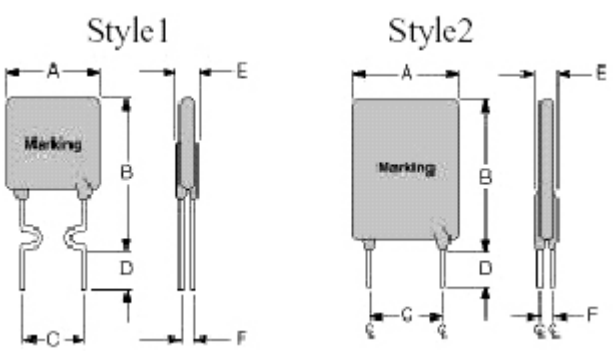
Polymer PTC Thermistors
LP30 Series

Electrical Characteristics

Part #	I_H	I_T	Ttrip	V max	Imax	Pd typ.	Rmin	Rmax
	(amps)	(amps)	(seconds)	(volts)	(amps)	(watts)	(ohms)	(ohms)
LP30-090	0.90	1.80	7.1	30	40	0.91	0.07	0.12
LP30-110	1.10	2.20	6.6	30	40	1.00	0.05	0.10
LP30-135	1.35	2.70	7.3	30	40	1.11	0.04	0.08
LP30-160	1.60	3.20	8.0	30	40	1.20	0.03	0.07
LP30-185	1.85	3.70	8.7	30	40	1.27	0.03	0.06
LP30-250	2.50	5.00	10.3	30	40	1.34	0.02	0.04
LP30-300	3.00	6.00	10.8	30	40	2.01	0.02	0.05
LP30-400	4.00	8.00	12.7	30	40	2.51	0.01	0.03
LP30-500	5.00	10.00	14.5	30	40	3.01	0.01	0.03
LP30-600	6.00	12.00	16.0	30	40	3.51	0.005	0.02
LP30-700	7.00	14.00	17.5	30	40	3.80	0.005	0.02
LP30-800	8.00	16.00	18.8	30	40	4.00	0.005	0.02
LP30-900	9.00	18.00	20.0*	30	40	4.21	0.005	0.01

Product Dimensions (millimeters)



Part #	A Max.	B Max.	C typ.	D Min.	E Max.	F typ.	Physical Characteristics		
							Style	Lead	Material
LP30-090	8.7	13.5	5.1	7.6	3.0	0.9	1	0.6	Sn/Cu
LP30-110	8.7	14.2	5.1	7.6	3.0	0.9	1	0.6	Sn/Cu
LP30-135	8.9	13.5	5.1	7.6	3.0	0.9	1	0.6	Sn/Cu
LP30-160	10.7	15.5	5.1	7.6	3.0	0.9	1	0.6	Sn/Cu
LP30-185	10.7	15.7	5.1	7.6	3.0	0.9	1	0.6	Sn/Cu
LP30-250	11.7	18.3	5.1	7.6	3.0	0.9	1	0.6	Sn/Cu

LP30-300	11.7	17.3	5.1	7.6	3.0	1.2	2	0.8	Sn/Cu
LP30-400	14.0	20.1	5.1	7.6	3.0	1.2	2	0.8	Sn/Cu
LP30-500	14.0	24.9	10.2	7.6	3.0	1.2	2	0.8	Sn/Cu
LP30-600	16.5	24.9	10.2	7.6	3.0	1.2	2	0.8	Sn/Cu
LP30-700	19.1	26.7	10.2	7.6	3.0	1.2	2	0.8	Sn/Cu
LP30-800	21.6	29.2	10.2	7.6	3.0	1.2	2	0.8	Sn/Cu
LP30-900	24.1	29.7	10.2	7.6	3.0	1.2	2	0.8	Sn/Cu

Typical Temperature-to-IHold table (Amps)

