0.5	E: 9.8±0.5	F: 8.7±0.5
G: 10.4±0.5	H: 12.45±1.0	I: 1.5±0.1	J: 12.4±0.5	K: 18.4±0.5	L: 5.6±0.5
M: 11.2±0.5	N: 15.2±0.5	O: 21.5±0.5	P: 28±1.0	a: 1.2±0.1	b: 0.5±0.1

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Thermally Protected Varistors (without micro switch)

Dimensions



WP25S270K - WP25S241K

A: 25.5±1.0	B: 10.0±0.5	C: 1.45±0.1	D: 3.3±0.5	E: 6.9±0.5
G: 7.5±0.5	H: 9.55±1.0	I: 1.5±0.1	J: 12.4±0.5	K: 18.4±0.5
O: 21.5±0.5	P: 28±1.0	a: 1.2±0.1	F: 5.8±0.5	L: 5.6±0.5

WP25S271K - WP25S122K

A: 25.5±1.0	B: 10.0±0.5	C: 1.45±0.1	D: 3.3±0.5	E: 9.8±0.5
G: 10.4±0.5	H: 12.45±1.0	I: 1.5±0.1	J: 12.4±0.5	K: 18.4±0.5
O: 21.5±0.5	P: 28±1.0	a: 1.2±0.1	F: 8.7±0.5	L: 5.6±0.5

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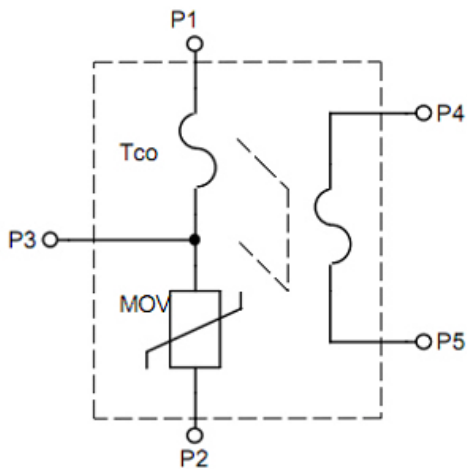
WPZ25S Series

Thermally Protected Varistors (with micro switch suffix “-IT” option)

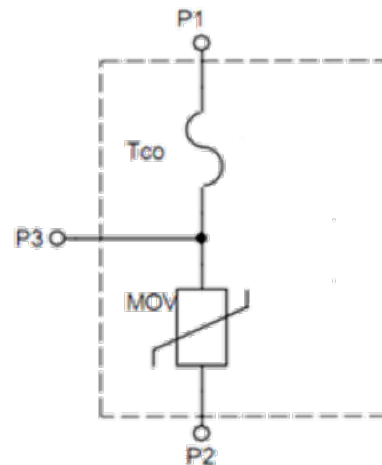
Environmental Specifications

Passive Aging	+85, 1000 hours $\pm 10\%$ typical voltage change
Humidity Aging	+85, 85% RH, 1000 hours $\pm 10\%$ typical voltage change
Thermal Shock	+85 to -40 5 times $\pm 10\%$ typical voltage change
Solvent Resistance	MIL-STD-202, Method 215F
Moisture Sensitivity	Level 1, J-STD-020C

Lead Configurations (with microswitch)



Lead Configurations (without microswitch)

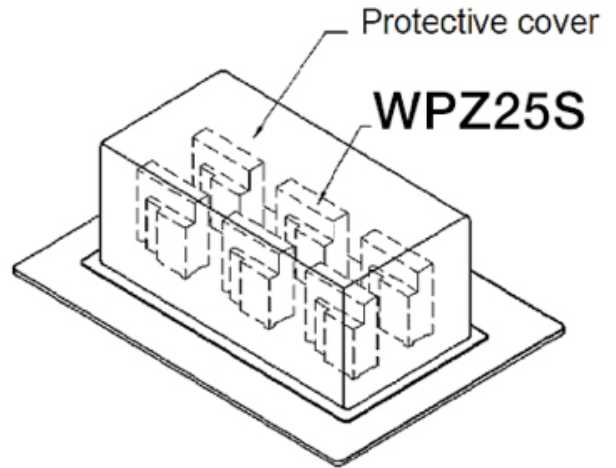
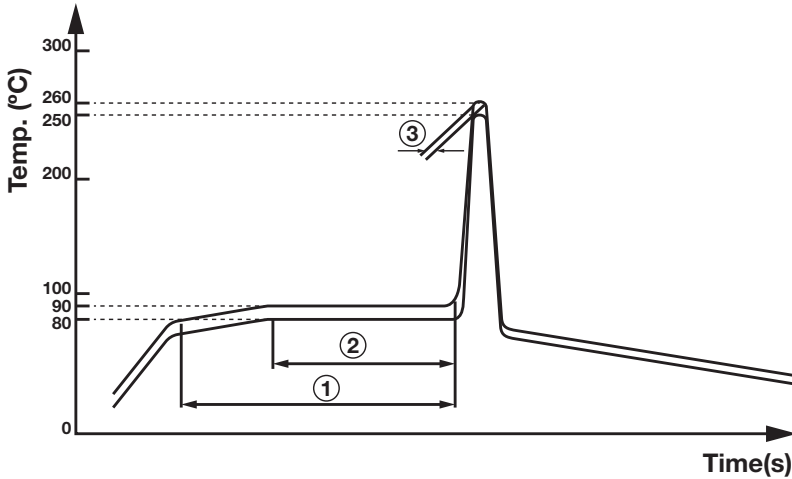


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Soldering Conditions

This product is available for wave soldering, the length of exposed pins should be less than 3mm and keep the preheat temperature below 90°C. Soldering temperature should be less than 260°C and tinning time should be less than 4s. During wave soldering, a protective cover can be applied to protect the product from the heat or after wave soldering. Cooling equipment is recommended to rapidly reduce the product temperature to room temperature. The following graph shows the recommended time.

- Preheat time:
1. <150s
 2. <100s
 3. Dip time ≤4s



This curve is our recommendation and for reference only.

If you use iron to weld, please pay attention to the iron temperature and soldering time:

Item	Condition
Iron Temperature	350°C (Max.)
Soldering Time	4s (Max.)
Space between soldering point and the bottom of the product.	2mm (Min.)

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Packing

Plastic Tray
342x245x18mm
48 PCS per tray



Outside Box
350x260x150mm
384 PCS per carton

