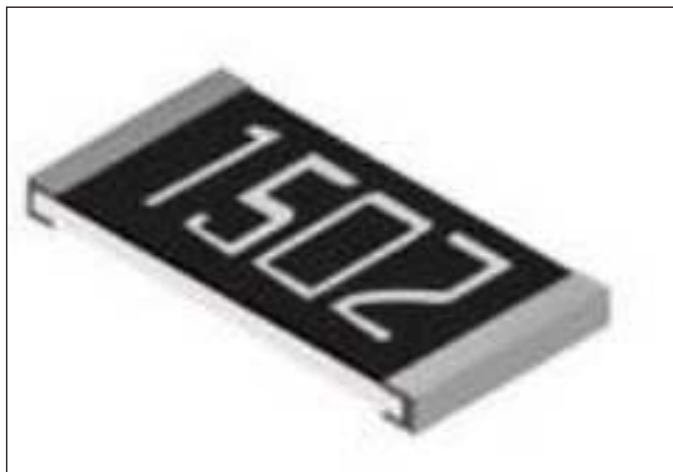


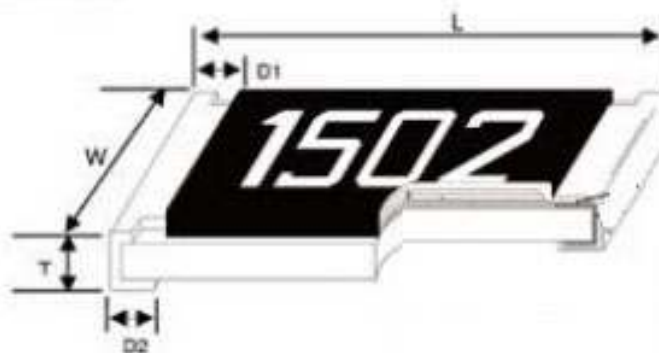


● Constructions



①	Alumina Substrate	④	Edge Electrode(NiCr)	⑦	Resistor Layer(NiCr)
②	Bottom Electrode	⑤	Barrier layer(Ni)	⑧	Passivation
③	Top Electrode(Ag)	⑥	External Electrode(sn)	⑨	Overcoat

● Dimensions



Type		L	W	T	D1	D2	Weight(g) 1000pcs
Pr02	0402	1.00 ± 0.05	0.50 ± 0.05	0.35 ± 0.05	0.20 ± 0.10	0.20 ± 0.10	0.55
PR03	0603	1.55 ± 0.10	0.80 ± 0.10	0.45 ± 0.10	0.30 ± 0.20	0.30 ± 0.20	1.85
PR05	0805	2.00 ± 0.15	1.25 ± 0.15	0.55 ± 0.10	0.30 ± 0.20	0.40 ± 0.25	4.76
PR06	1206	3.05 ± 0.15	1.55 ± 0.15	0.55 ± 0.10	0.42 ± 0.20	0.35 ± 0.25	9.11
PR10	2010	4.90 ± 0.15	2.40 ± 0.15	0.55 ± 0.10	0.60 ± 0.30	0.50 ± 0.25	23.82
PR12	2512	6.30 ± 0.15	3.10 ± 0.15	0.55 ± 0.10	0.60 ± 0.30	0.50 ± 0.25	38.46

● Features

- I long term life stability and demonstrated the Anti-Corrosion claims Characterized by Ta₂n
- II Special passivated NiCrR film for Anti-Acid and Anti-Damp
- III Tight tolerance down to $\pm 0.1\%$
- IV Extremely low TCR down to $\pm 15\text{ppm}/^\circ\text{C}$
- V Wide resistance range $10\Omega \sim 1\text{M}\Omega$

● Applications

- I Automotive
- II High-end Computer
- III Industrial Equipment
- IV Automatic Equipment Controller
- V Medical Equipment
- VI Telecommunication Device
- VII High-end Multimedia Electronics
- VIII Outdoor Electronic Applications

Reference Standards

JISC 5201-1

Ordering Information

Example:

PR (1)	02 (2)	C (3)	T (4)	D (5)	1001 (6)	N (6)
Series Name	Dimensions	Tolerance	Packaging Code	TCR(pmm/°C)	Resistance	Marking Code

