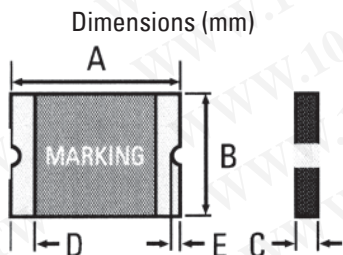
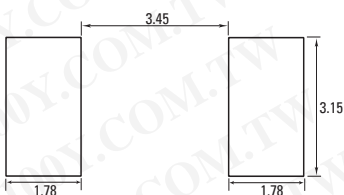


SMD1812

This product is not recommended for new designs. Please refer to Littelfuse No. 1812L.



Solder pad Layout (mm)



* only type "TF"

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 derating)

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 |
|---------------------|------|------|------|------|------|------|------|------|------|--------------------|
| | Min | Max | Min | Max | Min | Max | | Min | Max | |
| SMD1812P010TS/TF | 4.37 | 4.73 | 3.07 | 3.41 | 0.75 | 1.25 | 0.30 | 0.25 | 0.65 | 1,500 |
| SMD1812P014TS/TF | 4.37 | 4.73 | 3.07 | 3.41 | 0.75 | 1.95 | 0.30 | 0.25 | 0.65 | 1,500 |
| SMD1812P020TS/TF | 4.37 | 4.73 | 3.07 | 3.41 | 0.55 | 1.00 | 0.30 | 0.25 | 0.65 | 2,000 |
| SMD1812P050TS/TF | 4.37 | 4.73 | 3.07 | 3.41 | 0.50 | 0.75 | 0.30 | 0.25 | 0.50 | 2,000 |
| SMD1812P075TS/TF | 4.37 | 4.73 | 3.07 | 3.41 | 0.50 | 0.75 | 0.30 | 0.25 | 0.50 | 2,000 |
| SMD1812P075TS/TF/24 | 4.37 | 4.73 | 3.07 | 3.41 | 0.75 | 1.55 | 0.30 | 0.25 | 0.65 | 1,500 |
| SMD1812P110TS/TF | 4.37 | 4.73 | 3.07 | 3.41 | 0.50 | 0.75 | 0.30 | 0.25 | 0.50 | 2,000 |
| SMD1812P110TS/TF/16 | 4.37 | 4.73 | 3.07 | 3.41 | 0.75 | 1.25 | 0.30 | 0.25 | 0.65 | 1,500 |
| SMD1812P125TS/TF | 4.37 | 4.73 | 3.07 | 3.41 | 0.75 | 1.25 | 0.30 | 0.25 | 0.50 | 1,500 |
| SMD1812P150TS/TF | 4.37 | 4.73 | 3.07 | 3.41 | 0.75 | 1.25 | 0.30 | 0.25 | 0.50 | 1,500 |
| SMD1812P150TF/12 | 4.37 | 4.73 | 3.07 | 3.41 | 0.75 | 1.25 | 0.30 | 0.25 | 0.65 | 1,500 |
| SMD1812P160TS/TF | 4.37 | 4.73 | 3.07 | 3.41 | 0.75 | 1.25 | 0.30 | 0.25 | 0.65 | 1,500 |
| SMD1812P160TS/TF/8 | 4.37 | 4.73 | 3.07 | 3.41 | 0.75 | 1.25 | 0.30 | 0.25 | 0.65 | 1,500 |
| SMD1812P200TS/TF | 4.37 | 4.73 | 3.07 | 3.41 | 0.75 | 1.55 | 0.30 | 0.25 | 0.50 | 1,500 |
| SMD1812P260TS/TF | 4.37 | 4.73 | 3.07 | 3.41 | 1.00 | 1.60 | 0.30 | 0.25 | 0.50 | 1,000 |

