



TMRA-Thick Film Chip Array Resistor

Feature:

- High Density
- Reliability, high quality
- Reduction of mounting time
- Suitable for IR reflow soldering

Application LCD displays, memory modules, digital circuits and communication equipments, etc.

Part Number:

TMRA	-	1	2	3	4	5	6	7	8	9	10	11
			↓		↓			↓			↓	↓

Produce Code TMRA: Thick Film Chip Array Resistor	Resistance value: ±1% : 49R9=49.9Ω 1002=10KΩ ... ±5% : 06R8=6.8Ω 0564=560KΩ ...	Tolerance F=±1% J=± 5%	Size: 02012=0201*2 02014=0201*4 04022=0402*2 04024=0402*4 06032=0603*2 06034=0603*4	The electrode structure: D:Convex C:Concave F: Flat terminal	Packaging T:tape&reel B:bulk

Dimension(mm):

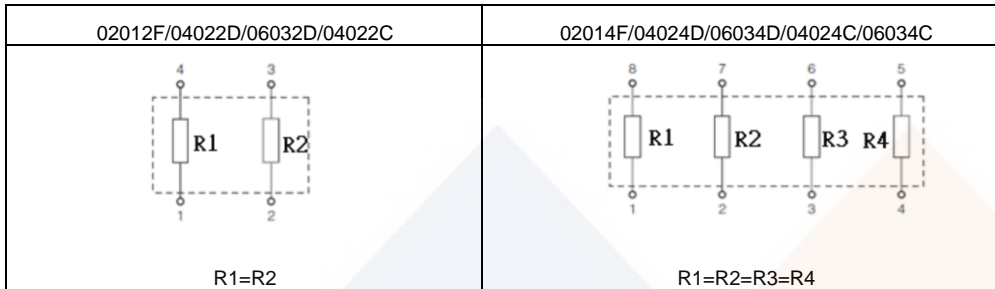
04022D/06032D	04024D/06034D
04024C/06034C	04022C
02012F flat terminal	02014F flat terminal



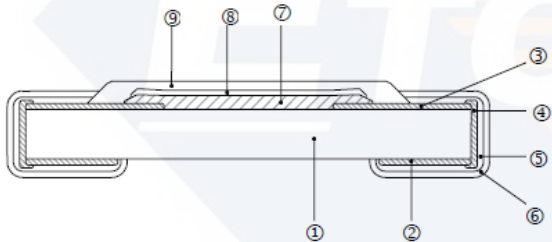
TMRA-Thick Film Chip Array Resistor

Type	L	W	T	A1	A2	B	P	G
02012F	0.80±0.10	0.60±0.10	0.35±0.10	0.30±0.10	/	0.15±0.10	0.50±0.05	0.15±0.10
02014F	1.40±0.10	0.60±0.10	0.35±0.10	0.20±0.10	/	0.15±0.10	0.40±0.05	0.15±0.10
04022D	1.00±0.10	1.00±0.10	0.35±0.10	0.33±0.10	/	0.15±0.05	0.65±0.05	0.25±0.10
04024D	2.00±0.10	1.00±0.10	0.45±0.10	0.40±0.05	0.30±0.05	0.20±0.15	0.50±0.05	0.30±0.15
06032D	1.60±0.15	1.60±0.15	0.50±0.10	0.60±0.15		0.30±0.10	0.80±0.05	0.25±0.10
06034D	3.20±0.20	1.60±0.20	0.50±0.10	0.65±0.15	0.50±0.15	0.30±0.15	0.80±0.10	0.30±0.15
04022C	1.00±0.10	1.00±0.10	0.35±0.10	/	/	0.15±0.10	/	0.30±0.10
04024C	2.00±0.10	1.00±0.10	0.45±0.10	/	/	0.15±0.10	/	0.30±0.10
06034C	3.20±0.20	1.60±0.20	0.60±0.10	/	/	0.30±0.20	/	0.40±0.10

Equivalent Circuit Diagram:



Construction:



No.	Components
①	Alumina Substrate
②	Bottom Electrode (Ag)
③	Top Electrode (Ag-Pd)
④	Edge Electrode (NiCr)
⑤	Barrier Layer (Ni)
⑥	External Electrode (Sn)
⑦	Resistor Layer (RuO ₂ /Ag)
⑧	Primary Overcoat (Glass)
⑨	Secondary Overcoat (Epoxy)

Electrical Characteristics:

