Polymeric Positive Temperature Coefficient Thermistor

Features

- ✧ Resettable over current and over temperature protection
- ✧ Small size of 0805
- ✧ Small footprint
- ✧ Low resistance
- ✧ Fast time-to-trip

Applications

- ✧ Computer, Mobile phones, Multimedia
- ✧ Automotive, Industrial controls, Telephony and broadband
- ✧ Game machines
- ✧ Portable electronics, Battery

Mechanical Data

- ✧ RoHS Compliant

Electrical Characteristics

Part Number	I(A)		V_{max}	I_{max}	Pd_{typ}	T_{trip}		R_{min}	R_{max}	R_{1max}
	25℃		--	--	--	25℃		25℃		
	Hold	Trip	(V)	(A)	(W)	Current(A)	Time(S)	(Ω)	(Ω)	(Ω)
OVSL0805110-7V-J	1.10	2.2	7.0	50	1.0	8.0	0.5	0.020	0.044	0.080

I_H=Hold current: maximum current at which the device will not trip at 25℃ or 60℃ still air reflow soldering of 260℃ for 20 sec.
I_T=Trip current: minimum current at which the device will always trip at 25℃ still air reflow soldering of 260℃ for 20 sec.
V_{max}=Maximum continuous voltage device can withstand without damage at rated current
I_{max}=Maximum fault current device can withstand without damage at rated voltage.
T_{trip}=Maximum time to trip(s) at assigned current reflow soldering of 260℃ for 20 sec.
Pd_{typ}=Typical power dissipation: typical amount of power dissipated by the device when in state air environment.
R_{min}= Minimum resistance of device in initial (un-soldered) state.
R_{max}= Maximum resistance of device in initial (un-soldered) state.
R_{1max}=Maximum resistance of device at 25℃ measured one hour after reflow soldering of 260℃ for 20 sec.
Value specified is determined by using the PWB with 0.030˙*1.5oz coppertraces.

Caution: Operation beyond the specified rating may result in damage and possible arcing and flame.

Environmental Specifications

Test	Test Conditions	Resistance Change/ Criteria
Recommended storage conditions	40°C max, 70% R.H. max	± 5%
Passive aging:	85°C, 1000 hours	≤ R_{1max}
Moisture Resistance	85% RH,85℃,1000hrs	≤ R_{1max}
Thermal Shock	MIL-STD-202 Method 107G +85ºC /-40ºC 20 times	≤ R_{1max}
Vibration	MIL-STD-883C, Method 2007.1, Condition A	± 5%
Solvent Resistance	MIL-STD-202, Method 215	Appearance No change
Moisture Level Sensitivity	J-STD-020C	Level 2a

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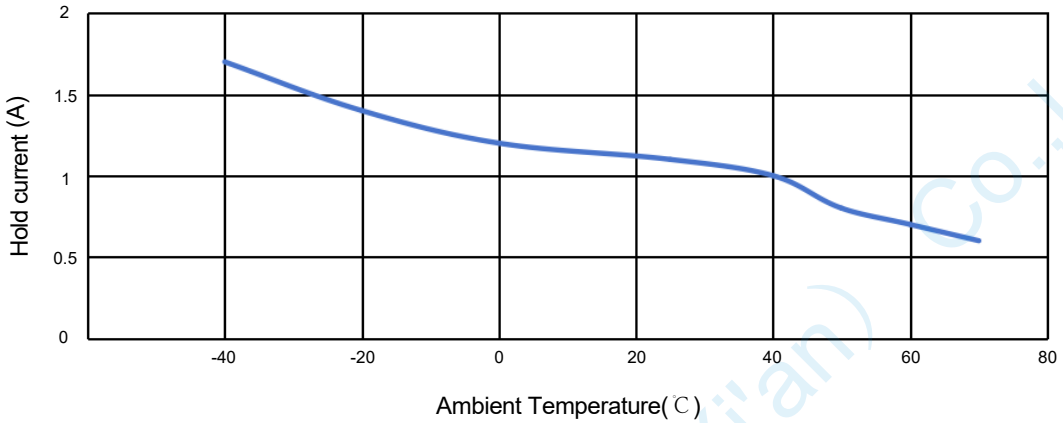
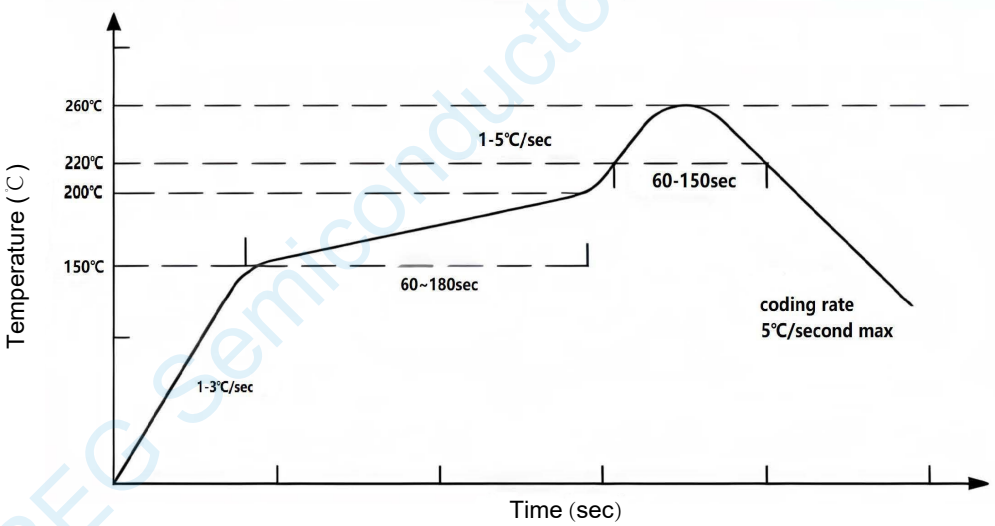
Thermal Derating(Hold Current (A) at Ambient Temperature (℃))

