

SMD1210

SMD Type, 6 V - 30 V

Standard

UL 1434 1st Edition
CSA C22.2 No. 0 CSA TIL No. CA-3A

Approvals

cULus Recognition
TÜV

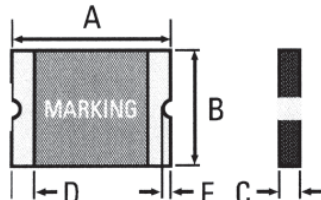
Features

This product line is designed for surface-mount applications with a range in hold currents from 50 mA to 1.5 A and voltages from 6 V to 30 V. These smaller devices (1210-mil footprint) are ideally suited for palm PC, PDAs and applications where space is constrained and circuit protection is required.

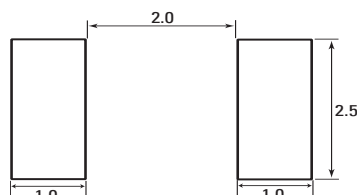
Suitable for reflow soldering



Dimensions (mm)



Solder pad Layout (mm)



Specifications

Packaging

A Blister tape and reel Ø 178 mm

Materials

Terminals: Solder-plated copper
TS: Solder Material: 63/37 SnPb
TF: Lead free plating on request

Max. Device Surface Temperature in Tripped State
125 °C

Operating / Storage Temperature

-40 °C to +85 °C (consider de-rating)

Humidity Ageing

+85 °C, 85 % R.H., 1000 hours, ± 5 % typical resistance change

Vibration

MIL-STD-883C, Method 2007.1, Condition A, no change

Thermal Shock

MIL-STD-202F, Method 107G
+85 °C to -40 °C 20 times, -30 % typical resistance change

Solderability

Meets EIA Specification RS186-9E,
ANSI/J-STD-002, Category 3
Reflow only

Solvent Resistance

MIL-STD-202, Method 215, no change

Marking

"P", Part Code



Dimensions (mm)

Model	A		B		C		D	E		packaging quantity tape
	Min	Max	Min	Max	Min	Max		Min	Max	
SMD1210P005TS/TF	3.00	3.43	2.35	2.80	0.75	1.25	0.25	0.20	0.50	3,000
SMD1210P010TS/TF	3.00	3.43	2.35	2.80	0.75	1.25	0.25	0.20	0.50	3,000
SMD1210P020TS/TF	3.00	3.43	2.35	2.80	0.60	1.00	0.25	0.20	0.50	3,000
SMD1210P035TS/TF	3.00	3.43	2.35	2.80	0.50	0.85	0.25	0.20	0.50	4,000
SMD1210P050TS/TF	3.00	3.43	2.35	2.80	0.50	0.85	0.25	0.20	0.50	4,000
SMD1210P075TS/TF	3.00	3.43	2.35	2.80	0.50	0.85	0.25	0.20	0.50	4,000
SMD1210P110TS/TF	3.00	3.43	2.35	2.80	0.90	1.30	0.25	0.20	0.50	3,000
SMD1210P150TS/TF	3.00	3.43	2.35	2.80	1.00	1.60	0.25	0.20	0.50	2,000

Permissible continuous operating current is ≤ 100 % at ambient temperature of 20 °C (68 °F).

Model	I _{hold} (A)	I _{trip} (A)	V _{max. dc} (V)	I _{max.} (A)	max. time to trip (s @ A)	P _{d max.} (W)	Resistance			Approvals
							R _{min.} (Ω)	R _{typ.} (Ω)	R _{I max.} (Ω)	
SMD1210P005TS/TF	0.05	0.15	30	10	1.50 @ 0.25	0.6	3.600	25.000	50.000	• •
SMD1210P010TS/TF	0.10	0.30	30	10	1.50 @ 0.50	0.6	1.600	7.000	15.000	• •
SMD1210P020TS/TF	0.20	0.40	30	10	0.02 @ 8.00	0.6	0.800	2.900	5.000	• •
SMD1210P035TS/TF	0.35	0.70	6	40	0.20 @ 8.00	0.6	0.320	0.810	1.300	• •
SMD1210P050TS/TF	0.50	1.00	13.2	40	0.10 @ 8.00	0.6	0.250	0.550	0.900	• •
SMD1210P075TS/TF	0.75	1.50	6	40	0.10 @ 8.00	0.6	0.130	0.290	0.400	• •
SMD1210P110TS/TF	1.10	2.20	6	40	0.30 @ 8.00	0.6	0.060	0.140	0.210	• •
SMD1210P150TS/TF	1.50	3.00	6	40	0.50 @ 8.00	0.8	0.040	0.070	0.110	• •