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

| Model (A) | 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 _{l max} (Ω) | cULus | TÜV |
| SMD1812P010TS/TF | 0.10 | 0.30 | 30 | 10/100* | 1.50 @ 0.50 | 0.8 | 1.600 | 7.000 | 15.000 | • | • |
| SMD1812P014TS/TF | 0.14 | 0.34 | 60 | 10/100* | 0.15 @ 1.50 | 0.8 | 1.500 | 4.000 | 6.000 | • | • |
| SMD1812P020TS/TF | 0.20 | 0.40 | 30 | 10/100* | 0.02 @ 8.00 | 0.8 | 0.800 | 2.900 | 5.000 | • | • |
| SMD1812P050TS/TF | 0.50 | 1.00 | 15 | 40/100* | 0.15 @ 8.00 | 0.8 | 0.150 | 0.600 | 1.000 | • | • |
| SMD1812P075TS/TF | 0.75 | 1.50 | 13.2 | 40/100* | 0.20 @ 8.00 | 0.8 | 0.110 | 0.260 | 0.450 | • | • |
| SMD1812P075TS/TF/24 | 0.75 | 1.50 | 24 | 40/100* | 0.20 @ 8.00 | 0.8 | 0.110 | 0.200 | 0.290 | • | • |
| SMD1812P075TF/33 | 0.75 | 1.50 | 33 | 20 | 0.20 @ 8.00 | 0.8 | 0.110 | 0.260 | 0.400 | • | • |
| SMD1812P110TS/TF | 1.10 | 2.20 | 6 | 40/100* | 0.30 @ 8.00 | 0.8 | 0.040 | 0.120 | 0.210 | • | • |
| SMD1812P110TS/TF/16 | 1.10 | 1.95 | 16 | 40/100* | 0.50 @ 8.00 | 0.8 | 0.060 | 0.120 | 0.180 | • | • |
| SMD1812P110TF/33 | 1.10 | 1.95 | 33 | 20 | 0.50 @ 8.00 | 0.8 | 0.060 | 0.120 | 0.200 | • | • |
| SMD1812P125TS/TF | 1.25 | 2.50 | 15 | 40/100* | 0.40 @ 8.00 | 0.8 | 0.070 | 0.160 | 0.250 | • | • |
| SMD1812P150TS/TF | 1.50 | 3.00 | 6 | 40/100* | 0.50 @ 8.00 | 0.8 | 0.040 | 0.070 | 0.110 | • | • |
| SMD1812P150TF/12 | 1.50 | 3.00 | 12 | 40/100* | 0.50 @ 8.00 | 0.8 | 0.040 | 0.070 | 0.110 | • | • |
| SMD1812P150TF/24 | 1.50 | 3.00 | 24 | 20 | 1.50 @ 8.00 | 0.8 | 0.040 | 0.070 | 0.120 | p | • |
| SMD1812P160TS/TF | 1.60 | 2.80 | 6 | 40/100* | 1.00 @ 8.00 | 0.8 | 0.030 | 0.066 | 0.100 | • | • |
| SMD1812P160TS/TF/8 | 1.60 | 2.80 | 8 | 40/100* | 1.00 @ 8.00 | 0.8 | 0.030 | 0.066 | 0.100 | • | • |
| SMD1812P160TF/12 | 1.60 | 2.80 | 12 | 20/100* | 1.00 @ 8.00 | 0.8 | 0.030 | 0.066 | 0.100 | • | • |
| SMD1812P200TS/TF | 2.00 | 3.50 | 8 | 40/100* | 2.00 @ 8.00 | 0.8 | 0.020 | 0.040 | 0.060 | • | • |
| SMD1812P260TS/TF | 2.60 | 5.20 | 6 | 40/100* | 2.50 @ 8.00 | 0.8 | 0.015 | 0.030 | 0.047 | • | • |

