

## Radial Leaded PTC Resettable Fuse : AHS Series

### 1. Summary

- (a) **RoHS Compliant (Lead Free) Product**
- (b) **Applications : Wide variety of electronic equipment**
- (c) **Product Features : Low hold current, Solid state, Radial leaded product ideal for up to 60VDC**
- (d) **Operation Current : 0.05A~3.75A**
- (e) **Maximum Voltage : 60VDC**
- (f) **Temperature Range : -40°C to 85°C**

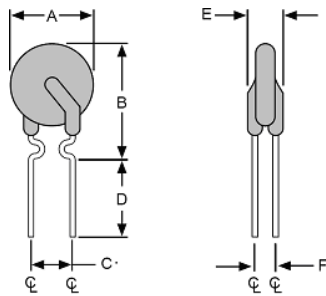
### 2. Electrical Characteristics (23°C)

Part Number	Hold Current	Trip Current	Max.Time to Trip	Maximum Current	Rated Voltage	Typical Power	Resistance	
	I <sub>H</sub> ,A	I <sub>T</sub> ,A	at 5X I <sub>H</sub> ,S	I <sub>MAX</sub> ,A	V <sub>MAX</sub> ,VDC	P <sub>d</sub> , W	R <sub>MIN</sub>	R <sub>1MAX</sub>
							Ohms	Ohms
AHS005-SM	0.05	0.10	5.0	40	60	0.26	7.30	20.00
AHS010-SM	0.10	0.20	4.0	40	60	0.38	2.50	7.50
AHS017-SM	0.17	0.34	3.0	40	60	0.48	2.00	8.00
AHS020-SM	0.20	0.40	2.2	40	60	0.41	1.83	4.40
AHS025-SM	0.25	0.50	2.5	40	60	0.45	1.25	3.00
AHS030-SM	0.30	0.60	3.0	40	60	0.49	0.88	2.10
AHS040-SM	0.40	0.80	3.8	40	60	0.56	0.55	1.29
AHS050-SM	0.50	1.00	4.0	40	60	0.77	0.50	1.17
AHS065-SM	0.65	1.30	5.3	40	60	0.88	0.31	0.72
AHS075-SM	0.75	1.50	6.3	40	60	0.92	0.25	0.60
AHS090-SM	0.90	1.80	7.2	40	60	0.99	0.20	0.47
AHS110-SM	1.10	2.20	8.2	40	60	1.50	0.15	0.38
AHS135-SM	1.35	2.70	9.6	40	60	1.70	0.12	0.30
AHS160-SM	1.60	3.20	11.4	40	60	1.90	0.09	0.22
AHS185-SM	1.85	3.70	12.6	40	60	2.10	0.08	0.19
AHS250-SM	2.50	5.00	15.6	40	60	2.50	0.05	0.13
AHS300-SM	3.00	6.00	19.8	40	60	2.80	0.04	0.10
AHS375-SM	3.75	7.50	24.0	40	60	3.20	0.03	0.08

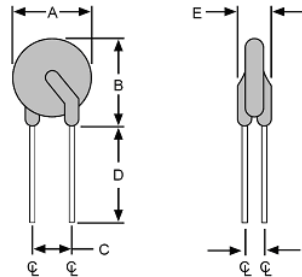
I<sub>H</sub>=Hold current-maximum current at which the device will not trip at 23°C still air.  
 I<sub>T</sub>=Trip current-minimum current at which the device will always trip at 23°C still air.  
 V<sub>MAX</sub>=Maximum voltage device can withstand without damage at its rated current.  
 I<sub>MAX</sub>= Maximum fault current device can withstand without damage at rated voltage (V<sub>MAX</sub>).  
 P<sub>d</sub>=Typical power dissipated from device when in tripped state in 23°C still air environment.  
 R<sub>MIN</sub>=Minimum device resistance at 23°C.  
 R<sub>1MAX</sub>=Maximum device resistance at 23°C, 1 hour after tripping .  
 Physical specifications:  
 Lead material: AHS005-SM~AHS090-SM Tin plated copper, 24 AWG.  
 AHS110-SM~AHS375-SM Tin plated copper, 20 AWG.  
 Soldering characteristics:MIL-STD-202, Method 208E.  
 Insulating coating:Flame retardant epoxy, meets UL-94V-0 requirement.



