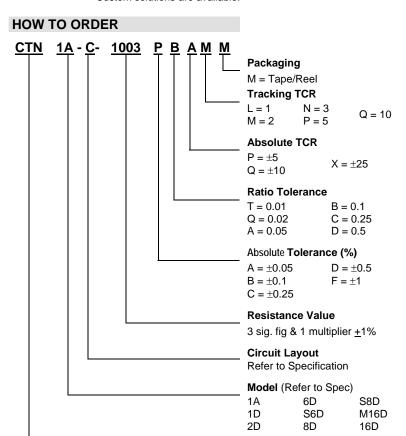


CTN Series – Ultra Precision Resistor Arrays & Networks

The content of this specification may change without notification 12/13/07

Custom solutions are available.

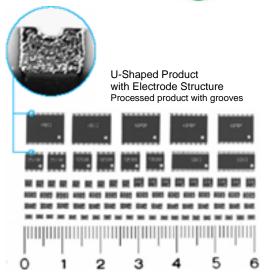




High Precision Resistor Array & Networks

ELECTRICAL CHARACTERISTICS

Model	Total Rated	Resistance Range (Ω) by Circuit Configuration				
Model	Power	В	2B	С		
CTN1A	0.125 W	10 ~ 50K		10.0 ~ 100K		
CTN1D	0.125 W	10 ~ 50K		10.0 ~ 100K		
CTN2D	0.100 W	10 ~ 25K		10.0 ~ 50.0K		
CTN6D	0.250 W		10.0 ~ 100K	10.0 ~ 100K		
CTNS6D	0.150 W		10.0 ~ 10.0K	10.0 ~ 50.0K		
CTN8D	0.500 W			10.0 ~ 200K		
CTN8U	0.500 W			(1.00M ~ Total)		
CTNS8D	0.125 W			10.0 ~ 50.0K		
CTNM16D	1.00 W			2.00M Total		
CTNM16U	1.00 W			2.00M Total		
CTN16D	1.50 W			10.0M Total		
CTN16U	1.50 W			10.0M Total		



FEATURES

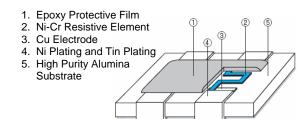
AAC thin film network resistors ensure stable high performance as indicated by the excellent ratio T.C.R as between elements 1pp/°C or less and absolute T.C.R as 5 pp/°C. The absolute tolerance as 0.5%.

- "U-type" electrodes offering excellent durability, ensuring superb durability for soldering flow, re-flow soldering, or dip soldering, and is also very beneficial for the durability of wire bonding
- A perfect solution to replace the network resistor of SOP, SIP or DIP types.
- Lead Free and RoHs Compliant
- Custom designed circuits are available upon special request

APPLICATIONS

- Medical Instrument
- Test Equipment For Semiconductor
- Precision Measuring Equipment
- Electric Components For Automotive

CONSTRUCTION



CIRCUIT LAYOUT

CTN1A, CTN	N1D, CTN2D	CTNS6D, CTN6D		CTNS8D, CTN8D, CTN8U	CTNM16D, CTNM16U, CTN16D, CTN16U		
В	С	2B	С	С	С		
$\begin{array}{c} \overset{4}{\searrow} & \overset{0}{\searrow} & \overset{3}{\swarrow} &$	§4 93 ≹R1 ≹R2	6 R4 5 R3 4 0 W 0 W 0 0 R1 R2 0 1 2 3	$R_1 = R_2 = R_3$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	160 150 140 130 120 110 100 9 0 1 1 1 1 1 1 1 1 1 1 1 1 1		





