

SP3171

High Resistance, Thick Film Chip Resistors



- Resistances from 100K to 10T Ohms
- Power Rating 0.125 to 1 Watt
- Resistance Tolerances to $\pm 0.5\%$
- TCR's to ± 25 ppm/ $^{\circ}\text{C}$
- Non-Magnetic
- High Value Thick Film Resistance Element
- Sizes, 0805, 1206, 1210, 2512

SPECIFICATIONS

Type	0805	1206	1210	2512
Power Rating (W) ¹	0.125	0.25	0.35	1.0
Working Voltage (VAC)	Trimmed	600	1000	2000
	Un-Trimmed	600	1000	3000
Resistance Range (Ω)	Tolerances Available (%) Temperature Coefficients Available (\pm ppm/ $^{\circ}\text{C}$) Voltage Coefficients Available (ppm / V)			
100K - 100M	0.5% to 10% 25, 50, 100 <50ppm/V	0.5% to 10% 25, 50, 100 <50ppm/V	0.5% to 10% 25, 50, 100 <25ppm/V	0.5% to 10% 25, 50, 100 <10ppm/V
>100M - 1G	2% to 20% 50, 100, 250 <250ppm/V	2% to 20% 50, 100, 250 <100ppm/V	1% to 10% 25, 50, 100 <50ppm/V	1% to 10% 25, 50, 100 <25ppm/V
>1G - 10G	5% to 20% 100, 250 <500ppm/V	5% to 20% 100, 250 <250ppm/V	2% to 20% 50, 100 <100ppm/V	2% to 20% 50, 100 <100ppm/V
>10G - 100G	10% to 30% 500, 1000 <1000ppm/V	10% to 30% 500, 1000 <1000ppm/V	5% to 20% 500, 1000 <500ppm/V	5% to 20% 100, 250 <250ppm/V
>100G - 1T	10% to 30% 1000, 2000 <2000ppm/V	10% to 30% 1000, 2000 <2000ppm/V	5% to 30% 500, 1000 <1000ppm/V	5% to 20% 250, 500 <500ppm/V
>1T - 10T	-	10% to 30% 2000 <3000ppm/V	5% to 30% 1000, 2000 <2000ppm/V	5% to 30% 500, 1000 <1000ppm/V

¹ W @ 70 $^{\circ}\text{C}$, 0W @ 155 $^{\circ}\text{C}$



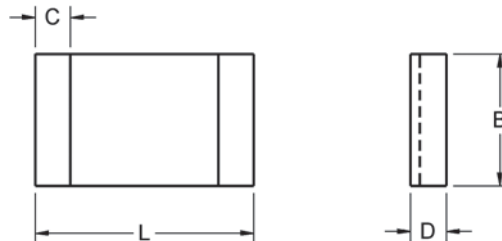
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SPECIFICATIONS (continued)

Specification	Value		
Temperature Range	-55°C to +155°C		
Climactic Category	55 / 155 / 56		
Solderability	250°C, 3s		
Max. Soldering Temperature	260°C, 10s		
Long Term Stability	Max ΔR		
	<1 GΩ	1 GΩ - 10 GΩ	>10 GΩ
Storage 125°C, 1000h	±0.5%	±1%	±2%
Maximum Voltage, 1000h	±0.5%	±1%	±2%



Type	Dimensions			
	L	B	D	C
SP3171 0805	0.080 +0.006 / -0.002 [2.0 +0.15 / -0.05]	0.050 +0.006 / -0.002 [1.25 +0.15 / -0.05]	0.016 +0.006 / -0.002 [0.4 +0.15 / -0.05]	0.012 +0.008 / -0.004 [0.3 +0.2 / -0.1]
SP3171 1206	0.126 +0.006 / -0.002 [3.2 +0.15 / -0.05]	0.060 +0.008 / -0.002 [1.5 +0.2 / -0.05]	0.016 +0.006 / -0.002 [0.4 +0.15 / -0.05]	0.012 +0.008 / -0.004 [0.3 +0.2 / -0.1]
SP3171 1210	0.126 +0.006 / -0.002 [3.2 +0.15 / -0.05]	0.098 +0.008 / -0.002 [2.5 +0.2 / -0.05]	0.020 +0.006 / -0.002 [0.5 +0.15 / -0.05]	0.032 ±0.008 [0.8 ±0.2]
SP3171 2512	0.250 +0.006 / -0.002 [6.3 +0.15 / -0.05]	0.138 +0.008 / -0.002 [3.5 +0.2 / -0.05]	0.024 +0.006 / -0.002 [0.6 +0.15 / -0.05]	0.035 ±0.008 [0.9 ±0.2]

Packaging:

Bulk or Tape & Reel per IEC 286-3 / EIA 481-1-A

- Tape width 8mm, Reel Diameter 180 or 330mm
- Minimum quantity Bulk, 100 pieces per value
- Minimum quantity Tape & Reel, 1000 pieces per value

Ordering Information:

Part Number - Resistance - Tolerance - TCR - Packaging

Example: **SP3171 2512 10G 10% 50ppm Tape**

(Note: if no TCR is Specified, The highest value will be supplied)

Power Derating Curve

