

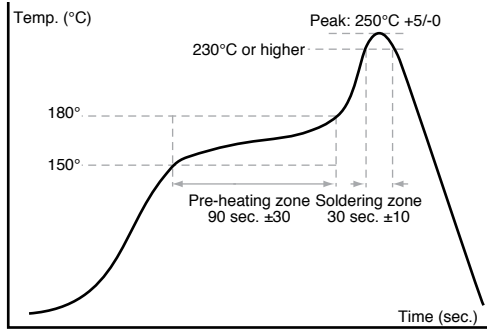


# PCS Series

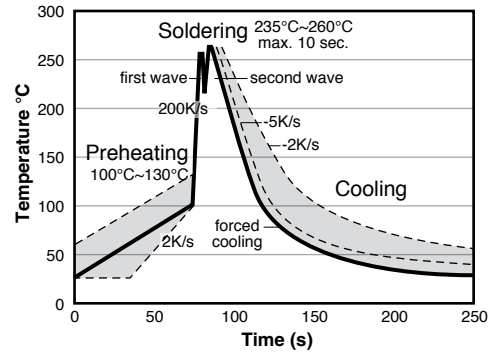
## Low Resistance Value Chip Resistors

### SOLDERING

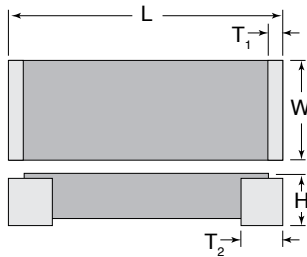
#### IR Reflow Soldering



#### Wave Soldering (Flow Soldering)

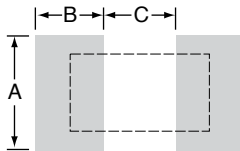


### DIMENSIONS



Type	Power Rating	L	W	T1	Res. Range	H	T2
PCS1206	1W	3.200 ±.254	1.650 ±.254	0~0.200	1~2mΩ	0.630 ±.254	0.508 ±.254
					3~50mΩ	0.430 ±.254	0.508 ±.254
PCS2512	1W, 2W	6.350 ±.254	3.050 ±.254	0.200~1.000	0.5~1mΩ	0.650 ±.254	2.200 ±.254
					1.5mΩ	0.410 ±.254	2.000 ±.254
					2mΩ	0.410 ±.254	1.400 ±.254
					2.5~100mΩ	0.410 ±.254	1.100 ±.254
PCS2728	4W	6.600 ±.254	6.700 ±.254	0.200~1.000	101~500mΩ	0.410 ±.254	0.850 ±.254
					4~450mΩ	0.620 ±.254	1.200 ±.254

#### Land pattern



Type	Res. Range	A	B	C
PCS1206	1mΩ~50mΩ	2.18	1.60	0.66
PCS2512	0.5mΩ~1.5mΩ	3.68	3.05	1.27
	2mΩ~3.5mΩ	3.68	2.11	3.18
PCS2728	3.6mΩ~500mΩ	3.68	1.90	3.50
	4mΩ~450mΩ	7.82	2.75	3.51

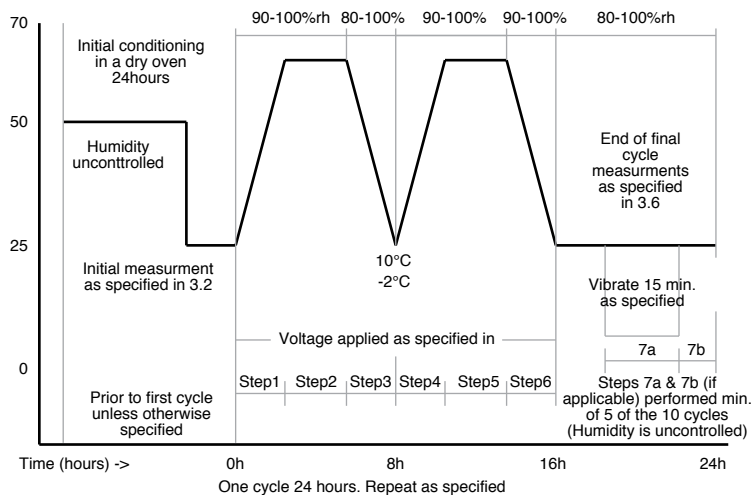
(continued)

