



高精密厚膜貼片電阻

PCR Series

Thick Film Precision Chip Resistor

PRODUCT FEATURE:

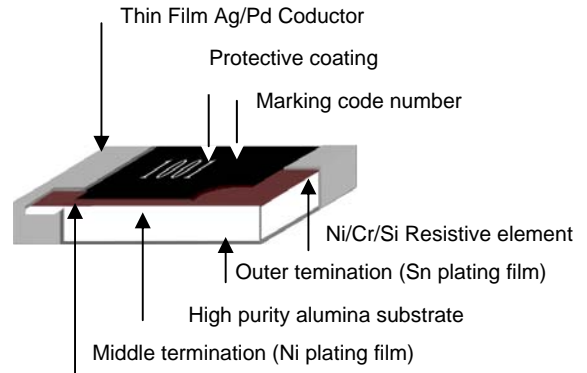
- Small size and light weight.
- Reduction of assembly costs matching with placement machines.
- Reliability, High quality and Fast Delivery.
- Power : Standard Type: 0201 ~ 2030
- Precision Tolerance: $\pm 0.1\%$.
- Rated Power: 1/20W ~ 2W

FIGURE



APPLICATION:

- Entertainment: Stereo TV tuners, Tape recorder.
- Appliance: Air conditioner, Refrigerator.
- Computer & relative products: Main board, PDA.
- Communication equipment: Cell phone, Fax machine.
- Power equipment: Power supply, Illumination equipment.
- Measuring instrument: Electric meter, Navigation equipment.



ORDERING INFORMATION

Example: PCR25FF10R0

Power	Size	Type	Tolerance	TCR(°C)	Resistance	Packing
1/20W	0201	PCR01	K = $\pm 10\%$	E = ± 100 ppm	1R = 1R00	10K Reel
1/16W	0402	PCR02	J = $\pm 5\%$	K = ± 150 ppm	10R = 10R0	10K Reel
1/10W	0603	PCR03	F = $\pm 1\%$	F = ± 200 ppm	100R = 100R	5K Reel
1/8W	0805	PCR05	D = $\pm 0.5\%$	G = ± 300 ppm	1K = 1001	5K Reel
1/4W	1206	PCR06	C = $\pm 0.25\%$	H = ± 400 ppm	10K = 1002	5K Reel
1/3W	1210	PCR10	B = $\pm 0.1\%$	I = ± 500 ppm	100K = 1003	5K Reel
1/2W	1812	PCR18			1M = 1004	4K Reel
	2010	PCR20				4K Reel
1W	2512	PCR25				4K Reel
	1218	PCR28				4K Reel
2W	2030	PCR30				2K Reel

Body Marking
PCR01 ~ PCR25

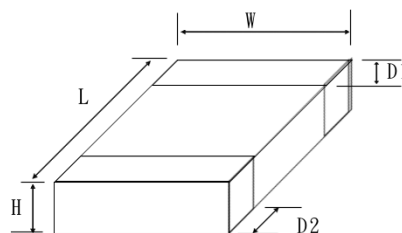


PCR1218, PCR2030



DIMENSION

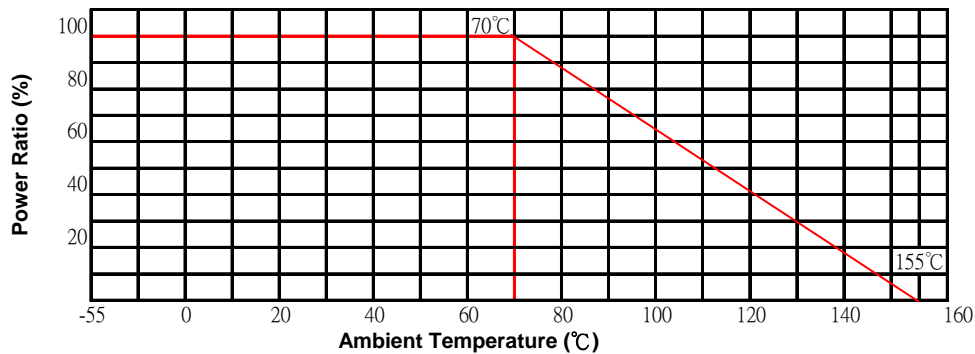
Power	Size	Type	L	W	H	D1	D2
1/20W	0201	PCR01	0.6 \pm 0.03	0.30 \pm 0.03	0.23 \pm 0.03	0.15 \pm 0.05	0.15 \pm 0.05
1/16W	0402	PCR02	1.0 \pm 0.10	0.50 \pm 0.05	0.35 \pm 0.05	0.20 \pm 0.10	0.25 \pm 0.10
1/10W	0603	PCR03	1.6 \pm 0.15	0.80 \pm 0.10	0.45 \pm 0.10	0.30 \pm 0.20	0.30 \pm 0.20
1/8W	0805	PCR05	2.0 \pm 0.15	1.25 \pm 0.10	0.50 \pm 0.10	0.35 \pm 0.20	0.40 \pm 0.20
1/4W	1206	PCR06	3.1 \pm 0.10	1.55 \pm 0.10	0.55 \pm 0.10	0.45 \pm 0.20	0.40 \pm 0.20
1/3W	1210	PCR10	3.1 \pm 0.10	2.55 \pm 0.10	0.55 \pm 0.10	0.50 \pm 0.20	0.50 \pm 0.20
1/2W	1812	PCR18	4.50 \pm 0.20	3.00 \pm 0.20	0.55 \pm 0.10	0.45 \pm 0.20	0.40 \pm 0.20
	2010	PCR20	5.0 \pm 0.20	2.50 \pm 0.20	0.55 \pm 0.10	0.60 \pm 0.20	0.50 \pm 0.20
1W	2512	PCR25	6.3 \pm 0.20	3.20 \pm 0.20	0.55 \pm 0.10	0.60 \pm 0.20	0.50 \pm 0.20
	1218	PCR28	3.1 \pm 0.10	4.60 \pm 0.20	0.55 \pm 0.10	0.45 \pm 0.20	0.40 \pm 0.20
2W	2030	PCR30	5.2 \pm 0.20	7.60 \pm 0.20	0.76 \pm 0.10	0.80 \pm 0.20	0.80 \pm 0.20