(1)Type: PR SERIES

(2)Dimensions:02=0402,03=0603,05=0805,06=1206,10=2010,12=2512

(3)Tolerance: B=±0.1%,C=±0.25%,D=±0.5%

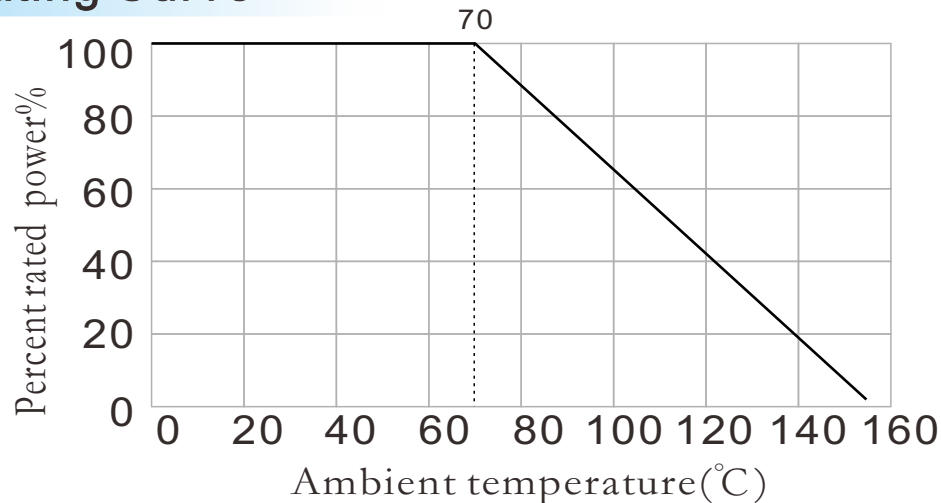
(4)Packaging Code :T:Taping Reel,B:BULK

(5)TCR(pmm/°C): N:±15,C:±25,D:±50

(6)Resistance:1000=100Ω、2201=2200Ω、1001=1KΩ、1004=1MΩ

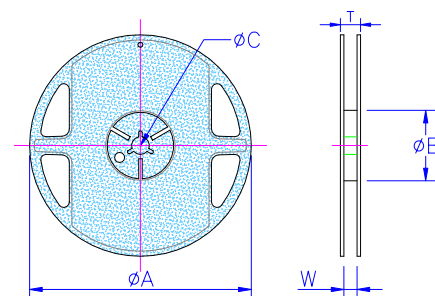
(7)Marking Code:Standard Marking for E96/E24,N:NO Marking

Derating Curve

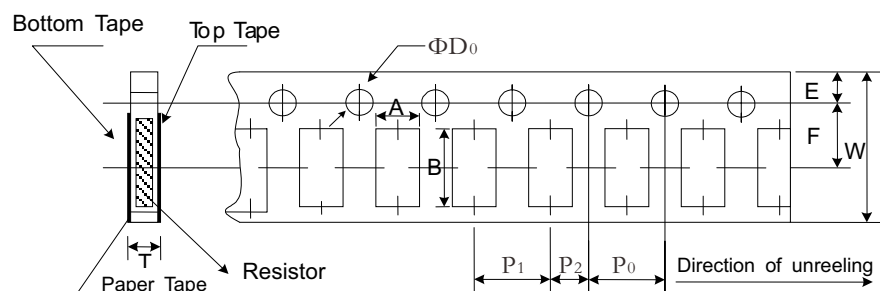


Packaging

Type	ΦA	ΦB	ΦC	W	T	Paper tape (EA)	Embossed Plastic Tape(EA)
PR02	178.0±1.0	60.0±1.0	13.5±0.7	9.5±1.0	11.5±1.0	10.000	-
PR03	178.0±1.0	60.0±1.0	13.5±0.7	9.5±1.0	11.5±1.0	5.000	-
PR05	178.0±1.0	60.0±1.0	13.5±0.7	9.5±1.0	11.5±1.0	5.000	-
PR06	178.0±1.0	60.0±1.0	13.5±0.7	9.5±1.0	11.5±1.0	5.000	-
PR10	178.0±1.0	60.0±1.0	13.5±0.7	13.5±1.0	15.5±1.0	-	4.000
PR12	178.0±1.0	60.0±1.0	13.5±0.7	13.5±1.0	15.5±1.0	-	4.000



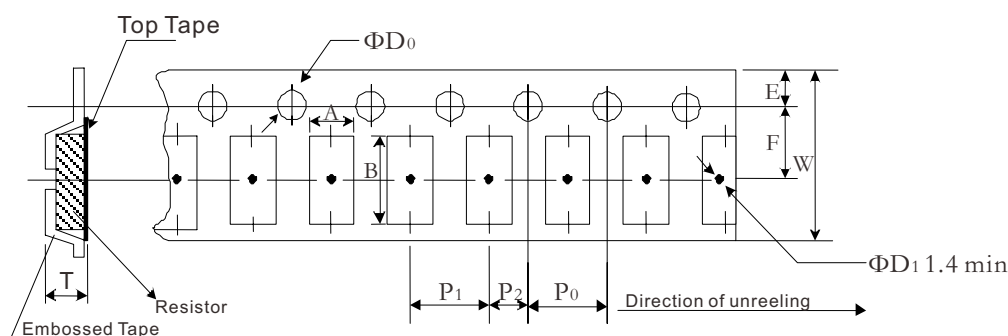
Paper Tape Specifications



Unit: mm

Type	A	B	W	E	F	P ₀	P ₁	P ₂	ΦD ₀	T
Pr02	0.70 ± 0.05	1.16 ± 0.05	8.0 ± 0.10	1.75 ± 0.05	3.50 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	2.00 ± 0.05	1.55 ± 0.05	0.40 ± 0.03
PR03	1.10 ± 0.05	1.90 ± 0.05	8.0 ± 0.10	1.75 ± 0.05	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.55 ± 0.05	0.60 ± 0.03
PR05	1.60 ± 0.05	2.37 ± 0.05	8.0 ± 0.10	1.75 ± 0.05	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.55 ± 0.05	0.75 ± 0.05
PR06	2.00 ± 0.05	3.55 ± 0.05	8.0 ± 0.10	1.75 ± 0.05	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.55 ± 0.05	0.75 ± 0.05