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### PERFORMANCE

<b>TCR</b>	JIS C 5201-1 clause 4.8 T.C.R. (ppm/°C) = ((R2-R1) / R1(T2-T1)) X 10 <sup>6</sup> R1: resistance at room temperature (T1) R2: resistance at 150°C (T2)	Refer to Ratings, ±50ppm
<b>Short Time Overload</b>	JIS C 5201-1 clause 4.13 Overload power as follows: PCS1206: 4x; PCS2512-1W: 5x; PCS2512-2W: 5x; PCS2512-3W: 4x; PCS2728-4W: 3x; Rated power duration: 5secs	ΔR/R1 ±0.5%
<b>High Temperature Exposure</b>	JIS C 5201-1 clause 4.23.2; 1,000hrs at +170°C	ΔR/R1 ±1.0%
<b>Soldering Heat</b>	JIS C 5201-1 clause 4.18; 260°C ±5 for 10 seconds.	ΔR/R1 ±0.5%
<b>Temperature Cycling</b>	JIS C 5201-1 clause 4.19, -55°C to +150°C, 1,000cycles, 15min at each extreme	ΔR/R1 ±0.5%
<b>Bias Humidity</b>	JIS C 5201-1 clause 4.24, 1,000hrs@+85°C/85%RH, 10%Bias 1.5hrs "ON", 0.5hrs "OFF"	ΔR/R1 ±0.5%
<b>Load at Rated Power</b>	JIS C 5201-1 clause 4.25, 1,000hrs@70 °C, 1.5hrs "ON", 0.5hrs "OFF"	ΔR/R1 ±1.0%
<b>Solderability</b>	JIS C 5201-1 clause 4.17, 245±5°C for 2±0.5secs	>95% coverage
<b>Dielectric Withstanding Voltage</b>	JIS-C5201-1 clause 4.7, Applied 500VAC for 1 minute, and Limit surge current 50 mA (max.)	No short or burned appearance
<b>Core Body Strength</b>	JIS-C5201-1 clause 4.15, Central part pressurizing force 5N ,10 seconds	No breakage
<b>Terminal Strength</b>	JIS-C5201-1 clause 4.32, Pressurizing force 17.7N,10 seconds	No breakage
<b>Terminal Bending Strength</b>	JIS-C5201-1 clause 4.33, Bending once for 2mm,10 seconds	ΔR/R1 ±0.5%; No breakage
<b>Moisture Resistance (Climatic Sequence)</b>	MIL-STD 202 Method 106, T=24 hours/cycle ,10 cycles. Steps 7a& 7b not required. Unpowered. (see figure)	ΔR/R1 ±0.5%

