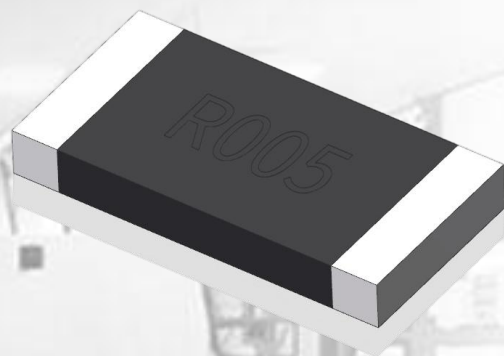


High-Precision Low TCR
Molded Alloy Current Sensing Resistor

PCSR2512

Resistance	5mΩ ~ 100mΩ
Tolerance	±0.1%
TCR	±10ppm/°C, ±15ppm/°C
Rated current	3-20A



Applicable to

Electric Vehicles | Precision Power Supplies | AI Servers
Lithium-Ion Battery and Semiconductor Test Equipment
Energy Storage | Medical Equipment

Tolerance of $\pm 0.1\%$ and TCR of $\pm 10\text{ppm}$ High Reliability and Stability

Introduction

The high-precision, low-temperature-coefficient molded alloy shunt resistor employs a resistor alloy independently developed by C&B Electronics and manufactured with precision processing. Continuous welding is realized using specialized electron beam welding equipment independently designed and produced by C&B Electronics. The resistor element is subsequently formed via a precision stamping process. Through the optimal integration of alloy consistency control, precision machining, process management, and precision welding technologies, the product achieves a target tolerance as tight as $\pm 0.1\%$ following fine resistance trimming. Finally, the device is encapsulated using a precision molding process.

This product series offers standard resistance values from 5 m Ω to 100 m Ω , with a temperature coefficient of resistance (TCR) within $\pm 10\text{ ppm}/^\circ\text{C}$ across the operating temperature range of -55°C to 125°C . By precisely controlling the resistance alloy composition, optimizing the electron beam welding process, and ensuring consistency in subsequent manufacturing steps, the product exhibits significantly reduced thermoelectric voltage and greatly improved long-term stability.

Core materials, key equipment, and critical processes for this series are fully self-developed and controlled, guaranteeing stable quality and on-time delivery. Should standard specifications not meet your requirements, please contact our sales team for further discussion. C&B is dedicated to providing customers with optimal precision resistor solutions to satisfy applications in test and measurement, electrical equipment, medical devices, precision power supplies, automotive electronics, chemical instrumentation, and other fields.



Electrical Parameters

Series	Resistance	Rated Power (+70°C)	Max. Operating Current	Operating Temperature	TCR ppm/ $^\circ\text{C}$ (+20°C Ref)	Tolerance %
PCSR2512	5m Ω $\leq$ R $\leq$ 10m Ω	2W	14A~20A	-55°C~+170°C	± 10 (-55°C~+125°C) ± 15 (-55°C~+125°C)	± 0.1 ± 0.5 ± 1.0 ± 5.0
PCSR2512	10m Ω < R $\leq$ 100m Ω	1W	3A~8A	-55°C~+170°C	± 10 (-55°C~+125°C) ± 15 (-55°C~+125°C)	± 0.1 ± 0.5 ± 1.0 ± 5.0

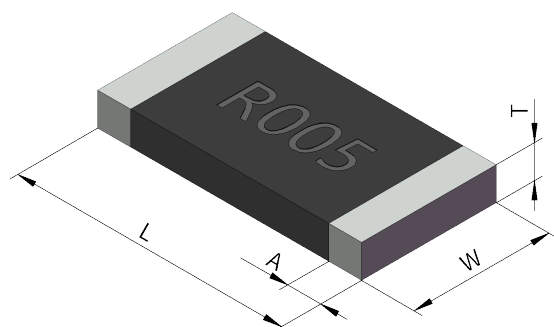
Application

This series of current-sensing resistors is suitable for AC and DC, high- and low-frequency current sensing circuits.

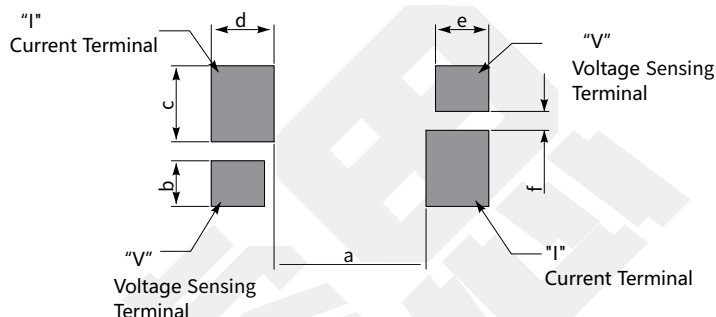
Dimensions

Unit:mm

Resistor



Land Pattern



Non-compliance with pad design requirements degrades TCR and current sensing accuracy!

