

Description

The ASIM 250R Series is designed to provide overcurrent protection to 250Vdc maximum voltage

Features

- 250Vdc max voltage
- RoHS compliant, Lead-Free and HalogenFree*
- Resettable feature
- Ideal for a broad range of general electronics using a low voltage power supply



Applications

- Load protection on wide range of low voltage power supplies
- Computers
- Computers peripherals
- General electronics

Performance Specification

Model	I_{hold}	I_{trip}	V_{max}	I_{max}	Maximum Time To Trip		P_d	Resistance		
					Current	Time		Rimin	Rimax	R1max
	(A)	(A)	(Vdc)	(A)	(A)	(Sec)	(W)	(Ω)	(Ω)	(Ω)
250R050	0.050	0.100	250	3.0	1.00	0.35	4.00	33.0	60.0	90.0
250R060	0.060	0.120	250	3.0	1.00	0.35	4.00	22.0	32.0	40.0
250R080	0.080	0.160	250	3.0	1.00	0.40	3.00	14.0	22.0	28.0
250R090	0.090	0.018	250	3.0	1.00	0.35	4.00	10.0	20.0	26.0
250R110	0.110	0.220	250	3.0	1.00	1.00	2.00	7.0	11.0	15.0
250R120	0.120	0.240	250	3.0	1.00	0.60	0.75	8.0	12.0	15.0
250R145	0.145	0.290	250	3.0	1.00	1.00	2.50	3.0	6.5	10.0
250R180	0.180	0.360	250	3.0	1.00	1.50	10.0	0.8	2.0	2.50
250R200	0.200	0.400	250	3.0	1.00	1.50	10.0	1.5	3.2	4.50
250R300	0.300	0.600	250	3.0	1.00	1.50	10.0	1.0	2.4	3.60
250R400	0.400	0.800	250	3.0	3.00	2.00	10.0	0.75	1.10	1.40
250R500	0.500	1.000	250	3.0	3.00	2.50	10.0	0.45	0.80	1.20
250R600	0.600	1.200	250	3.0	3.00	3.00	10.0	0.50	0.75	1.00
250R800	0.800	1.600	250	3.0	3.50	4.00	8.0	0.45	0.65	1.00
250R1000	1.000	2.000	250	3.0	4.00	5.00	10.0	0.28	0.51	0.70
250R1200	1.200	2.400	250	3.0	5.00	6.00	10.0	0.25	0.30	0.50

I_{hold} = Hold Current. Maximum current device will not trip in 25°C still air.

I_{trip} = Trip Current. Minimum current at which the device will always trip in 25°C still air.

V_{max} = Maximum operating voltage device can withstand without damage at rated current (I_{max}).

I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max}).

P_d = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

$R_{i min/max}$ = Minimum/Maximum device resistance prior to tripping at 25°C.

R_{1max} = Maximum device resistance is measured one hour post reflow.

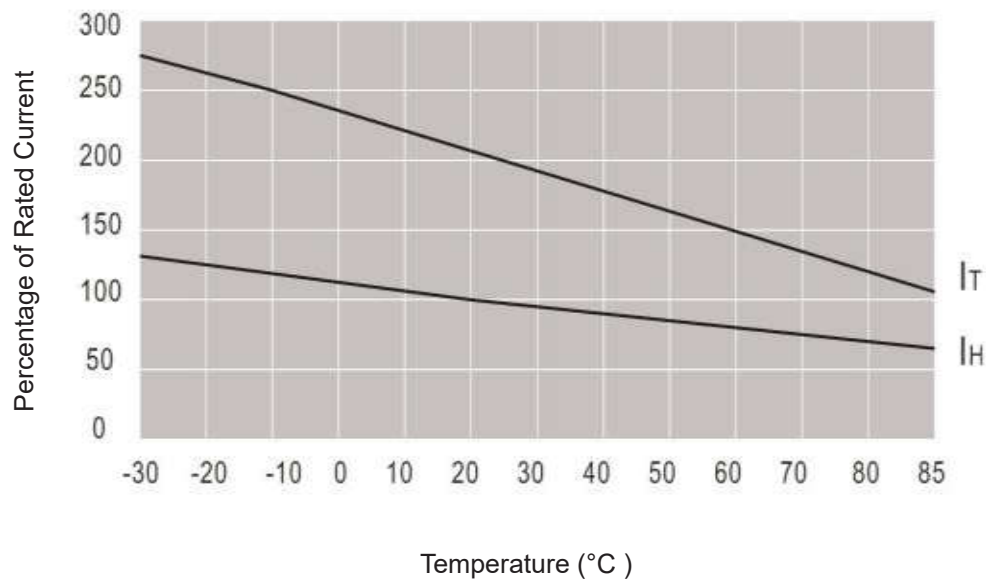
CAUTION : Operation beyond the specified ratings may result in damage and possible arcing and flame.