□ **GENERAL ELECTRICAL SPECIFICATION** Operate Temperature Range: -55°C ~ 155°C

Type	Standard	High	Maximum Voltage		Resistance (Ω)		T.C.R.	Jumper	
	Power	Power	Working	Overload	±0.1%,±0.5%	±1%,±2%	(ppm/°C)	Res. Value	Rated Current
PCR01(0201)	0.05W	0.05W	25V	50V	-	10Ω~1MΩ	±200	50Ω Max.	0.5A
PCR02(0402)	0.063W	0.1W	50V	100V	-	1Ω~9.9Ω	±400	50Ω Max.	1A
					10Ω~1MΩ	10Ω~10MΩ	±100		
PCR03(0603)	0.1W	0.125W	50V	100V	-	1Ω~9.9Ω	±400	50Ω Max.	1A
					10Ω~1MΩ	10Ω~10MΩ	±100		
PCR05(0805)	0.125W	0.25W	150V	300V	-	1Ω~9.9Ω	±400	50Ω Max.	1A
					10Ω~1MΩ	10Ω~10MΩ	±100		
PCR06(1206)	0.25W	0.33W	200V	400V	-	1Ω~9.9Ω	±400	50Ω Max.	2A
					10Ω~1MΩ	10Ω~10MΩ	±100		
PCR10(1210)	0.33W	0.66W	200V	400V	-	1Ω~9.9Ω	±400	50Ω Max.	2A
					10Ω~1MΩ	10Ω~10MΩ	±100		
PCR18(1812)	0.5W	0.66W	200V	400V	-	1Ω~9.9Ω	±400	50Ω Max.	2A
					10Ω~1MΩ	10Ω~10MΩ	±100		
PCR20(2010)	0.5W	1W	200V	400V	-	1Ω~9.9Ω	±400	50Ω Max.	2A
					10Ω~1MΩ	10Ω~10MΩ	±100		
PCR25(2512)	1W	2W	200V	400V	-	1Ω~9.9Ω	±400	50Ω Max.	2A
					10Ω~1MΩ	10Ω~10MΩ	±100		
PCR28(1218)	1W	2W	200V	400V	-	1Ω~9.9Ω	±400	50Ω Max.	2A
					10Ω~1MΩ	10Ω~10MΩ	±100		
PCR30(2030)	2W	4W	200V	400V	-	1Ω~9.9Ω	±400	50Ω Max.	2A
					10Ω~1MΩ	10Ω~10MΩ	±100		

□ **POWER DERATING CURVE**



In case resistors operating ambient temperature in excess of the temperature range -55°C ~+155°C power ratio will be derated in accordance with the figure as shown on the right.