Resistance	L	W	A	T	a	b
5mΩ~100mΩ	6.4±0.2	3.2±0.2	0.8±0.2	0.8±0.1	4.0	1.2
c	d	e	f	Packaging	Quantity Per Reel	Weight
2.0	1.65	1.4	0.5	Tape & Reel	4000pcs	0.07±0.02g

Part Number Information

Example:PCSR2512BR005M9 (PCSR 2512 ±0.1% 5mΩ ±15ppm/°C Marked)

P	C	S	R	2	5	1	2	B	R	0	0	5	M	9
Series		Size		Tolerance		Resistance		TCR		Code				
PCSR		2512		B=±0.1% D=±0.5% F=±1.0% J=±5.0%		R005=5mΩ R010=10mΩ R100=100mΩ		N=±10ppm/°C M=±15ppm/°C		9=Marked 6=Unmarked				

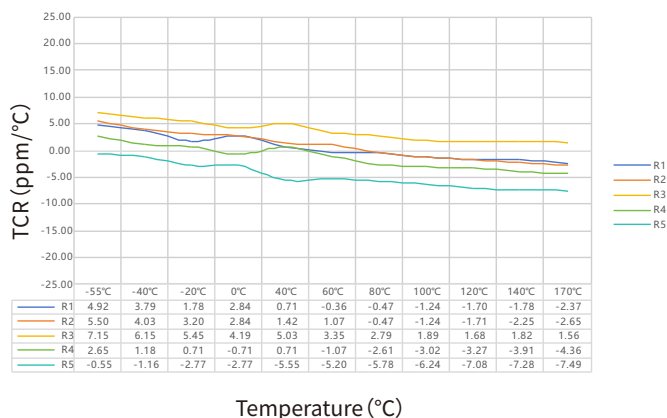
- There are situations where the expression of resistance value exceeds four digits. 49.9mohm expresses as R0499, and 49.99mohm expresses as R04999, etc.
- For higher/lower resistance, tighter tolerance, higher power, lower TCR and larger size, please contact us.

Performance

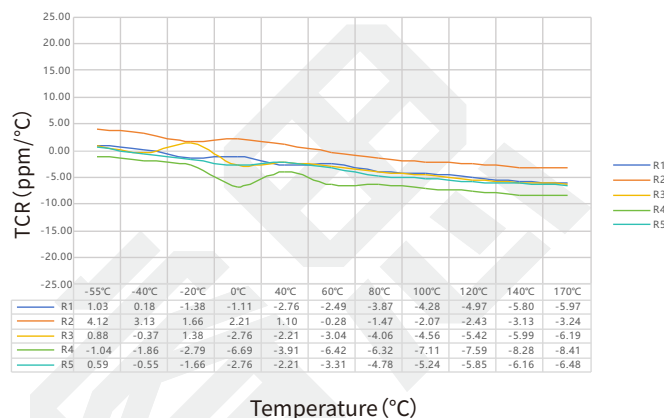
Test	Test Method	Standards	Typical	Max.
High Temperature Storage	1000h@+170°C, unpowered	AEC-Q200 TEST 3 MIL-STD-202 Method 108	$\Delta R \leq \pm 0.1\%$	$\Delta R \leq \pm 0.3\%$
Thermal Shock	-55°C, 15min~ambient temperature<20s~+155°C, 15min, 1000 cycles	MIL-STD-202 Method 107	$\Delta R \leq \pm 0.1\%$	$\Delta R \leq \pm 0.3\%$
Bias Humidity	+85°C, 85%RH, powered 10% rated power for 1000h	AEC-Q200 TEST 7 MIL-STD-202 Method 103	$\Delta R \leq \pm 0.05\%$	$\Delta R \leq \pm 0.2\%$
Load Life	2000h @ +70°C, rated power, 90min on, 30min off +70°C refers to terminal temperature	AEC-Q200 TEST 8 MIL-STD-202 Method 108	$\Delta R \leq \pm 0.2\%$	$\Delta R \leq \pm 0.75\%$
Resistance to Solvent	Immerse in solvent for 3 min and wipe 10 times. Three cycles of three solvents. Dry at ambient temperature after cleaning	AEC-Q200 TEST 12 MIL-STD-202 Method 215	Clear marking. No visible damage	
Mechanical Shock	Half sine wave, peak acceleration 100g's, pulse duration 6ms, 3 times in each of six directions, on three different axes	AEC-Q200 TEST 13 MIL-STD-202 Method 213	$\Delta R \leq \pm 0.02\%$	$\Delta R \leq \pm 0.05\%$
Vibration	10-2KHz, 5g's, 20min/cycle, 12 cycles in each directions of X Y Z	AEC-Q200 TEST 14 MIL-STD-202 Method 204	$\Delta R \leq \pm 0.02\%$	$\Delta R \leq \pm 0.05\%$
Resistance to Solder Heat	+260°C constant temperature station for 10s	AEC-Q200 TEST 15 MIL-STD-202 Method 210	$\Delta R \leq \pm 0.05\%$	$\Delta R \leq \pm 0.1\%$
Solderability	+245°C tin bath for 3s	AEC-Q200 TEST 18 IEC 60115-1 4.17	No visible damage. 95% minimum coverage	
TCR	-55°C and +125°C, +20°C Ref.	AEC-Q200 TEST 19 IEC 60115-1 4.8	Refer to tested curve, max. value $\leq 15\text{ppm}/^\circ\text{C}$	
Board Flex	2mm. Duration: 60s.	AEC-Q200 TEST 21 AEC-Q200-005	$\Delta R \leq \pm 0.1\%$	$\Delta R \leq \pm 0.5\%$
Short Time Overload	5x rated power, 5s	IEC 60115-1 4.13	$\Delta R \leq \pm 0.1\%$	$\Delta R \leq \pm 0.5\%$
Low Temperature Storage	-55°C for 96h, unpowered	IEC 60068-2-1	$\Delta R \leq \pm 0.1\%$	$\Delta R \leq \pm 0.5\%$
Moisture Resistance	Apply T=24 h/cycle, zero power, method 7a and 7b are not required	MIL-STD-202 Method 106	$\Delta R \leq \pm 0.02\%$	$\Delta R \leq \pm 0.05\%$