Please choose TS for SnPb and TF for Sn plating

NOTE:

I_{hold} = Hold current: maximum current device will pass without tripping in 20 °C still air.
I_{trip} = Trip current: minimum current at which the device will trip in 20 °C 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 °C still air.

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

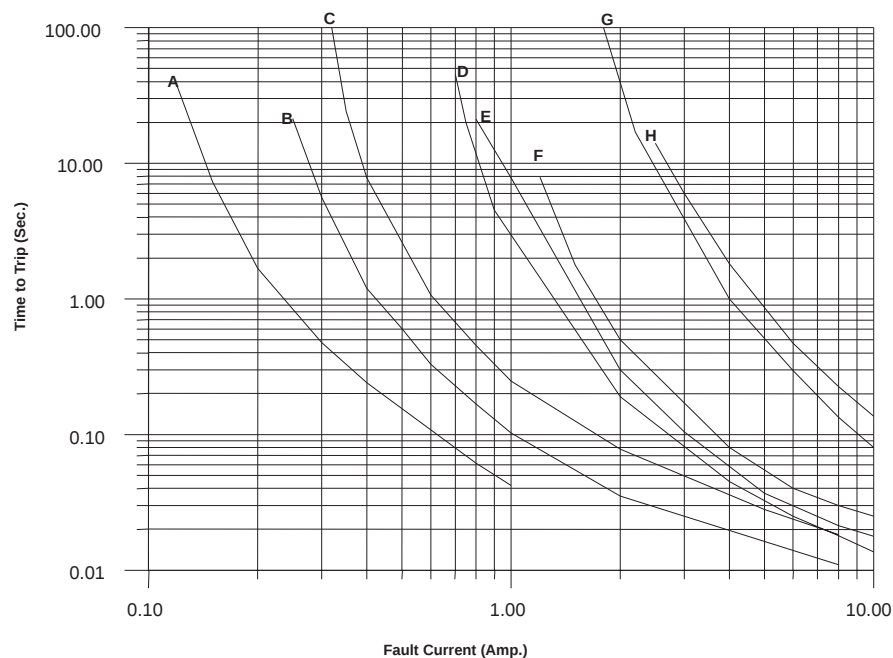
R_{I max} = Maximum resistance of device at 20 °C measured one hour after tripping for 20 s.

Caution: Operation beyond the specified rating may result in damage and possible arcing and flame.
Specifications are subject to change without notice

Order
Information

Qty.	Order- Number	Model	Packaging

SMD1210



Thermal Derating Chart

Model	Ambient Operation Temperature - I _{hold} (A)								
	-40 °C	-20 °C	0 °C	23 °C	40 °C	50 °C	60 °C	70 °C	85 °C
SMD1210P005TS/TF	0.08	0.07	0.06	0.05	0.04	0.04	0.03	0.03	0.02
SMD1210P010TS/TF	0.16	0.14	0.12	0.10	0.08	0.07	0.06	0.05	0.03
SMD1210P020TS/TF	0.29	0.26	0.22	0.20	0.16	0.14	0.13	0.11	0.08
SMD1210P035TS/TF	0.47	0.45	0.40	0.35	0.33	0.28	0.24	0.21	0.18
SMD1210P050TS/TF	0.76	0.67	0.58	0.50	0.43	0.40	0.36	0.32	0.28
SMD1210P075TS/TF	1.00	0.97	0.86	0.75	0.64	0.59	0.54	0.48	0.40
SMD1210P110TS/TF	1.69	1.48	1.29	1.10	0.88	0.76	0.65	0.57	0.43
SMD1210P150TS/TF	2.13	1.92	1.71	1.50	1.26	1.14	1.01	0.89	0.71