Part Number	Maximum Ambient Operating Temperature (℃)							
	-40	-20	0	25	40	50	60	70
OVSL0805110-7V-J	1.7	1.4	1.2	1.10	1.0	0.8	0.7	0.6



Solder Reflow Recommendation



Reflow -curve

Recommended reflow methods:IR,hot air oven ,nitrogen oven
Devices can be cleaned using standard industry methods and solvents.
NOTE:
If reflow temperatures exceed the recommended profile,devices may not meet the performance requirements.
Caution: Operation beyond the rated voltage or current may result in rupture electrical arcing or flame

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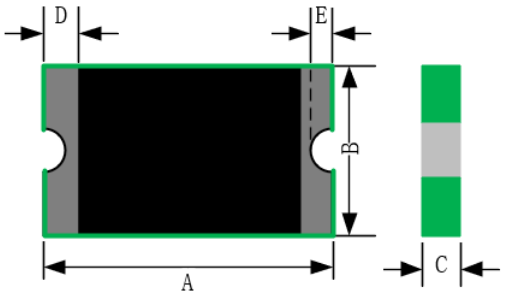
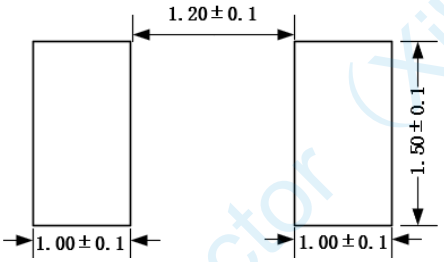
Product Dimensions in Millimeter



Part Number	A		B		C		D	E
	Min	Max	Min	Max	Min	Max	Min	Min
OVSL0805110-7V-J	1.90	2.50	1.20	1.80	0.5	1.2	0.20	0.10

Recommend PCB Layout



Recommended Pad Layout(mm.)

Ordering Information

Part number	Material	Type	Reel size	MOQ	MOQ/internal box	MOQ/carton
OVSL0805110-7V-J	GREEN	T/R	7 inch	4k/reel	10reel= 40k/box	4boxes=160k/carton

Warning

1. Operation beyond the maximum voltage or current may result in device damage and possible electrical arcing or flame.
2. Hold current at all temperatures specified in the SPEC is the conventional performance of PTC obtained by one time reflow welding. PTC can hold 1 hour under current conditions at a given temperature. This current is not the condition of long-term charging or discharging current for this type of PTC.
3. The PTC is thermal sensitive device. It is recommended not to design any heat source devices around it to reduce the outside heat source impact.
4. SMD PTC is designed for SMT processing which applies reflow soldering.
5. recommended curve for reference. If the reflow soldering temperature exceeds the recommended value, the PTC might be damaged. Hand welding PTC is prohibited. Heat gun is not allowed to use during the circuit board components or terminals rework .
6. When mounting or using PTC, it is not recommended to use circuit board washer water or other cleaning agent. If cleaning is required, it is necessary to verify the applicability of various cleaning agents, washboard water and solvents, and confirm that they will not affect the PTC performance . The known chemicals that impacts PTC include but not limited to ethers, benzene homolog, ketones, lipids and derivates that is of strong solubleness and ruinous. Please place the product in open environment for at least 24 hours to volatilize solvents residuals.
7. In charging terminal application, PP type material is recommended to use as inner membrane and TPE and PVC type material is inhibited.
8. Please do not smash, clamp, pull, dent or twist by tool during assembling process otherwise it might be a cause of the performance degradation.

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