Temperature Coefficient of Resistance Test Curve

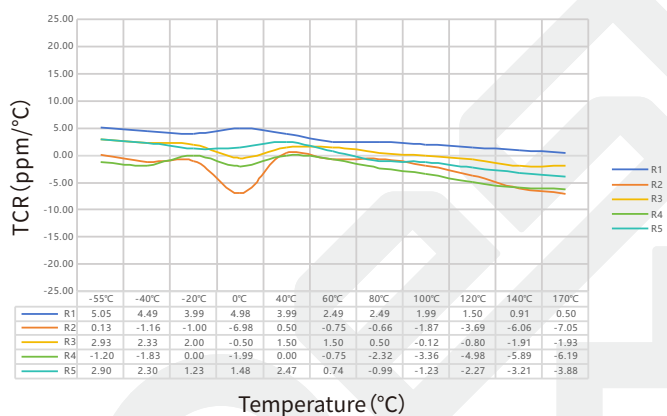
TCR Test Curve -PCSR2512 5.0mΩ



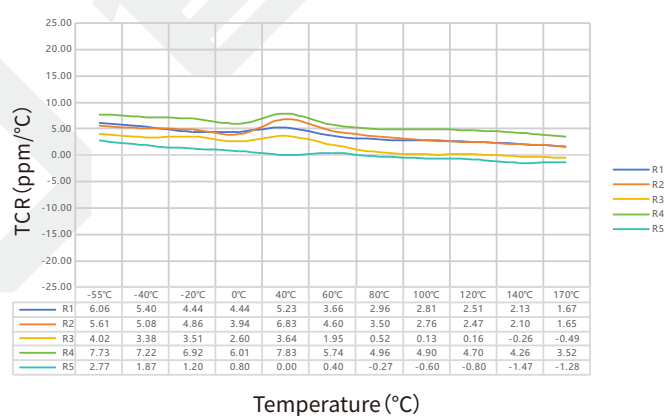
TCR Test Curve -PCSR2512 9.0mΩ



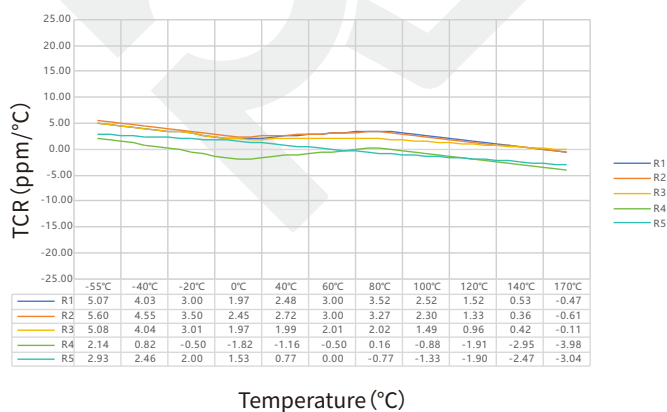
TCR Test Curve -PCSR2512 10mΩ



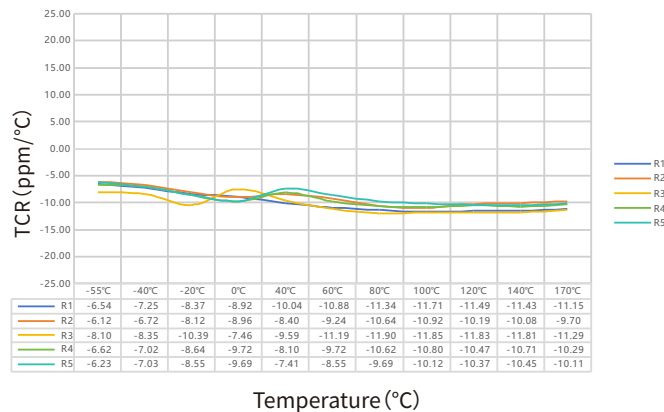
TCR Test Curve -PCSR2512 20mΩ



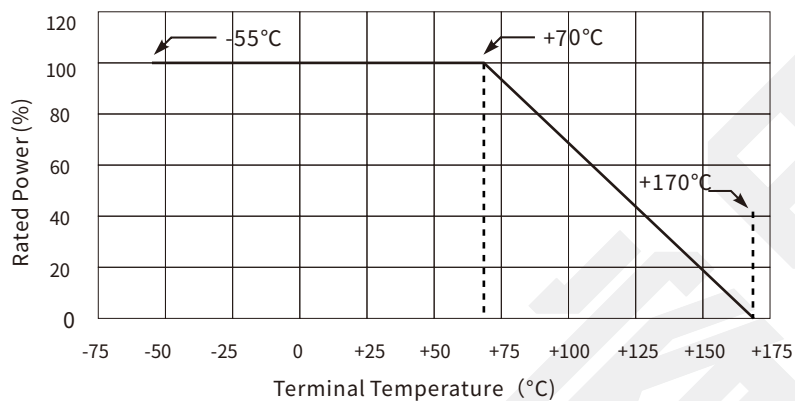
TCR Test Curve -PCSR2512 50mΩ



TCR Test Curve -PCSR2512 100mΩ



Derating Curve



Reflow Soldering Profile

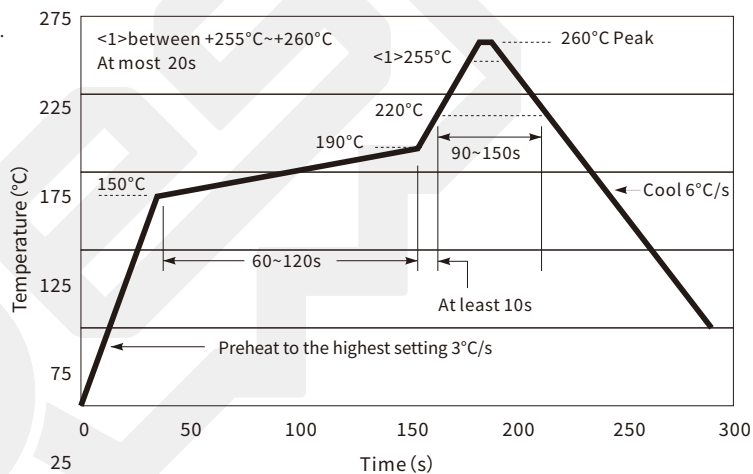
Resistor Surface Temperature:

Pre-Heat: +150°C~+190°C, 60~120sec.