**3. Production Dimensions (millimeter)**



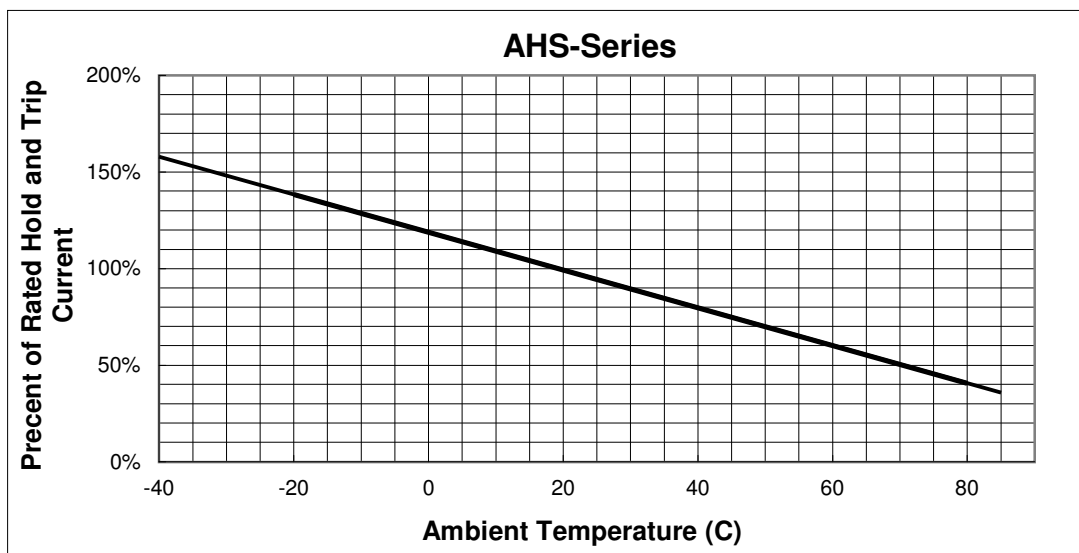
**AHS 005-SM ~ AHS 090-SM**  
Lead Size : 24AWG  
Φ 0.51 mm Diameter



**AHS 110-SM ~ AHS 375-SM**  
Lead Size : 20AWG  
Φ 0.81 mm Diameter

Part Number	A	B	C	D	E	F
	Maximum	Maximum	Typical	Minimum	Maximum	Typical
AHS005-SM	7.4	12.7	5.1	7.6	3.1	1.1
AHS010-SM	7.4	12.7	5.1	7.6	3.1	1.1
AHS017-SM	7.4	12.7	5.1	7.6	3.1	1.1
AHS020-SM	7.4	12.7	5.1	7.6	3.1	1.1
AHS025-SM	7.4	12.7	5.1	7.6	3.1	1.1
AHS030-SM	7.4	13.0	5.1	7.6	3.1	1.1
AHS040-SM	7.6	13.5	5.1	7.6	3.1	1.1
AHS050-SM	7.9	13.7	5.1	7.6	3.1	1.1
AHS065-SM	9.7	14.5	5.1	7.6	3.1	1.1
AHS075-SM	10.4	15.2	5.1	7.6	3.1	1.1
AHS090-SM	11.7	15.8	5.1	7.6	3.1	1.1
AHS110-SM	13.0	18.0	5.1	7.6	3.1	1.4
AHS135-SM	14.5	19.6	5.1	7.6	3.1	1.4
AHS160-SM	16.3	21.3	5.1	7.6	3.1	1.4
AHS185-SM	17.8	22.9	5.1	7.6	3.1	1.4
AHS250-SM	21.3	26.4	10.2	7.6	3.1	1.4
AHS300-SM	24.9	30.0	10.2	7.6	3.1	1.4
AHS375-SM	28.5	33.5	10.2	7.6	3.1	1.4

