SMD2920 LF Series Surface Mount PTC Devices **U.S. Patent#6377467**

- The SMD2920 Lead(Pb) Free Series, a polymer-based Positive Temperature Coefficient (PTC) device to protect electrical circuits against overcurrent conditions with resettable feature, is fully compatible with current industrial standards.
- The new designed SMD2920 Lead(Pb) Free Series provides surface mount overcurrent protection with superior performance that is compliant with RoHS Directive 2002/95/EC.
- Application: The SMD2920 Lead(Pb) Free Series is ideal for computers and peripherals and can be applied to almost anywhere there is a low voltage power supply and a load to be protected.
- The solder plated termination is designed to meet or exceed solderability specifications and provide excellent solder joint inspectability.
- Agency Approval: UL / CSA File # E201431.
  TÜV Certificate # R9956421.

RoHS 2002/95/EC

ELECTRICAL CHARACTERISTICS

Part Number	I_{hold} (A)	I_{trip} (A)	V_{max} (Vdc)	I_{max} (A)	P_d^{max} (W)	Maximum Time To Trip Current (A)	Maximum Time To Trip Time (Sec.)	Resistance R_{min} (Ω)	Resistance R_{typ} (Ω)	Resistance R_{1max} (Ω)	Agency Approval
SMD2920P030TF	0.30	0.60	60	10	1.50	1.50	3.00	1.200	3.000	4.800	UL/CSA/TÜV
SMD2920P050TF	0.50	1.00	60	10	1.50	2.50	4.00	0.350	0.870	1.400	UL/CSA/TÜV
SMD2920P075TF	0.75	1.50	30	40	1.50	8.00	0.30	0.350	0.670	1.000	UL/CSA/TÜV
SMD2920P100TF	1.10	2.20	33	40	1.50	8.00	0.50	0.120	0.270	0.410	UL/CSA/TÜV
SMD2920P125TF	1.25	2.50	15	40	1.50	8.00	2.00	0.070	0.160	0.250	UL/CSA/TÜV
SMD2920P150TF	1.50	3.00	33	40	1.50	8.00	2.00	0.080	0.150	0.230	UL/CSA/TÜV
SMD2920P185TF	1.85	3.70	33	40	1.50	8.00	2.50	0.065	0.110	0.150	UL/CSA/TÜV
SMD2920P200TF	2.00	4.00	15	40	1.50	8.00	5.00	0.050	0.090	0.125	UL/CSA/TÜV
SMD2920P200TF/24	2.00	4.00	24	40	1.50	8.00	5.00	0.050	0.090	0.125	UL/CSA/TÜV
SMD2920P250TF	2.50	5.00	15	40	1.50	8.00	10.00	0.035	0.060	0.085	UL/CSA/TÜV
SMD2920P260TF	2.60	5.20	6	40	1.50	8.00	10.00	0.025	0.050	0.075	UL/CSA/TÜV
SMD2920P300TF	3.00	6.00	6	40	1.50	8.00	20.00	0.015	0.033	0.048	UL/CSA/TÜV
SMD2920P300TF/15	3.00	6.00	15	40	1.50	8.00	20.00	0.015	0.033	0.048	UL/CSA/TÜV

Note: I_{hold} = Hold current: maximum current device will pass without tripping in 20℃ still air.

I_{trip} = Trip current: minimum current at which the device will trip in 20℃ still air.

V_{max} = Maximum 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 dissipated from device when in the tripped state at 20℃ still air.

R_{min} = Minimum resistance of device in initial (un-soldered) state.

R_{typ} = Typical resistance of device in initial (un-soldered) state.

R_{1max} = Maximum resistance of device at 20℃ measured one hour after tripping or reflow soldering of 260℃ for 20 sec.

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

Recognitions: UL, CSA, TÜV recognized.

◎Specifications are subject to change without notice.

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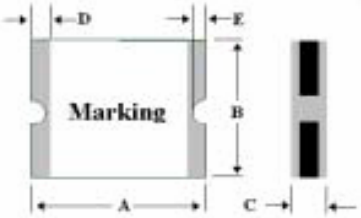
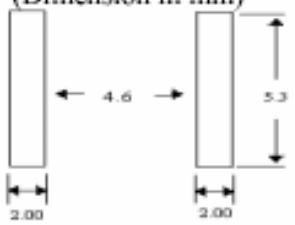
FIGURE



SOLDER PAD LAYOUTS
(Dimension in mm)



PHYSICAL DIMENSIONS (mm)

Part Number	A		B		C		D	E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.	Max.
SMD2920P030TF	6.73	7.98	4.80	5.44	0.75	1.25	0.30	0.25	2.00
SMD2920P050TF	6.73	7.98	4.80	5.44	0.75	1.25	0.30	0.25	2.00
SMD2920P075TF	6.73	7.98	4.80	5.44	0.75	1.25	0.30	0.25	2.00
SMD2920P100TF	6.73	7.98	4.80	5.44	0.55	1.00	0.30	0.25	2.00
SMD2920P125TF	6.73	7.98	4.80	5.44	0.55	1.00	0.30	0.25	2.00
SMD2920P150TF	6.73	7.98	4.80	5.44	0.75	1.25	0.30	0.25	2.00
SMD2920P185TF	6.73	7.98	4.80	5.44	0.75	1.25	0.30	0.25	2.00
SMD2920P200TF	6.73	7.98	4.80	5.44	0.75	1.25	0.30	0.25	2.00
SMD2920P200TF/24	6.73	7.98	4.80	5.44	0.75	1.25	0.30	0.25	2.00
SMD2920P250TF	6.73	7.98	4.80	5.44	0.75	1.25	0.30	0.25	2.00
SMD2920P260TF	6.73	7.98	4.80	5.44	0.55	1.00	0.30	0.25	2.00
SMD2920P300TF	6.73	7.98	4.80	5.44	0.75	1.25	0.30	0.25	2.00
SMD2920P300TF/15	6.73	7.98	4.80	5.44	0.75	1.25	0.30	0.25	2.00

ENVIRONMENTAL SPECIFICATIONS

Operating/Storage Temperature	-40℃ to +85℃	
Maximum Device Surface Temperature in Tripped State	125℃	
Passive Aging	+85℃, 1000 hours	±5% typical resistance change
Humidity Aging	+85℃, 85%R.H. 1000 hours	±5% typical resistance change
Thermal Shock	MIL-STD-202 Method 107G +85℃/-40℃ 20 times	-30% typical resistance change
Solvent Resistance	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-883C, Method 2007.1, Condition A	No change

PHYSICAL SPECIFICATIONS

Terminal Material	Solder-Plated Copper (Solder Material: Tin(Sn) or others)
Lead Solderability	Meets EIA Specification RS186-9E, ANSI/J-STD-002 Category 3.
Packaging	16 mm tape on 7 inch reel per EIA-481-1 (equivalent to IEC286, part 3) 2000 devices per reel for P100TF, P125TF &P260TF others : 1500 devices per reel

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