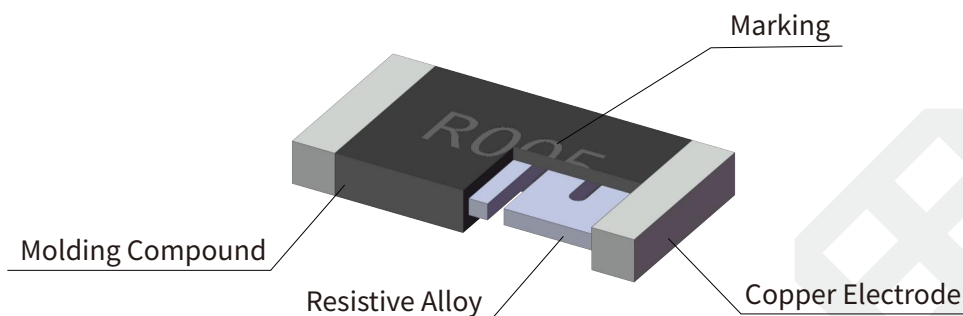
Reflow: +220°C and above, 90~150sec.

Applicable Solder Composition:

Sn-Ag-Cu.

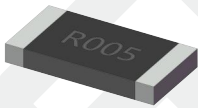


Construction



Marking

Marking: Resistance

Size	Illustration	Demonstration
2512		R005: Resistance

Storage Instructions

- (1) Resistors should be stored at a temperature of 5 to 35 °C, with a humidity of <60% RH. The humidity should be kept as low as possible.
- (2) Resistors should be protected from direct sunlight.
- (3) Resistors should be stored in a clean and dry environment free of harmful gases (HCl, Sulfuric acid, H₂S, etc.)
- (4) Do not move the resistor from the packaging unless use it.
- (5) Under the above storage conditions, the resistor can be stored for at least 1 year.

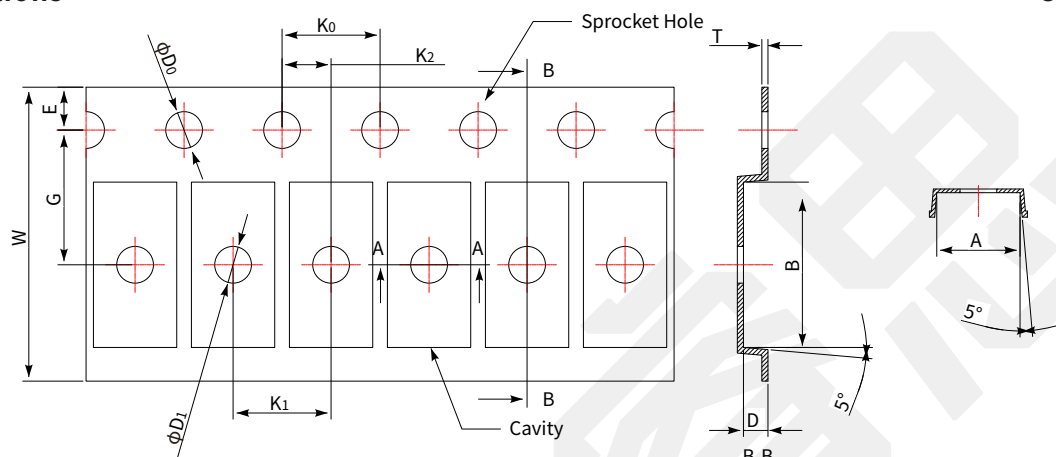
Usage Suggestions

- (1) Please protect the surface of the resistor during use. Prevent defects such as scratches, bumps, and oil stains on the surface.
- (2) Do not use sharp tweezers to move the resistor. Scratches on the surface can cause resistance drift and resistor failure.
- (3) When installing and using resistors, avoid the impact of mechanical stress on the resistor.
- (4) The long-term operating power of resistors should be $\leq$ rated power to avoid resistance drift caused by long-term overload.
- (5) Please refer to the derating curve when operating under high temperature conditions or poor heat dissipation environment.
- (6) If the operating conditions exceed the pulse specified in the pulse curve, a systematic evaluation is required.
- (7) If the resistor is not used after being moved from the packaging, it should be stored under vacuum to avoid risks such as poor solderability caused by oxidation of the resistor.