**4. Thermal Derating Curve**

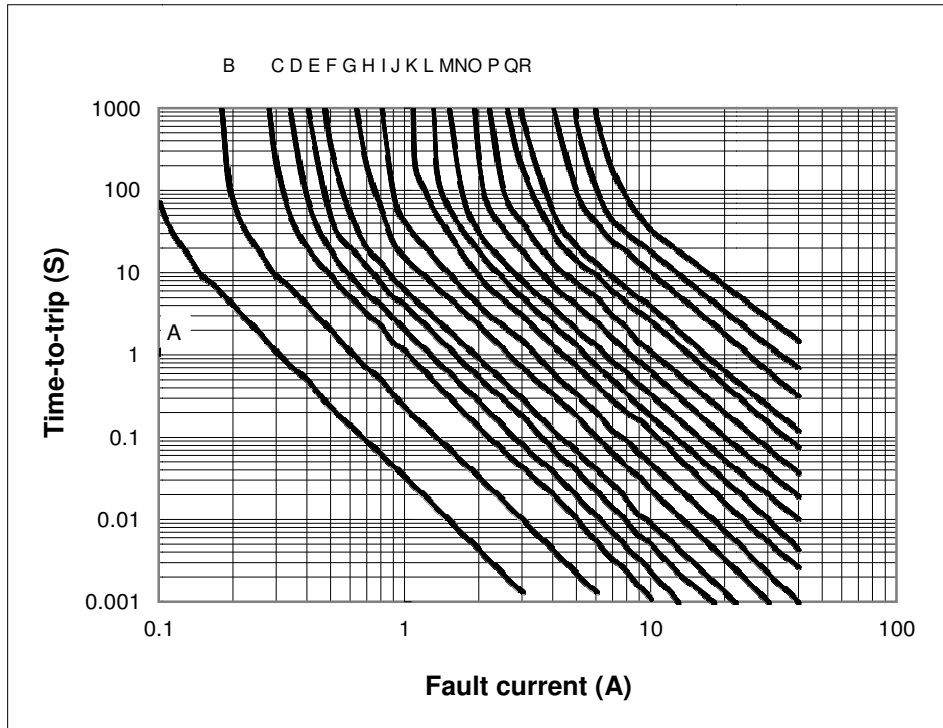


NOTE : Specification subject to change without notice.



### 5. Typical Time-To-Trip at 23°C

- A =AHS005-SM
- B =AHS010-SM
- C =AHS017-SM
- D =AHS020-SM
- E =AHS025-SM
- F =AHS030-SM
- G =AHS040-SM
- H =AHS050-SM
- I =AHS065-SM
- J =AHS075-SM
- K =AHS090-SM
- L =AHS110-SM
- M =AHS135-SM
- N =AHS160-SM
- O =AHS185-SM
- P =AHS250-SM
- Q =AHS300-SM
- R =AHS375-SM



### 6. Material Specification

Lead material : AHS005-SM~AHS090-SM Tin plated copper,24 AWG.

AHS110-SM~AHS375-SM Tin plated copper, 20 AWG.

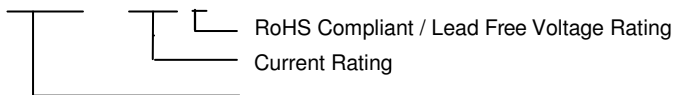
Soldering characteristics:MIL-STD-202, Method 208E.

Insulating coating:Flame retardant epoxy, meets UL-94V-0 requirement

### 7. Part Numbering and Marking System

#### Part Numbering System

AHS □□□-□□



#### Part Marking System



**Warning:** -Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.

-PPTC device are intended for occasional overcurrent protection. Application for repeated overcurrent condition and/or prolonged trip are not anticipated.

- Avoid contact of PPTC device with chemical solvent. Prolonged contact will damage the device performance.