CTN Series – Ultra Precision Resistor Arrays & Networks

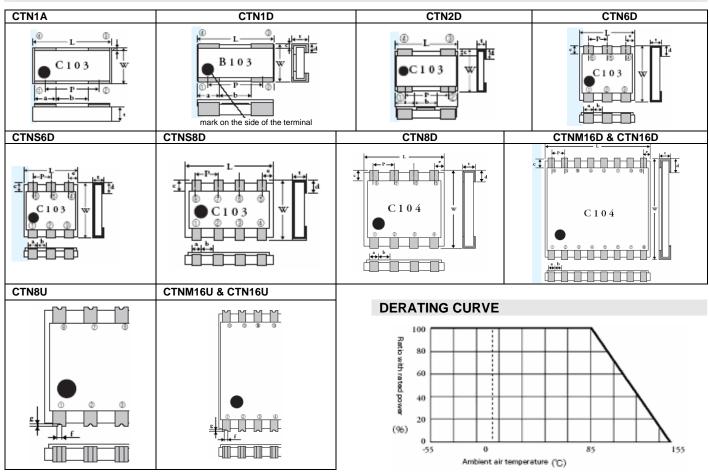
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DIMENSIONS (mm)

Model	L	W	Р	а	b	С	d	е	f	g	t	
CTN1A	3.2 ± 0.2	1.6 ± 0.2	2.0 ± 0.1	1.0 ± 0.1	1.0 ± 0.1	0.15 ± 0.05					0.55 max	
CTN1D	3.2 ± 0.2	1.0 ± 0.2	2.0 ± 0.1	1.0 ± 0.1	1.0 ± 0.1	0.15 ± 0.05	0.4 ± 0.1				U.SS IIIdX	
CTN2D	2.0 ± 0.2	1.25 ± 0.2	1.3 ± 0.2	0.7 ± 0.2	0.6 ± 0.2	0.1 ± 0.05	0.25 ± 0.1				0.55 max	
CTN6D	2.54 ± 0.1	2.54 ± 0.1	0.86 ± 0.1	0.43 ± 0.1	0.43 ± 0.2	0.41 ±0.2	0.5 ± 0.2	0.41 ± 0.1			0.55 max	
CTNS6D	2.0 ± 0.1	2.0 ± 0.1	0.72 ± 0.1	0.36 ± 0.1	0.36 ± 0.1	0.28 ± 0.2	0.4 ± 0.2	0.28 ± 0.1			0.55 max	
CTN8D	F 00 + 0 2	-00 + 0.2	1.27 ± 0.2	0 / 25 + 0 1	0/25:01	0/ + 00	0.8 ± 0.2	0.635±0.1			0.9 max	
CTN8U	5.08 ± 0.2	5.1 ± 0.2	1.21 ± 0.2	0.635±0.1	0.635±0.1	0.6 ± 0.2	0.8 ± 0.2		0.2	0.1		
CTNS8D	3.2 ± 0.2	1.6 ± 0.2	0.8 ± 0.1	0.4 ± 0.1	0.4 ± 0.1	0.3 ± 0.2	0.4 ± 0.2	0.3 ± 0.1			0.55 max	
CTNM16D		5.1 ± 0.2										
CTNM16U	10 16 + 0 2	5.1 ± 0.2	1 27 0 2	0.425+0.1	0.635+0.1	06.00	00.00	0.435+0.1	0.2	0.1	0.9 max	
CTN16D	10.16 ± 0.2	0 1 0 2	1.27 ± 0.2	0.635±0.1	U.030±U.1	0.6 ± 0.2	0.8 ± 0.2	0.635±0.1			U.7 IIIdX	
CTN16U		8 ± 0.2							0.2	0.1		

SCHEMATIC



PERFORMANCE

Item	Test Condition	Specification
Short Time Overload	Application of 2.5 times the rated voltage for 5 seconds	\pm (0.1% + 0.05 Ω)
Heat Resistance During Soldering	Dip in Solder at 260°C ± 5°C for 10 ± 1 seconds	$\pm (0.05\% + 0.05\Omega)$
Temperature Cycles	100 cycles between -55°C ~ +125°C	$\pm (0.1\% + 0.05\Omega)$
Service Life Under Heavy Load	1,000 hours at 85°C, rated voltage with intermittent load	$\pm (0.1\% + 0.05\Omega)$
Longevity Under Heavy Humidity Load	95% RH for 1000 hrs at 40°C, rated voltage with intermittent load	$\pm (0.1\% + 0.05\Omega)$
Absolute Value indicating Secular Change	1 year at ambient temperature, normal humidity without load	±50ppm (within ±50ppm / year)
Relative Value Indicating Secular Change	1 year at ambient temperature, normal humidity without load	±10ppm (within ±10ppm / year)



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