Packaging

Tape Specifications

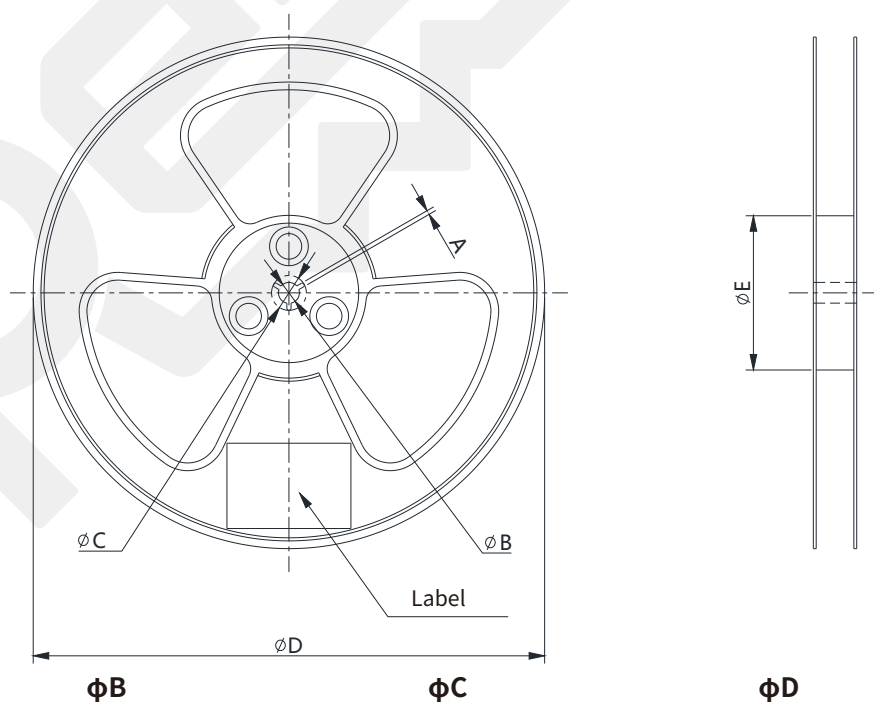
Unit:mm



Resistance	A	B	ϕD_0	ϕD_1	K_0	K_1	K_2	E	G	W	D	T
5m Ω -100m Ω	3.40 $\pm$ 0.2	6.75 $\pm$ 0.2	1.5 $^{+0.1}_{-0}$	1.5 $^{+0.1}_{-0}$	4.0 $\pm$ 0.1	4.0 $\pm$ 0.1	2.0 $\pm$ 0.1	1.75 $\pm$ 0.1	5.5 $\pm$ 0.1	12.0 $\pm$ 0.3	1.0 $\pm$ 0.1	0.25 $\pm$ 0.05

Reel Specifications

Unit:mm

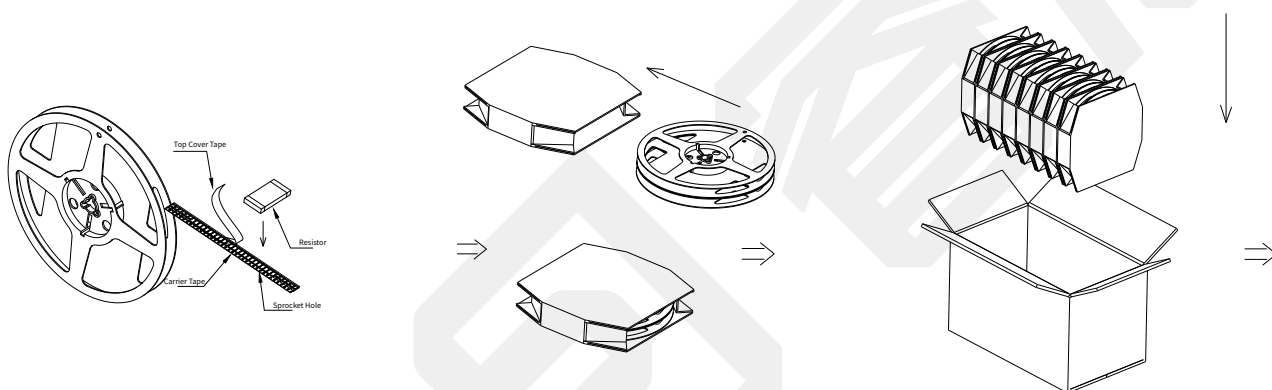


A	ϕB	ϕC	ϕD	ϕE
1.5 min.	13.5 +0.5/-0.2	20.2 Min.	178 $\pm$ 2	60 $\pm$ 2

Packaging

- (1) 4000 pcs. resistors are packed in a tape and wrapped in a reel;
- (2) Every 2 reels are packed by a cardboard sleeve case. The size of the cardboard is 180mm*180mm*35mm;
- (3) Place every 8 cases into a box (64000 pcs. / box);
- (4) For partial cartons, insert empty corrugated cases to fill one full carton and prevent movement and shock during transit.
- (5) Box size: 330mm*195mm*200mm.

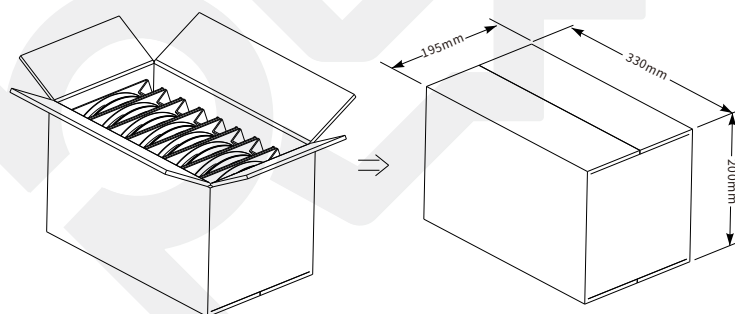
Note: If ordered quantity or partial cartons do not align with the standard quantities, the final shipping configuration shall be subject to our shipment packaging.



1. 4000 pcs. resistors are packed in a tape and wrapped in a reel.