Environmental Specifications

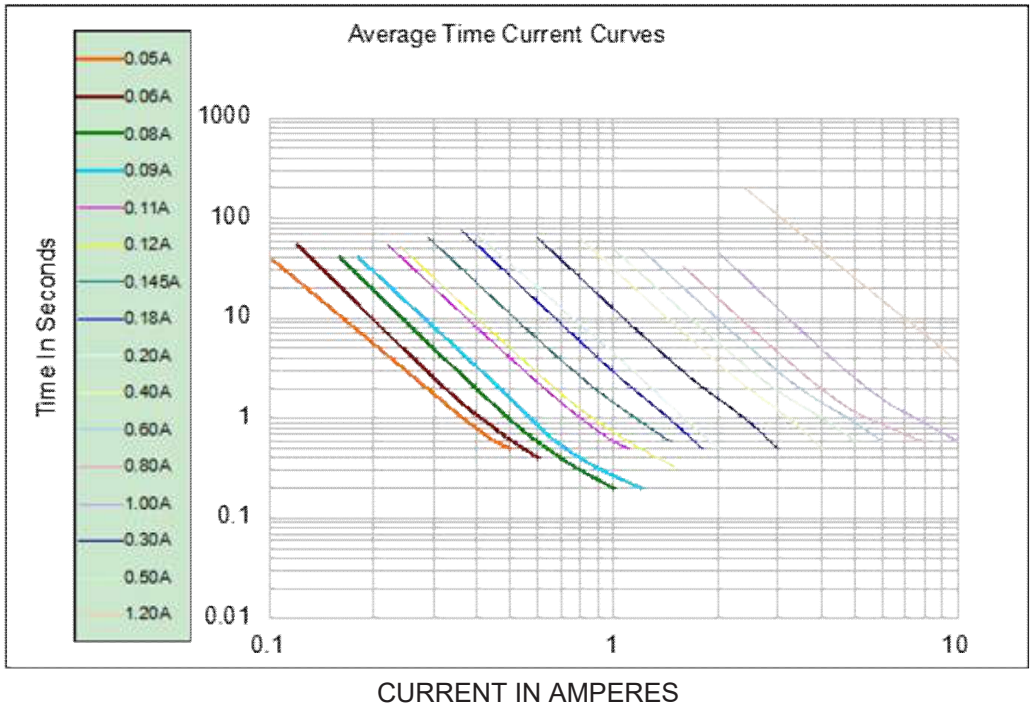
Test	Conditions	Resistance change
Passive aging	+85°C, 1000 hrs.	±5% typical
Humidity aging	+85°C, 85% R.H. , 168 hours	±5% typical
Thermal shock	+85°C to -40°C, 20 times	±33% typical
Resistance to solvent	MIL-STD-202,Method 215	No change
Vibration	MIL-STD-202,Method 201	No change
Ambient operating conditions : - 40 °C to +85 °C		

Maximum surface temperature of the device in the tripped state is 125 °C

Thermal Derating Curve



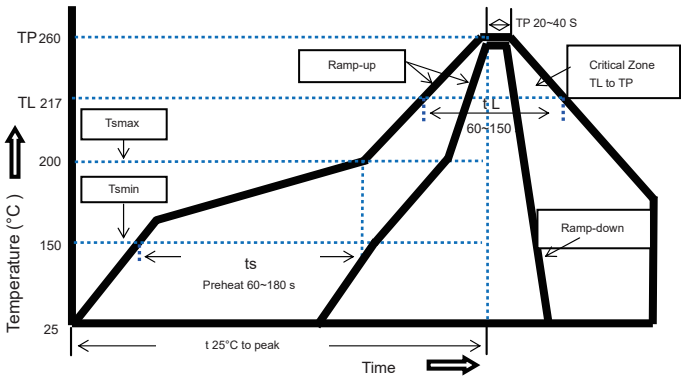
Average Time-Current Curve



Ihold Versus Temperature

Model	Maximum ambient operating temperature (T _{mao}) vs. hold current (I _{hold})								
	- 40°C	- 20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
Decline percentage	148%	133%	114%	100%	92%	73%	64%	52%	40%