□ BELIABILITY TEST

ITEM	SPECIFICATION	TEST METHOD
(1) Temperature Coefficient of Resistance	As Specification	JIS-C-5202 5.2/IEC 60115-1 4.8 +25/-55, +25/125, +155/+25°C.
(2) Thermal Shock	±(1.0+0.05Ω)	MIL-STD-202F, Method 107 -55°C~125,155°C,5 cycles
(3) Short Time Overload	±(2.0+0.05Ω)	MIL-R-55342D 4.7.5 RCWV*2.5 or Max Overloading Voltage, 5 seconds
(4) High Temperature Exposure	±(2.0+0.05Ω)	MIL-R-55342D 4.7.6 1000 hours @ +125°C without load
(5) Load Life	±(3.0+0.05Ω)	MIL-STD-202F M108 RCWV, 70°C, 1.5 hours on, 0.5 hours off total 1000~1048 hours
(6) Resistance to Soldering Heat	±(1.0+0.05Ω)	MIL-R-55342D 4.7.7 260±5°C, 10±1seconds
(7) Moisture Resistance	±(2.0+0.05Ω)	MIL-STD-202F, Method 103 40°C, 90~95%RH, 1000 hours
(8) Low Temperature Operation	±(1.0+0.05Ω)	MIL-R-55342D 4.7.4 1hour, -55°C, followed by 45 minutes of RCWV
(9) Bending Strenght	±(1.0+0.05Ω)	JIS-C-5202 6.1.4 5 mm deflection in either direction, 10 seconds
(10) Solderability	95% min coverage	MIL-STD-202F-Method 208H 235±5°C, 2±0.5seconds

* Storage Temperature :25±3°C; Humidity <80%RH

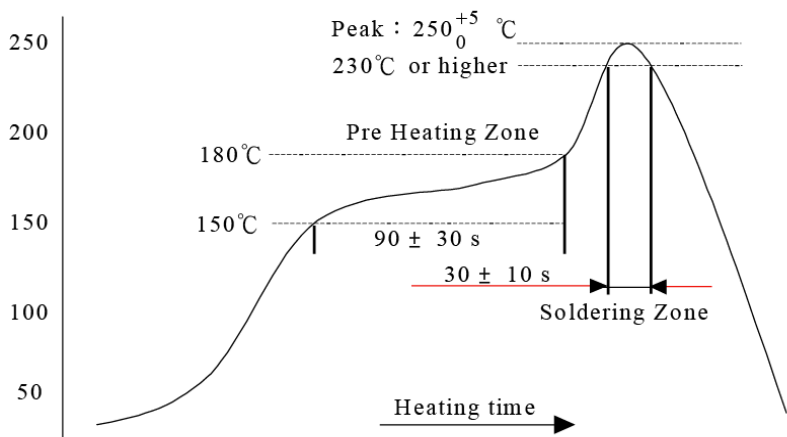
□ VOLTAGE RATING OR CURRENT RATING

Resistance Range: ≥ 1Ω

Rated Voltage: The resistor shall have a DC continuous working voltage or a RMS AC continuous working voltage at commercial-line frequency and wave form corresponding to the power rating, as determined formula as following:

$$E = \sqrt{R \times P} \quad P = \text{Power rating (W)} \quad R = \text{Nominal resistance (Ω)}$$

□ SOLDERING PROFILE



□ PACKAGE SPECIFICATION

Power	Size	Type	Quantity(ea)			
			Paper Reel Tape	In Box	Carton	
1/20W	0201	PCR01	10K Reel	7" Reel	100K pcs	600K pcs
1/16W	0402	PCR02	10K Reel	7" Reel	50K pcs	300K pcs
1/10W	0603	PCR03	5K Reel	7" Reel	50K pcs	300K pcs
1/8W	0805	PCR05	5K Reel	7" Reel	50K pcs	300K pcs
1/4W	1206	PCR06	5K Reel	7" Reel	40K pcs	240K pcs
1/3W	1210	PCR10	5K Reel	7" Reel	40K pcs	240K pcs
1/2W	1812	PCR18	4K Reel	7" Reel	40K pcs	240K pcs
	2010	PCR20	4K Reel	7" Reel	40K pcs	240K pcs
1W	2512	PCR25	4K Reel	7" Reel	40K pcs	240K pcs
	1218	PCR28	4K Reel	7" Reel	40K pcs	240K pcs
2W	2030	PCR30	2K Reel	7" Reel	20K pcs	120K pcs

SINLOON®



品質承諾標誌
QUALITY COMMITMENT

Fig-1



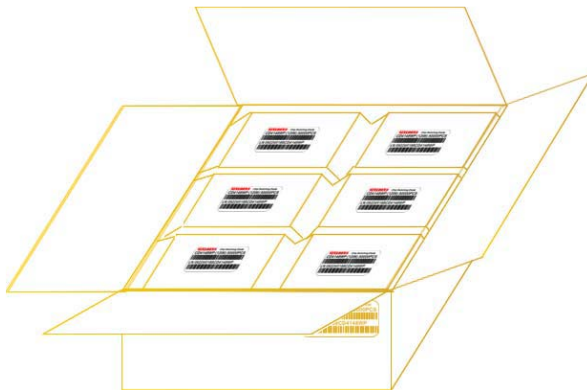
Paper Reel Tape

Fig-2



Reel Tape Label

Fig-3



Carton Pack

Fig-4



Inner Box



品質承諾標誌
QUALITY COMMITMENT