

Specification

Part No.: CTC

◆ Product Features

More efficient thermal management

Low Thermal Resistance

RoHS Compliant

High Thermal Conductivity

Low Capacitance

◆ Product Applications

GaN Power Amplifiers

Filters

Switch Mode Power Supplies

High RF Power Amplifiers

Synthesizers

Pin & Laser Diodes



◆ Functional Applications

Between active device and adjacent ground planes

Contact pad to contact pad

Edges fully metalized

Specific contact pad case

Direct component contact to via pad or trace

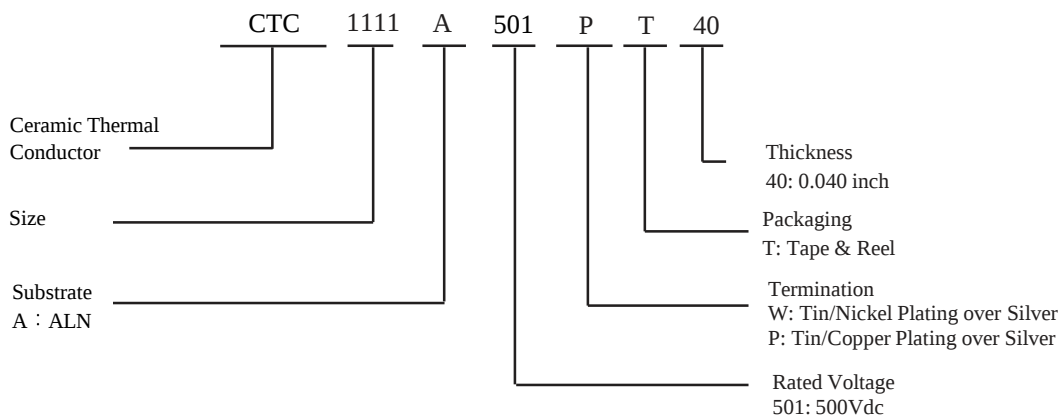
◆ General Description

DLC Bridge Thermal Conductor product is made of Aluminum Nitride (AlN) , sizes are available in EIA form and also can be customized based on requests.

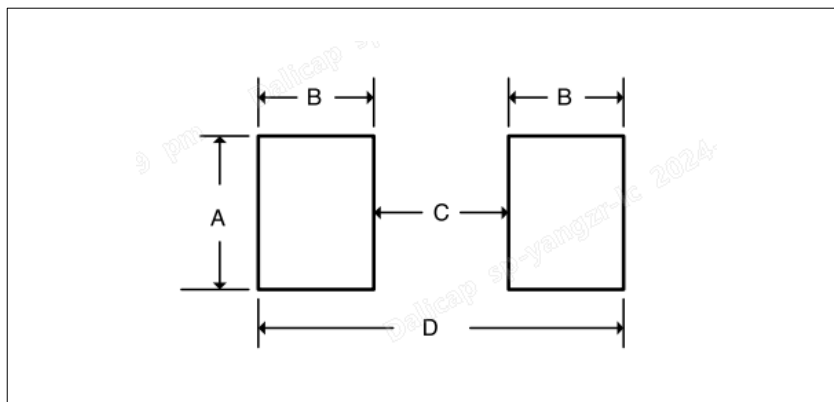
Bridge Thermal Conductor provides a simple thermal management solution in circuit design by conducting heat to a thermal ground plane, heat sink etc., which will lower the temperature in some specific position in order to enhance the reliability of the adjacent components and circuit.

The inherently low capacitance makes this device virtually transparent at RF/microwave application. And it is manufactured with one-piece construction, providing a RoHS compliant SMT package that is fully compatible with high speed automated pick-and-place processing.