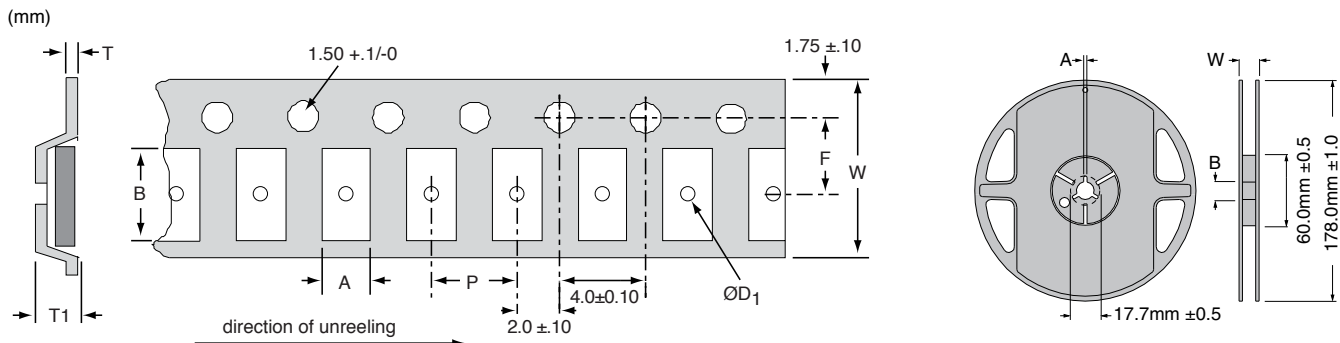


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### TAPE AND REEL



Item	W	P	F	D1	H	A	B	T1	T	Qty./reel	tape size	A	B	W
PCS1206	8.0 ± 0.30	4.0 ± 0.10	3.5 ± 0.10	1.0 ± 0.10	2.0 ± 0.10	2.03 ± 0.10	3.55 ± 0.10	0.70 ± 0.10	0.20 ± 0.05	5,000	8mm	2.0 ± 0.5	13.2 ± 0.5	12.0 ± 0.5
PCS2512	12.0 ± 0.30	4.0 ± 0.10	5.5 ± 0.10	1.55 ± 0.10	2.0 ± 0.10	3.50 ± 0.10	6.75 ± 0.10	0.90 ± 0.10	0.20 ± 0.05	4,000	12mm	2.5 ± 0.5	13.5 ± 0.5	16.2 ± 0.5
PCS2728	12.0 ± 0.30	8.0 ± 0.10	5.5 ± 0.10	1.55 ± 0.10	2.0 ± 0.10	7.10 ± 0.10	7.05 ± 0.10	0.95 ± 0.10	0.20 ± 0.05	2,000	12mm	2.5 ± 0.5	13.5 ± 0.5	16.2 ± 0.5

### ORDERING INFORMATION

<b>P</b>	<b>C</b>	<b>S</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>F</b>	<b>R</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>E</b>	<b>T</b>
Series	Size	Tolerance	Resistance	RoHS	Tape	and reel								
	1206	D = 0.5%		Compliant										
	2512	F = 1%												
	2728													

#### Standard part numbers

Part number	Wattage	Resistance	Tol.
PCS1206FR0010ET	1	1mΩ	1%
PCS1206FR0020ET	1	2mΩ	1%
PCS1206FR0030ET	1	3mΩ	1%
PCS1206FR0050ET	1	5mΩ	1%
PCS1206DR0100ET	1	10mΩ	0.50%
PCS1206DR0200ET	1	20mΩ	0.50%
PCS1206DR0500ET	1	50mΩ	0.50%
PCS2512FR0005ET	2	0.5mΩ	1%
PCS2512FR0010ET	2	1mΩ	1%
PCS2512FR0020ET	2	2mΩ	1%
PCS2512FR0050ET	2	5mΩ	1%
PCS2512DR0100ET	2	10mΩ	0.50%
PCS2512DR0200ET	2	20mΩ	0.50%
PCS2512DR0500ET	2	50mΩ	0.50%
PCS2512DR1000ET	2	100mΩ	0.50%
PCS2512FR5000ET	1	500mΩ	1%
PCS2728DR0100ET	4	10mΩ	0.50%
PCS2728DR0250ET	4	25mΩ	0.50%
PCS2728DR0500ET	4	50mΩ	0.50%
PCS2728DR1000ET	4	100mΩ	0.50%

#### Marking

"R" designates the decimal location in ohms, e.g. R001=1m, R025=25m, R100=100m

"m" designates the decimal location in milliohms, e.g. 0m25=0.25m, 0m50=0.5m, 5m50=5.5m, 25m5=25.5m

All the other products marking are 4 digits