2. Every 2 reels are packed by a cardboard sleeve case. The size of the cardboard is 180mm*180mm*35mm;

3. Place every 8 cases into a box (64000 pcs. / box).



4. For partial cartons, insert empty corrugated cases to fill one full carton and prevent movement and shock during transit.

5. Box size: 330mm*195mm*200mm

Popular Part Numbers

Part Number	Size	Tolerance	Resistance	Marking	TCR	Rated Power	Max. Operating Current
PCSR2512BR005M9	2512	±0.1%	5.0mΩ	Marked	±15ppm/°C	2W	20A
PCSR2512DR005M9	2512	±0.5%	5.0mΩ	Marked	±15ppm/°C	2W	20A
PCSR2512FR005M9	2512	±1.0%	5.0mΩ	Marked	±15ppm/°C	2W	20A
PCSR2512BR006M9	2512	±0.1%	6.0mΩ	Marked	±15ppm/°C	2W	18A
PCSR2512DR006M9	2512	±0.5%	6.0mΩ	Marked	±15ppm/°C	2W	18A
PCSR2512FR006M9	2512	±1.0%	6.0mΩ	Marked	±15ppm/°C	2W	18A
PCSR2512BR007M9	2512	±0.1%	7.0mΩ	Marked	±15ppm/°C	2W	16A
PCSR2512DR007M9	2512	±0.5%	7.0mΩ	Marked	±15ppm/°C	2W	16A
PCSR2512FR007M9	2512	±1.0%	7.0mΩ	Marked	±15ppm/°C	2W	16A
PCSR2512BR008M9	2512	±0.1%	8.0mΩ	Marked	±15ppm/°C	2W	15A
PCSR2512DR008M9	2512	±0.5%	8.0mΩ	Marked	±15ppm/°C	2W	15A
PCSR2512FR008M9	2512	±1.0%	8.0mΩ	Marked	±15ppm/°C	2W	15A
PCSR2512BR009M9	2512	±0.1%	9.0mΩ	Marked	±15ppm/°C	2W	14A
PCSR2512DR009M9	2512	±0.5%	9.0mΩ	Marked	±15ppm/°C	2W	14A
PCSR2512FR009M9	2512	±1.0%	9.0mΩ	Marked	±15ppm/°C	2W	14A
PCSR2512BR010M9	2512	±0.1%	10mΩ	Marked	±15ppm/°C	2W	14A
PCSR2512DR010M9	2512	±0.5%	10mΩ	Marked	±15ppm/°C	2W	14A
PCSR2512FR010M9	2512	±1.0%	10mΩ	Marked	±15ppm/°C	2W	14A
PCSR2512BR015M9	2512	±0.1%	15mΩ	Marked	±15ppm/°C	1W	8A
PCSR2512DR015M9	2512	±0.5%	15mΩ	Marked	±15ppm/°C	1W	8A
PCSR2512FR015M9	2512	±1.0%	15mΩ	Marked	±15ppm/°C	1W	8A
PCSR2512BR018M9	2512	±0.1%	18mΩ	Marked	±15ppm/°C	1W	7A
PCSR2512DR018M9	2512	±0.5%	18mΩ	Marked	±15ppm/°C	1W	7A
PCSR2512FR018M9	2512	±1.0%	18mΩ	Marked	±15ppm/°C	1W	7A
PCSR2512BR020M9	2512	±0.1%	20mΩ	Marked	±15ppm/°C	1W	7A
PCSR2512DR020M9	2512	±0.5%	20mΩ	Marked	±15ppm/°C	1W	7A
PCSR2512FR020M9	2512	±1.0%	20mΩ	Marked	±15ppm/°C	1W	7A
PCSR2512BR025M9	2512	±0.1%	25mΩ	Marked	±15ppm/°C	1W	6A
PCSR2512DR025M9	2512	±0.5%	25mΩ	Marked	±15ppm/°C	1W	6A
PCSR2512FR025M9	2512	±1.0%	25mΩ	Marked	±15ppm/°C	1W	6A

Popular Part Numbers

Part Number	Size	Tolerance	Resistance	Marking	TCR	Rated Power	Max. Operating Current
PCSR2512BR030M9	2512	±0.1%	30mΩ	Marked	±15ppm/°C	1W	5A
PCSR2512DR030M9	2512	±0.5%	30mΩ	Marked	±15ppm/°C	1W	5A
PCSR2512FR030M9	2512	±1.0%	30mΩ	Marked	±15ppm/°C	1W	5A
PCSR2512BR033M9	2512	±0.1%	33mΩ	Marked	±15ppm/°C	1W	5A
PCSR2512DR033M9	2512	±0.5%	33mΩ	Marked	±15ppm/°C	1W	5A
PCSR2512FR033M9	2512	±1.0%	33mΩ	Marked	±15ppm/°C	1W	5A
PCSR2512BR040M9	2512	±0.1%	40mΩ	Marked	±15ppm/°C	1W	5A
PCSR2512DR040M9	2512	±0.5%	40mΩ	Marked	±15ppm/°C	1W	5A
PCSR2512FR040M9	2512	±1.0%	40mΩ	Marked	±15ppm/°C	1W	5A
PCSR2512BR047M9	2512	±0.1%	47mΩ	Marked	±15ppm/°C	1W	4A
PCSR2512DR047M9	2512	±0.5%	47mΩ	Marked	±15ppm/°C	1W	4A
PCSR2512FR047M9	2512	±1.0%	47mΩ	Marked	±15ppm/°C	1W	4A
PCSR2512BR050M9	2512	±0.1%	50mΩ	Marked	±15ppm/°C	1W	4A
PCSR2512DR050M9	2512	±0.5%	50mΩ	Marked	±15ppm/°C	1W	4A
PCSR2512FR050M9	2512	±1.0%	50mΩ	Marked	±15ppm/°C	1W	4A
PCSR2512BR100M9	2512	±0.1%	100mΩ	Marked	±15ppm/°C	1W	3A
PCSR2512DR100M9	2512	±0.5%	100mΩ	Marked	±15ppm/°C	1W	3A
PCSR2512FR100M9	2512	±1.0%	100mΩ	Marked	±15ppm/°C	1W	3A

