

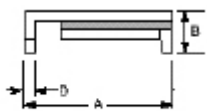


# Polymer PTC Thermistors LP-SM Series

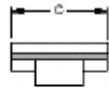
## Electrical Characteristics

Part #	IH	IT	T trip	T trip	V max	Pdmax	Pd typ.	I <sub>max</sub>	Initial resistance	
	(A)	(A)	(A)	(S)	(V)	(W)	R1 max	(A)	R <sub>min</sub>	R <sub>max</sub>
LP-SM030	0.30	0.60	1.5	4.0	60	1.9	4.80	10	0.70	1.30
LP-SM050/60	0.50	1.00	2.5	4.0	60	1.9	1.40	10	0.35	0.60
LP-SM050/30	0.50	1.00	2.5	4.0	30	1.9	1.40	10	0.35	0.60
LP-SM075	0.75	1.50	8.0	0.3	30	1.9	1.00	40	0.29	0.40
LP-SM110/33	1.10	2.20	8.0	2.0	33	1.9	0.48	40	0.10	0.40
LP-SM110/24	1.10	2.20	8.0	2.0	24	1.9	0.48	40	0.10	0.40
LP-SM110/15	1.10	2.20	8.0	2.0	15	1.9	0.48	40	0.10	0.40
LP-SM125	1.25	2.50	8.0	2.0	15	1.6	0.25	40	0.07	0.12
LP-SM130/33	1.30	2.60	8.0	4.0	33	2.1	--	40	0.08	--
LP-SM130/15	1.30	2.60	8.0	4.0	15	2.1	--	40	0.08	--
LP-SM150/33	1.50	3.00	8.0	5.0	33	2.1	0.25	40	0.06	0.11
LP-SM150/15	1.50	3.00	8.0	5.0	15	2.1	0.25	40	0.06	0.11
LP-SM185	1.85	3.70	8.0	5.0	15	2.1	0.165	40	0.045	0.08
LP-SM200	2.00	4.00	8.0	12.0	15	2.1	0.125	40	0.045	0.065
LP-SM260	2.60	5.20	8.0	20.0	6	1.9	0.075	40	0.025	0.052

## Product Dimensions (millimeters)



Side View

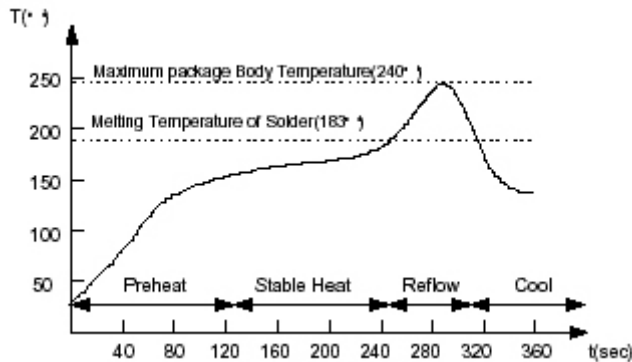


End View

Part #	A (typ)	B (max)	C (typ)	D(max)
	mm	mm	mm	mm
LP-SM030	7.50	3.18	5.00	0.70
LP-SM050/60	7.50	3.18	5.00	0.70
LP-SM050/30	7.50	3.18	5.00	0.70
LP-SM075	7.50	3.18	5.00	0.70
LP-SM110/33	7.50	3.00	5.00	0.70
LP-SM110/24	7.50	3.00	5.00	0.70
LP-SM110/15	7.50	3.00	5.00	0.70
LP-SM125	7.50	3.00	5.00	0.70
LP-SM130/33	8.70	3.00	6.30	0.70
LP-SM130/15	8.70	3.00	6.30	0.70
LP-SM150/33	8.70	3.00	6.30	0.70

LP-SM150/15	8.70	3.00	6.30	0.70
LP-SM185	8.70	3.00	6.30	0.70
LP-SM200	8.70	3.00	6.30	0.70
LP-SM260	7.50	3.18	5.00	0.70

## Solder Reflow Recommendation



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

The specification is intended to present application, product and technical data to assist the user in selecting PPTC circuit production devices. However, users should independently evaluate and test the suitability of each product. Wayon makes no warranties as to the accuracy or completeness of the information and disclaims any liability resulting from its use. Wayon's only obligations are those in the Wayon Standard Terms and Conditions of Sale and in no case will Wayon be liable for any incidental, indirect, or consequential damages arising from the sale, resale, or misuse of its products.

## Cross Reference

RTI	Raychem	Bourns
LP-SM030	SMD030	MF-SM030
LP-SM050/60	SMD050	MF-SM050
LP-SM075	SMD075	MF-SM075
LP-SM110/33	SMD100	MF-SM100
LP-SM125	SMD125	MF-SM125
LP-SM150/15	SMD150	MF-SM150
LP-SM200	SMD200	MF-SM200
LP-SM260	SMD260	MF-SM260

IH = Hold current-maximum current at which the device will not trip at 25 °C still air

IT = Trip current-maximum current at which the device will always trip at 25 °C still air

V max = Maximum voltage device can withstand without damage at rated current.

I max = Maximum fault current device can withstand without damage at rated voltage

Pd typ. = Power dissipated from device when in the tripped state in 25 °C still air environment

T trip = Maximum time to trip(s) at 5\*IH

R max = Maximum resistance measured in the nontripped state 1 hour post reflow with reflow conditions of 260°C for 20 sec.

## Environmental Characteristics

Operating/Storage Temperature	-40 °C to 85 °C
Maximum Device Surface Temperature	
In Tripped State	125 °C

Passive Aging	+70 °C, 1000 hours	±10% typical resistance change
Humidity Aging	+ 85 °C, 85%R.H. 1000 hours	±10% typical resistance change
Thermal Shock	MIL-STD-202F, Method 107G 125 °C to -40 °C, 10 times	±10% typical resistance change
Mechanical Shock	MIL-STD-202F, Method 213	No resistance change
Solvent Resistance	MIL-STD-202F, Method 215	No change
Vibration	MIL-STD-883C, Method 20007.1	No change Condition A

## Test Procedures And Requirements

Test	Test Conditions	Accept/Reject Criteria
Resistance	In Still Air @ 25 °C	$R_{min} \leq R \leq R_{max}$
Time to Trip	5 times I <sub>H</sub> ., V <sub>max</sub> , 25 °C	$T \leq \text{max. time to trip (sec.)}$
Hold Current	30 min. at I <sub>H</sub>	No trip
Trip Cycle Life	V <sub>max</sub> , I <sub>max</sub> , 100 cycles	No arcing or burning
Trip Endurance	V <sub>max</sub> , 24 hours	No arcing or burning