Part #	Maximum ambient operating temperatures(°C)								
	-40	-20	0	25	40	50	60	70	85
LP30-090	1.40	1.25	1.10	0.90	0.75	0.69	0.65	0.60	0.50
LP30-110	1.75	1.52	1.33	1.10	0.99	0.90	0.80	0.73	0.63
LP30-135	2.15	1.94	1.70	1.35	1.20	1.14	1.00	0.90	0.81
LP30-160	2.49	2.21	1.94	1.60	1.42	1.31	1.19	1.03	0.88
LP30-185	2.87	2.59	2.28	1.85	1.63	1.52	1.33	1.21	1.05
LP30-250	3.82	3.44	3.03	2.50	2.17	2.00	1.81	1.59	1.39
LP30-300	4.55	4.10	3.60	3.00	2.65	2.51	2.24	2.01	1.74
LP30-400	6.00	5.40	4.74	4.00	3.47	3.28	2.82	2.63	2.26
LP30-500	7.44	6.68	5.80	5.00	4.30	4.03	3.58	3.22	2.77
LP30-600	8.90	7.99	7.08	6.00	5.13	4.82	4.27	3.84	3.30
LP30-700	10.35	9.30	8.21	7.00	5.95	5.58	4.96	4.46	3.84
LP30-800	11.60	10.60	9.35	8.00	6.79	6.36	5.64	5.07	4.36
LP30-900	13.25	11.90	10.49	9.00	7.53	7.12	6.32	5.69	4.88

Cross Reference

RTI	Raychem	Bourns	Littlefuse
LP30-090	RUE090	MF-R090-0-9	30R090
LP30-110	RUE110	MF-R110	30R110
LP30-135	RUE135	MF-R135	30R135
LP30-160	RUE160	MF-R160	30R160
LP30-185	RUE185	MF-R185	30R185
LP30-250	RUE250	MF-R250-0-10	30R250
LP30-300	RUE300	MF-R300	30R300
LP30-400	RUE400	MF-R400	30R400
LP30-500	RUE500	MF-R500	30R500
LP30-600	RUE600	MF-R600	30R600
LP30-700	RUE700	MF-R700	30R700
LP30-800	RUE800	MF-R800	30R800
LP30-900	RUE900	MF-R900	30R900

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

I_T = 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.

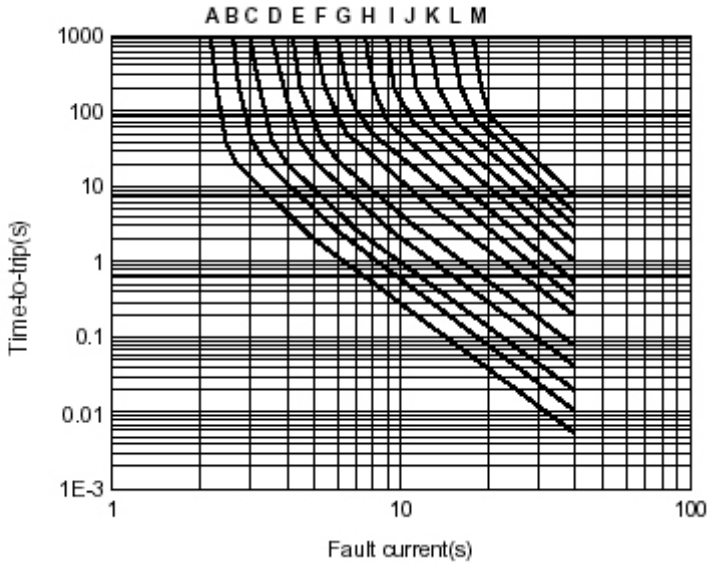
I max = Maximum fault current device can withstand without damage at rated voltage

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

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

Typical Time to Trip Chart, LP30

A=LP30-090
B=LP30-110
C=LP30-135
D=LP30-160
E=LP30-185
F=LP30-250
G=LP30-300
H=LP30-400
I=LP30-500
J=LP30-600
K=LP30-700
L=LP30-800
M=LP30-900



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	±5% typical resistance change
Humidity Aging	+ 85 °C, 85%R.H. 1000 hours	±5% 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 Condition A	No change

Test Procedures And Requirements

Test	Test Conditions	Accept/Reject Criteria
Resistance	In Still Air @ 25 °C	Rmin <= R <= Rmax
Time to Trip	5 times IH., Vmax, 25 °C	T <= max. time to trip (sec.)
Hold Current	30 min. at IH	No trip
Trip Cycle Life	Vmax, Imax, 100 cycles	No arcing or buring
Trip Endurance	Vmax, 24 hours	No arcing or buring