Popular Part Numbers

Part Number	Size	Tolerance	Resistance	Marking	TCR	Rated Power	Max. Operating Current
PCSR2512BR005N9	2512	±0.1%	5.0mΩ	Marked	±10ppm/°C	2W	20A
PCSR2512DR005N9	2512	±0.5%	5.0mΩ	Marked	±10ppm/°C	2W	20A
PCSR2512FR005N9	2512	±1.0%	5.0mΩ	Marked	±10ppm/°C	2W	20A
PCSR2512BR006N9	2512	±0.1%	6.0mΩ	Marked	±10ppm/°C	2W	18A
PCSR2512DR006N9	2512	±0.5%	6.0mΩ	Marked	±10ppm/°C	2W	18A
PCSR2512FR006N9	2512	±1.0%	6.0mΩ	Marked	±10ppm/°C	2W	18A
PCSR2512BR007N9	2512	±0.1%	7.0mΩ	Marked	±10ppm/°C	2W	16A
PCSR2512DR007N9	2512	±0.5%	7.0mΩ	Marked	±10ppm/°C	2W	16A
PCSR2512FR007N9	2512	±1.0%	7.0mΩ	Marked	±10ppm/°C	2W	16A
PCSR2512BR008N9	2512	±0.1%	8.0mΩ	Marked	±10ppm/°C	2W	15A
PCSR2512DR008N9	2512	±0.5%	8.0mΩ	Marked	±10ppm/°C	2W	15A
PCSR2512FR008N9	2512	±1.0%	8.0mΩ	Marked	±10ppm/°C	2W	15A
PCSR2512BR009N9	2512	±0.1%	9.0mΩ	Marked	±10ppm/°C	2W	14A
PCSR2512DR009N9	2512	±0.5%	9.0mΩ	Marked	±10ppm/°C	2W	14A
PCSR2512FR009N9	2512	±1.0%	9.0mΩ	Marked	±10ppm/°C	2W	14A
PCSR2512BR010N9	2512	±0.1%	10mΩ	Marked	±10ppm/°C	2W	14A
PCSR2512DR010N9	2512	±0.5%	10mΩ	Marked	±10ppm/°C	2W	14A
PCSR2512FR010N9	2512	±1.0%	10mΩ	Marked	±10ppm/°C	2W	14A
PCSR2512BR015N9	2512	±0.1%	15mΩ	Marked	±10ppm/°C	1W	8A
PCSR2512DR015N9	2512	±0.5%	15mΩ	Marked	±10ppm/°C	1W	8A
PCSR2512FR015N9	2512	±1.0%	15mΩ	Marked	±10ppm/°C	1W	8A
PCSR2512BR018N9	2512	±0.1%	18mΩ	Marked	±10ppm/°C	1W	7A
PCSR2512DR018N9	2512	±0.5%	18mΩ	Marked	±10ppm/°C	1W	7A
PCSR2512FR018N9	2512	±1.0%	18mΩ	Marked	±10ppm/°C	1W	7A
PCSR2512BR020N9	2512	±0.1%	20mΩ	Marked	±10ppm/°C	1W	7A
PCSR2512DR020N9	2512	±0.5%	20mΩ	Marked	±10ppm/°C	1W	7A
PCSR2512FR020N9	2512	±1.0%	20mΩ	Marked	±10ppm/°C	1W	7A
PCSR2512BR025N9	2512	±0.1%	25mΩ	Marked	±10ppm/°C	1W	6A
PCSR2512DR025N9	2512	±0.5%	25mΩ	Marked	±10ppm/°C	1W	6A
PCSR2512FR025N9	2512	±1.0%	25mΩ	Marked	±10ppm/°C	1W	6A

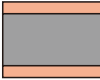
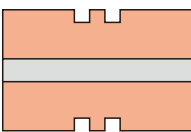
Popular Part Numbers

Part Number	Size	Tolerance	Resistance	Marking	TCR	Rated Power	Max. Operating Current
PCSR2512BR030N9	2512	±0.1%	30mΩ	Marked	±10ppm/°C	1W	5A
PCSR2512DR030N9	2512	±0.5%	30mΩ	Marked	±10ppm/°C	1W	5A
PCSR2512FR030N9	2512	±1.0%	30mΩ	Marked	±10ppm/°C	1W	5A
PCSR2512BR033N9	2512	±0.1%	33mΩ	Marked	±10ppm/°C	1W	5A
PCSR2512DR033N9	2512	±0.5%	33mΩ	Marked	±10ppm/°C	1W	5A
PCSR2512FR033N9	2512	±1.0%	33mΩ	Marked	±10ppm/°C	1W	5A
PCSR2512BR040N9	2512	±0.1%	40mΩ	Marked	±10ppm/°C	1W	5A
PCSR2512DR040N9	2512	±0.5%	40mΩ	Marked	±10ppm/°C	1W	5A
PCSR2512FR040N9	2512	±1.0%	40mΩ	Marked	±10ppm/°C	1W	5A
PCSR2512BR047N9	2512	±0.1%	47mΩ	Marked	±10ppm/°C	1W	4A
PCSR2512DR047N9	2512	±0.5%	47mΩ	Marked	±10ppm/°C	1W	4A
PCSR2512FR047N9	2512	±1.0%	47mΩ	Marked	±10ppm/°C	1W	4A
PCSR2512BR050N9	2512	±0.1%	50mΩ	Marked	±10ppm/°C	1W	4A
PCSR2512DR050N9	2512	±0.5%	50mΩ	Marked	±10ppm/°C	1W	4A
PCSR2512FR050N9	2512	±1.0%	50mΩ	Marked	±10ppm/°C	1W	4A
PCSR2512BR100N9	2512	±0.1%	100mΩ	Marked	±10ppm/°C	1W	3A
PCSR2512DR100N9	2512	±0.5%	100mΩ	Marked	±10ppm/°C	1W	3A
PCSR2512FR100N9	2512	±1.0%	100mΩ	Marked	±10ppm/°C	1W	3A