Embossed Plastic Tape Specifications

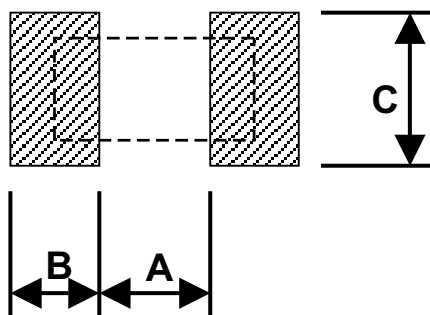


Unit: mm

Type	A	B	W	E	F	P ₀	P ₁	P ₂	ΦD ₀	T
PR02	0.70 ± 0.05	1.16 ± 0.05	8.0 ± 0.10	1.75 ± 0.05	3.50 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	2.00 ± 0.05	1.55 ± 0.05	0.40 ± 0.03
PR03	1.10 ± 0.05	1.90 ± 0.05	8.0 ± 0.10	1.75 ± 0.05	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.55 ± 0.05	0.60 ± 0.03
PR05	1.60 ± 0.05	2.37 ± 0.05	8.0 ± 0.10	1.75 ± 0.05	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.55 ± 0.05	0.75 ± 0.05
PR06	2.00 ± 0.05	3.55 ± 0.05	8.0 ± 0.10	1.75 ± 0.05	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.55 ± 0.05	0.75 ± 0.05

Recommend Land Pattern

Unit: mm



Type	A	B	C
PR02	0.50	0.50	0.60 ± 0.20
PR03	0.80	1.00	0.90 ± 0.20
PR05	1.00	1.00	1.35 ± 0.20
PR06	2.00	1.15	1.70 ± 0.20
PR10	3.60	1.40	2.50 ± 0.20
PR12	4.90	1.60	3.10 ± 0.20

Electrical Characteristics

Standard Electrical specifications

Type	Power Rating at 70℃	Max Operating Voltage(V)	Max Operating Voltage(V)	Resistance Range(Ω)		Operating Temperature	TCR(PPM/℃)
				± 1%	± 5%		
PR02(0402)	1/16W	25	50	49.9Ω-12KΩ		-55~+155℃	± 15
				25Ω-25KΩ			± 25 ± 50
PR03(0603)	1/16W	50	100	25Ω-100KΩ			± 15
				25Ω-332KΩ			± 25 ± 50
PR05(0805)	1/10W	100	200	25Ω-200KΩ			± 15
				10Ω-800KΩ			± 25 ± 50
PR06(1206)	1/8W	150	300	25Ω-500KΩ			± 15
				10Ω-1MΩ			± 25 ± 50
PR0A(2010)	1/4W	150	300	25Ω-500KΩ			± 15
				10Ω-1MΩ			± 25 ± 50
PR12(2512)	1/2W	150	300	25Ω-500KΩ			± 15
				10Ω-1MΩ			± 25 ± 50

Operating Voltage= $\sqrt{P \cdot R}$ or Max. operating voltage listed above, whichever is lower.

Overload Voltage= $2.5 \sqrt{P \cdot R}$ or Max. overload voltage listed above, whichever is lower.

Performance Characteristics

Item	Requirement		Test Method
	size/0603/0805 1206/2010/2512	size/0402	
Short Time Overload	$\leq \pm 0.02\%$	$\leq \pm 0.1\%$	2.5 times RCWV/ Max. overload voltage for 2 seconds
Endurance	$\leq \pm 0.05\%$	$\leq \pm 0.25\%$	70 ± 2℃. Max. working voltage for 1000 hrs with 1.5 hrs "ON and 0.5 hrs "OFF"
Damp Heat with Load	$\leq \pm 0.05\%$	$\leq \pm 0.5\%$	40 ± 2℃ . 90-95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON and 0.5 hrs "OFF"
Solderability	90% min.coverage		245 ± 5° C for 3 seconds
Resistance to Soldering Heat	$\leq \pm 0.02\%$	$\leq \pm 0.1\%$	260 ± 5° C for 10 seconds
Thermal Shock	$\leq \pm 0.02\%$	$\leq \pm 0.02\%$	~55℃ ~ 150℃ , 100 cycles

■ Reference Standards: MIL-STD-202, JIS-C 5201-1

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