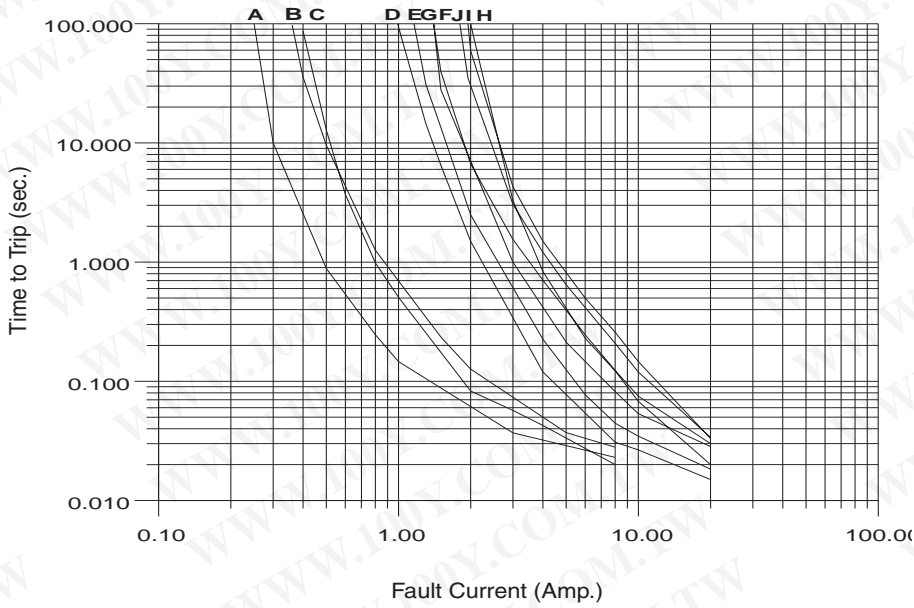
* Approvals for 100 A pending

Please choose TS for SnPb and TF for Sn plating

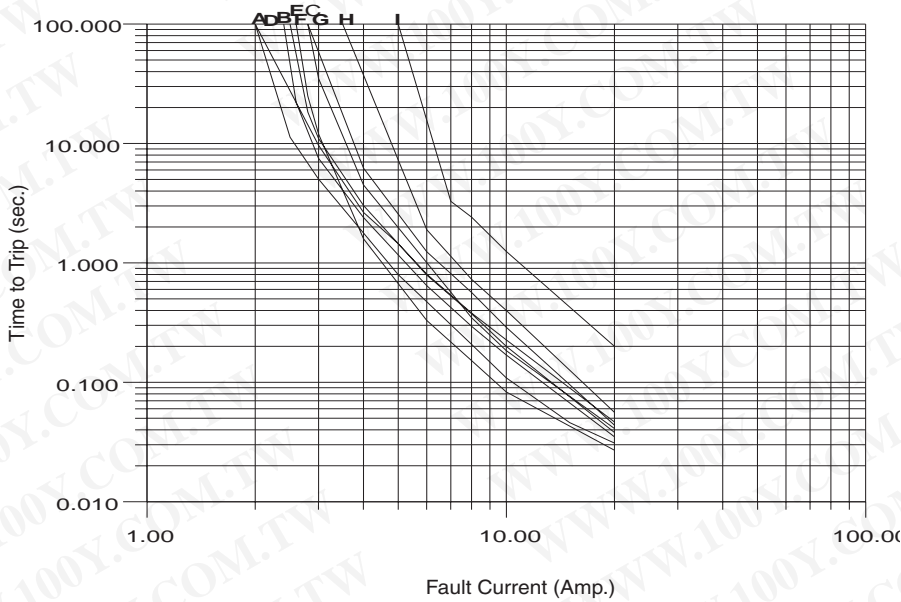
NOTE:
 I_{hold} = Hold current: maximum current device will pass without tripping in 20 °C still air.
 I_{trip} = Trip current: minimum current at which the device will trip in 20 °C still air.
 V_{max} = Maximum voltage device can withstand without damage at rated current (I_{max})
 I_{max} = Maximum 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_{l 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 |
| | | | | |

SMD1812



- A: SMD1812P010TS/TF
- B: SMD1812P014TS/TF
- C: SMD1812P020TS/TF
- D: SMD1812P050TS/TF
- E: SMD1812P075TS/TF
- F: SMD1812P075TS/TF/24
- G: SMD1812P075TF/33
- H: SMD1812P110TS/TF
- I: SMD1812P110TS/TF/16
- J: SMD1812P110TF/33



- A: SMD1812P125TS/TF
- B: SMD1812P150TS/TF
- C: SMD1812P150TF/12
- D: SMD1812P150TF/24
- E: SMD1812P160TS/TF
- F: SMD1812P160TS/TF/8
- G: SMD1812P160TF/12
- H: SMD1812P200TS/TF
- I: SMD1812P260TS/TF

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 |
| SMD1812P010TS/TF | 0.16 | 0.14 | 0.12 | 0.01 | 0.08 | 0.07 | 0.06 | 0.05 | 0.03 |
| SMD1812P014TS/TF | 0.23 | 0.19 | 0.17 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 | 0.06 |
| SMD1812P020TS/TF | 0.29 | 0.26 | 0.23 | 0.20 | 0.17 | 0.15 | 0.14 | 0.12 | 0.10 |
| SMD1812P050TS/TF | 0.77 | 0.68 | 0.59 | 0.50 | 0.44 | 0.40 | 0.37 | 0.33 | 0.29 |
| SMD1812P075TS/TF | 1.15 | 1.01 | 0.88 | 0.75 | 0.65 | 0.60 | 0.55 | 0.49 | 0.43 |
| SMD1812P075TS/TF/24 | 1.06 | 0.95 | 0.84 | 0.75 | 0.60 | 0.55 | 0.50 | 0.45 | 0.37 |
| SMD1812P110TS/TF | 1.59 | 1.43 | 1.26 | 1.10 | 0.95 | 0.87 | 0.80 | 0.71 | 0.60 |
| SMD1812P110TS/TF/15 | 1.58 | 1.43 | 1.27 | 1.10 | 0.95 | 0.85 | 0.77 | 0.71 | 0.58 |
| SMD1812P110TS/TF/16 | 1.58 | 1.43 | 1.27 | 1.10 | 0.95 | 0.85 | 0.77 | 0.71 | 0.58 |
| SMD1812P125TS/TF | 2.00 | 1.75 | 1.52 | 1.25 | 1.00 | 0.95 | 0.90 | 0.75 | 0.53 |
| SMD1812P150TS/TF | 2.30 | 2.03 | 1.76 | 1.50 | 1.25 | 1.10 | 1.00 | 0.80 | 0.60 |
| SMD1812P160TS/TF | 2.27 | 2.05 | 1.83 | 1.60 | 1.35 | 1.25 | 1.15 | 1.00 | 0.85 |
| SMD1812P200TS/TF | 3.08 | 2.71 | 2.35 | 2.00 | 1.80 | 1.60 | 1.50 | 1.07 | 0.80 |
| SMD1812P260TS/TF | 4.00 | 3.52 | 3.06 | 2.60 | 2.34 | 2.08 | 1.95 | 1.39 | 1.04 |