Soldering Parameters



Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (Ts max to T p)	3°C/second mac.
Preheat	
-Temperature Min(Ts min)	150°C
-Temperature Max(Ts max)	200°C
-Time(Ts min to Ts max)	60~180 seconds
Time maintained above:	
-Temperature(TL)	217°C
-Time(tL)	60~150 seconds
Peak Temperature(Tp)	260°C
Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max
Storage Condition	0°C~35°C, ≤70%RH

Recommended reflow methods: IR, vapor phase oven, hot air oven, N2 environment for lead-free

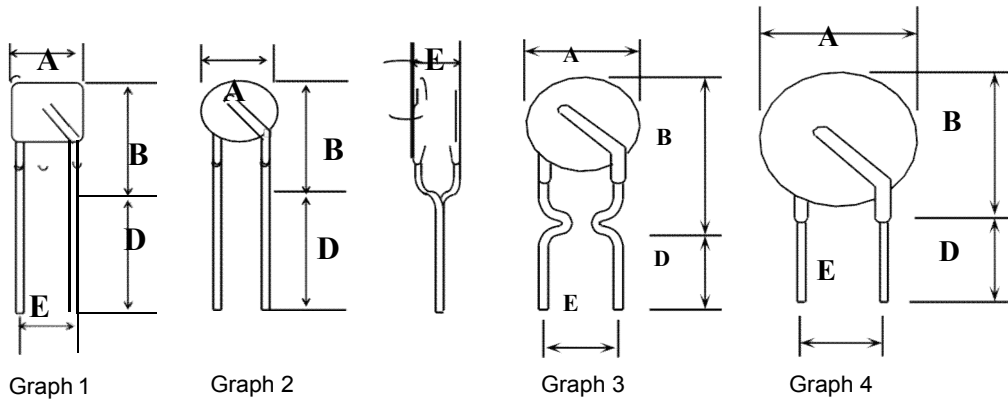
Recommended maximum paste thickness is 0.25mm

Devices can be cleaned using standard industry methods and solvents.

Note 1:All temperature refer to topside of the package, measured on the package body surface.

Note 2: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Physical Dimensions(mm.)



	A	B	C	D	E	Pin		Graph
	Max.	Max.	Typ.	Min.	Max.	Wire diameter	Materials	
250R050	5.8	9.9	3.8	4.7	5.1	0.60	Tin plated copper clad steel wire	Graph 2
250R060	5.8	9.9	3.8	4.7	5.1	0.60		Graph 2
250R080	5.8	9.9	3.8	4.7	5.1	0.60		Graph 2
250R090	5.8	9.9	3.8	4.7	5.1	0.60		Graph 2
250R110	6.5	11.0	3.8	4.7	5.1	0.60		Graph 1
250R120	7.1	13.0	4.2	4.7	5.1	0.60		Graph 1
250R145	7.1	11.0	3.8	4.7	5.1	0.60		Graph 1
250R180	9.0	12.6	3.5	4.7	5.1	0.60		Graph 1
250R200	9.0	14.6	3.5	4.7	5.1	0.60		Graph 1
250R300	9.0	12.6	3.5	4.7	5.1	0.60		Graph 2
250R400	9.5	15.2	3.5	4.7	5.1	0.60		Graph 3
250R500	11.0	15.8	3.5	4.7	5.1	0.80		Graph 4
250R600	11.0	15.8	3.5	4.7	5.1	0.80		Graph 4
250R800	11.0	15.8	3.5	4.7	5.1	0.80		Graph 4
250R1000	14.0	19.1	3.5	4.7	5.1	0.80		Graph 4
250R1200	16.7	20.5	3.5	4.7	5.1	0.80		Graph 4