Broad Portfolio of Current Sensing Resistors

Series	Product	Rated Power +70°C	Resistance Range	Tightest Tolerance	Best TCR
PCSR2512		1W~2W	5mΩ~100mΩ	±0.1%	±10ppm/°C
PCSR3637		2W~3W	1mΩ~200mΩ	±0.1%	±15ppm/°C
PCSK2512		1W	5mΩ~100mΩ	±0.5%	±25ppm/°C
PCSK3637		2W~5W	1mΩ~200mΩ	±0.5%	±25ppm/°C
MCSM2512		3W	0.5mΩ~2mΩ	±0.5%	±100ppm/°C
MCSF2512		2W~3W	3mΩ~100mΩ	±0.5%	±50ppm/°C
PEWM1206		6W	0mΩ~1mΩ	±1.0%	±100ppm/°C
PEWM1216		7W~10W	0.3mΩ~1.0mΩ	±1.0%	±100ppm/°C
PEWK1216		3W~5W	2.0mΩ~3.0mΩ	±1.0%	±50ppm/°C
PEWM2512		3W~6W	0mΩ~1mΩ	±0.5%	±100ppm/°C
SEWK2512		4W~5W	1mΩ~3mΩ	±0.5%	±10ppm/°C
EBWM2512		6W	0mΩ~1mΩ	±0.5%	±200ppm/°C
EBWK2512		2.5W~5W	2mΩ~5mΩ	±0.5%	±100ppm/°C
SEWF2512		2.5W~4W	3mΩ~5mΩ	±0.5%	±25ppm/°C
PEWF2512		2.5W~5W	1.5mΩ~5mΩ	±0.5%	±50ppm/°C
PEWM3920		8W~12W	0.2mΩ~1mΩ	±0.5%	±100ppm/°C
PEWK3920		3W~8W	1mΩ~5mΩ	±0.5%	±50ppm/°C
SEWF3920		3W~8W	1mΩ~5mΩ	±0.5%	±25ppm/°C
SEWK3920		5W~8W	1mΩ~3mΩ	±0.5%	±10ppm/°C
SEWM3920		8W~12W	0.2mΩ~1mΩ	±0.5%	±50ppm/°C

Broad Portfolio of Current Sensing Resistors

Series	Product	Rated Power +70°C	Resistance Range	Tightest Tolerance	Best TCR
SEWK3951		15W	0.25mΩ~0.4mΩ	±0.5%	±25ppm/°C
SEWF3951		10W~15W	0.3mΩ~0.8mΩ	±0.5%	±25ppm/°C
SEWF5930		6W~10W	1mΩ~3mΩ	±0.5%	±25ppm/°C
PEWM5930		6W~15W	0.1mΩ~1.5mΩ	±0.5%	±100ppm/°C
PEWK5930		10W	1mΩ	±0.5%	±50ppm/°C
SEWM5930		9W~15W	0.2mΩ~1mΩ	±0.5%	±50ppm/°C
PEWF4026		3W~7W	1mΩ~5mΩ	±0.5%	±50ppm/°C
PEWF2726		3W~7W	1mΩ~5mΩ	±0.5%	±50ppm/°C
PEWM4026		7W~12W	0.2mΩ~1mΩ	±0.5%	±75ppm/°C
PEWM2726		7W~12W	0.2mΩ~1mΩ	±0.5%	±75ppm/°C
SEWK6398		4W	0.1mΩ	±1.0%	±10ppm/°C

Revision

Version	Revised Content	Date	Approver
V0	Initial Issue	2019.12.26	YBP
V1	Overall Revision of the Specification Document	2020.02.27	YBP
V2	Improve the description of material information	2020.03.09	YBP
V3	Complete revision of the specification document, improving the material information description for the 10mΩ to 100mΩ range.	2022.07.17	LWW
V4	The specification booklet has been completely revised, adding product specifications for 5mΩ~9mΩ, and improving information on product reliability, packaging, and other details.	2024.03.24	LWW
V5	The rated power of 5mΩ~10mΩ products has been upgraded from 1W to 2W.	2024.07.30	LWW
V6	New series meeting automotive standards	2025.01.13	LWW
V7	1. Remove the 'AEC-Q200 standard' from the thermal shock testing 2. Adjust the typical load life value to ' $\Delta R \leq \pm 0.2\%$ ' and the maximum value to ' $\Delta R \leq \pm 0.75\%$ '. 3. For welding resistance, remove the 'solder trough'	2025.02.28	LWW
V8	Added material with a temperature coefficient of 10 ppm/°C	2025.10.29	LWW
V9	Add new page of broad portfolio of current sensing resistors	2026.04.28	LWW

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