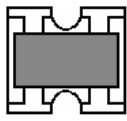
Type	Rated Power 70 °C	Max Working Voltage	Dielectric Withstandin g Voltage	Resistance Range±5% ± 1%	Temperature Coefficient PPM/°C	Operation Temperature	Resistance Value of Jumper	Rated Current of Jumper
02012F	1/20W	12.5V	/	10Ω~1MΩ	±200	-55°C~+125°C	<50mΩ	1A
02014F	1/20W	12.5V	/	10Ω~1MΩ	±200			
04022D	1/16W	50V	100V	10Ω~1MΩ	±200	-55°C~+155°C		
04024D	1/16W	50V	100V	10Ω~1MΩ	±200			
06032D	1/16W	50V	100V	10Ω~1MΩ	±200			
06034D	1/16W	50V	300V	1Ω~1MΩ	≥10Ω:±200 <10Ω:±400			
04022C	1/16W	50V	100V	10Ω~1MΩ				
04024C	1/16W	50V	100V	10Ω~1MΩ				
06034C	1/10W	50V	300V	1Ω~1MΩ	≥10Ω:±200 <10Ω:±400			



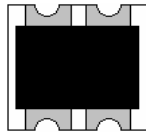
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Marking:

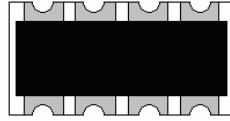
a. no marking on body for 04022D,04022C,04024C



04022D

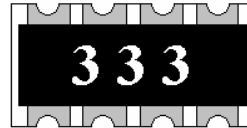
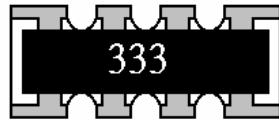
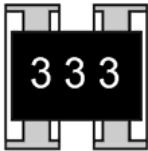


04022C

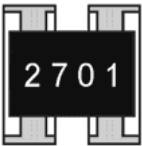


04024C

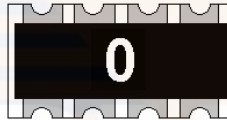
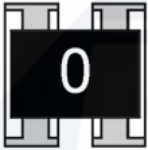
b. $\pm 5\%$ tolerance



c. $\pm 1\%$ tolerance

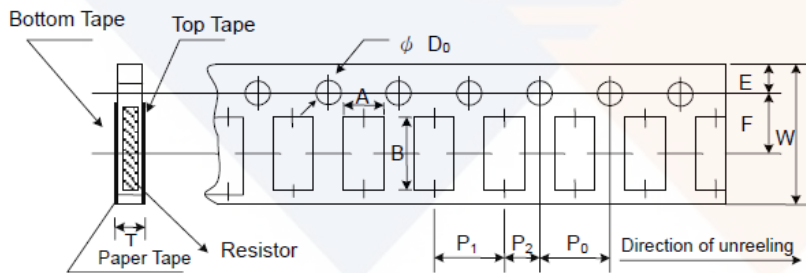


d. 0Ω



Packing dimension

A. Paper taping dimentions.(Unit:mm)



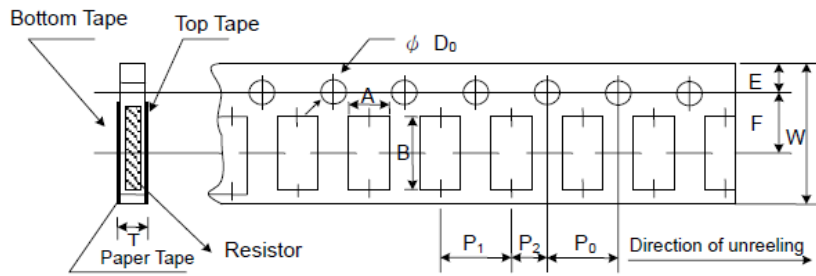
Type	A(± 0.2)	B(± 0.2)	P1(± 0.05)	T (± 0.1)	ΦD	P0(± 0.2)	P2(± 0.2)	P2(± 0.2)
04022D/04022C	1.20	1.20	2.00	0.45	1.50	4.00	2.00	2.00
04024D/04024C	1.20	2.20	2.00	0.70	1.50	4.00	2.00	2.00
02012F	0.79	1.00	2.00	0.50	1.50	4.00	2.00	2.00
02014F	0.90	1.70	2.00	0.50	1.50	4.00	2.00	2.00

Type	E(± 0.1)	F(± 0.05)	W(± 0.2)
04022D/04022C	1.75	3.50	8.00
04024D/04024C	1.75	3.50	8.00
02012F	1.75	3.50	8.00
02014F	1.75	3.50	8.00



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B. Embossed Taping dimensions.(Unit:mm)



Type	A(± 0.2)	B(± 0.2)	P2(± 0.05)	T (± 0.1)	ΦD	P0(± 0.2)
06034D/06034C	2.00	3.60	2.00	0.83	1.50	4.00
06032D	1.90	1.90	2.00	0.83	1.50	4.00

Type	E(± 0.1)	F(± 0.05)	W(± 0.2)
06034D/06034C	1.75	3.50	8.00
06032D	1.75	3.50	8.00

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