◆ Part Numbering



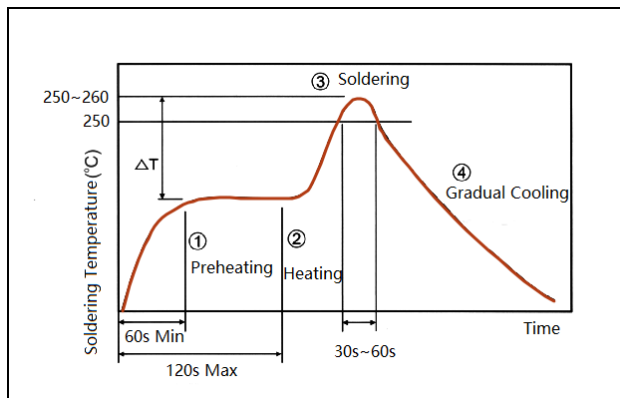
Size	Part Number	Capacitance (pF)	Capacitor Size						Thermal Resistance (°C/W)	Thermal Conductivity (mW/°C)
			Length(LC)	Wide(WC)	Thickness(TC)	Terminal(t)	Voltage Rating(V)	Wide(WC)	ALN	ALN
0505	CTC0505A251WT25	0.07		0.063 ± 0.006 (1.60 ± 0.152)	0.051 ± 0.006 (1.29 ± 0.152)	0.025 (0.64 ± 0.05)	0.015 (0.38) max	250	10	100
0603	CTC0603A251WT25	0.035		0.064 ± 0.006 (1.63 ± 0.152)	0.033 ± 0.006 (0.85 ± 0.152)	0.025 (0.64 ± 0.05)	0.015 (0.38) max	250	20	50
0805	CTC0805A251WT40	0.081		0.080 ± 0.008 (2.03 ± 0.203)	0.050 ± 0.008 (1.27 ± 0.203)	0.04 (1.02 ± 0.05)	0.02 (0.51) max	250	10	100
1005	CTC1005A501WT40	0.046		0.100 ± 0.008 (2.54 ± 0.203)	0.050 ± 0.008 (1.27 ± 0.203)	0.04 (1.02 ± 0.05)	0.02 (0.51) max	500	13	77
1111	CTC1111A501WT40	0.096		0.110 ± 0.008 (2.79 ± 0.203)	0.110 ± 0.008 (2.79 ± 0.203)	0.04 (1.02 ± 0.05)	0.03 (0.92 ± 0.05) max	500	7	153
2010	CTC2010A202WT60	0.070		0.195 ± 0.010 (4.95 ± 0.254)	0.095 ± 0.010 (2.41 ± 0.254)	0.06 (1.52 ± 0.05)	0.03 (0.77) max	2000	10	100
2525	CTC2525A302WT60	0.156		0.240 ± 0.010 (6.10 ± 0.254)	0.250 ± 0.010 (6.35 ± 0.254)	0.06 (1.52 ± 0.05)	0.04 (1.02) max	3000	4	240
3725	CTC3725A402WT60	0.105		0.370 ± 0.010 (9.40 ± 0.254)	0.245 ± 0.010 (6.22 ± 0.254)	0.06 (1.52 ± 0.05)	0.05 (1.27) max	4000	6	160
3737	CTC3737A402WT60	0.164		0.365 ± 0.010 (9.27 ± 0.254)	0.375 ± 0.010 (9.53 ± 0.254)	0.06 (1.52 ± 0.05)	0.05 (1.27) max	4000	4	240
6725	CTC6725A502WT60	0.058		0.670 ± 0.010 (17.00 ± 0.254)	0.250 ± 0.010 (6.35 ± 0.254)	0.06 (1.52 ± 0.05)	0.05 (1.27) max	5000	10.7	93



Inches (mm)

Case Size	A Min.	B Min.	C Min.	D Min.
0505	0.0512 (1.30)	0.0275 (0.70)	0.02 (0.50)	0.075 (1.90)
0603	0.0315 (0.80)	0.0275 (0.70)	0.0275 (0.70)	0.0825 (2.1)
0805	0.0512 (1.30)	0.039 (1.00)	0.039 (1.00)	0.118 (3.00)
1005	0.0512 (1.30)	0.039 (1.00)	0.059 (1.50)	0.138 (3.50)
1111	0.118 (3.00)	0.039 (1.00)	0.063 (1.60)	0.142 (3.60)
2010	0.118 (3.00)	0.059 (1.50)	0.126 (3.20)	0.244 (6.20)
2525	0.252 (6.40)	0.079 (2.00)	0.15 (3.81)	0.3075 (7.81)
3725	0.252 (6.40)	0.1 (2.54)	0.266 (6.75)	0.466 (11.83)
3737	0.386 (9.80)	0.1 (2.54)	0.266 (6.75)	0.466 (11.83)
6725	0.252 (6.40)	0.1 (2.54)	0.472 (12.00)	0.787 (20.00)

◆ Recommended soldering conditions



$\Delta T \leq 190^{\circ}\text{C}$;

Maximum temperature: $255^{\circ}\text{C} \pm 5^{\circ}\text{C}$;

Heating rate: $\leq 4^{\circ}\text{C/s}$.