



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# ATC Q-BRIDGE THERMAL CONDUCTOR

## ATC Q-Bridge Thermal Conductor

ATC's new Q-Bridge Thermal Conductor is manufactured with the highest quality materials for reliable and repeatable performance providing a cost effective thermal management solution. These devices are constructed with Aluminum Nitride (AlN) or Beryllium Oxide (BeO) and are available in standard EIA form factors.

Q-Bridge provides the designer with the ability to manage thermal conditions by directing heat to a thermal ground plane, heat sink or any other specific thermal point of interest. The inherently low capacitance makes this device virtually transparent at RF / microwave frequencies. This device has the added benefit of offering additional layers of protection to adjacent components from hot spot thermal loads.

Q-Bridge provides the benefit of increased overall circuit reliability. ATC's Q-Bridge is manufactured using one-piece construction, providing a RoHS compliant SMT package that is fully compatible with high speed automated pick-and-place processing. It is available in 0302, 0402, 0603 and 0805 EIA case sizes. Custom configurations are also available.

### Features:

- High Thermal Conductivity
- Low Thermal Resistance
- Low Capacitance
- Increases Circuit Reliability
- RoHS Compliant
- More efficient thermal management



### Applications:

- GaN Power Amplifiers
- High RF Power Amplifiers
- Filters
- Synthesizers
- Industrial Computers
- Switch Mode Power Supplies
- Pin & Laser Diodes

### Functional Applications:

- Between active device and adjacent ground planes
- Specific contact pad to case
- Contact pad to contact pad
- Direct component contact to via pad or trace
- Edges fully metalized

### Termination Materials\*

ATC Termination Code	Termination Materials
CA	Gold over Non-Magnetic Barrier Termination
G	Gold over Magnetic Barrier Termination

\*Consult factory for other termination options, e.g., tin plate and solder plate.



AMERICAN TECHNICAL CERAMICS

ATC // AVX Thin Film Technologies

tfsales@atceramics.com

ATC North America

sales@atceramics.com

THE ENGINEERS' CHOICE®

www.atceramics.com



ISO 9001 REGISTERED COMPANY

ATC # 001-1143  
Rev. F, 2/16

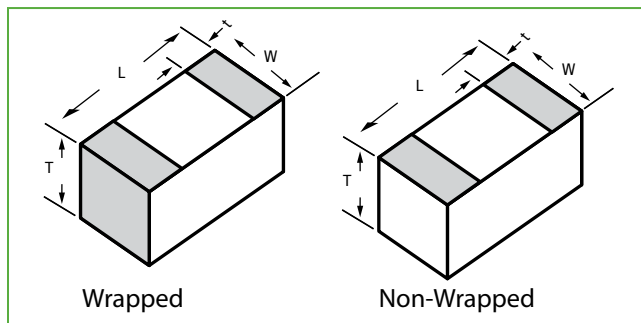
# ATC Q-BRIDGE THERMAL CONDUCTOR

## Dimensions

Size (EIA)	Length (L)	Width (W)	Standard Thickness (T, mils)		Termination (t)
			T1	T2	
0302	0.030 ± .002 (.77 ± .051)	0.020 ± .002 (0.51 ± 0.051)	20	15	0.010 ± .002 (0.25 ± 0.051)
0402	0.040 ± .002 (1.02 ± 0.051)	0.020 ± .002 (0.51 ± 0.051)	20	15	0.010 ± .002 (0.25 ± 0.051)
0603	0.060 ± .002 (1.52 ± 0.051)	0.030 ± .002 (0.76 ± 0.051)	25	20	0.015 ± .002 (0.38 ± 0.051)
0805	0.080 ± .002 (2.03 ± 0.051)	0.050 ± .002 (1.27 ± 0.051)	40	25	0.020 ± .002 (0.51 ± 0.051)

inches (mm)

## Mechanical Configurations



## Typical Characteristics

AIN Case Size	Thermal Resistance (°C/W)		Thermal Conductivity (mW/°C)		Capacitance Value (pF)*	
	Thickness T1	Thickness T2	Thickness T1	Thickness T2	Thickness T1	Thickness T2
0302	19	24	53	41	.08	.07
0402	25	32	40	30	.06	.05
0603	20	25	50	40	.08	.06
0805	10	16	100	60	.13	.08
BeO Case Size	Thermal Resistance (°C/W)		Thermal Conductivity (mW/°C)		Capacitance Value (pF)*	
	Thickness T1	Thickness T2	Thickness T1	Thickness T2	Thickness T1	Thickness T2
0302	12	15	81	63	.07	.06
0402	16	21	61	46	.05	.04
0603	13	16	76	61	.06	.05
0805	7	11	153	92	.10	.07

Note: Thermal conductivity is normalized to chip size. All values are approximate. Consult factory for extended thermal conductivity options.

\*Applies to wrapped versions only. Non-wrapped versions have lower capacitance.

## ATC Part Number Code

	<b>QB</b>	<b>0603</b>	<b>A</b>	<b>25</b>	<b>W</b>	<b>G</b>	<b>T</b>	
Q-Bridge	—	—	—	—	—	—	—	Packaging T = Tape and Reel, std. 1000 pc., 7" Reel 500 pc., 7" Reel C = ATC Matrix Tray  Termination CA = Gold over Non-Magnetic Barrier Termination G = Gold over Magnetic Termination  Style: W = Edge Wrap; E = No Wrap
Case Size	—	—	—	—	—	—	—	
Substrate A = AlN; B = BeO	—	—	—	—	—	—	—	
Thickness (mils)	—	—	—	—	—	—	—	

The above part number refers to a Q-Bridge, (EIA case size 0603), Aluminum Nitride (AlN) substrate, Thickness 25 mils, Style W, G Termination (Gold over Magnetic Termination), with Tape and Reel Packaging.

ATC accepts orders for our parts using designations *with* or *without* the "ATC" prefix. Both methods of defining the part number are equivalent, i.e., part numbers referenced with the "ATC" prefix are interchangeable to parts referenced without the "ATC" prefix. Customers are free to use either in specifying or procuring parts from American Technical Ceramics.

For additional information and catalogs contact your ATC representative or call direct at +1-631-622-4700.

Consult factory for additional performance data.

Sales of ATC products are subject to the terms and conditions contained in American Technical Ceramics Corp. Terms and Conditions of Sale (ATC document #001-992). Copies of these terms and conditions will be provided upon request. They may also be viewed on ATC's website at [www.atceramics.com/productfinder/default.asp](http://www.atceramics.com/productfinder/default.asp). Click on the link for Terms and Conditions of Sale.

ATC has made every effort to have this information as accurate as possible. However, no responsibility is assumed by ATC for its use, nor for any infringements of rights of third parties which may result from its use. ATC reserves the right to revise the content or modify its product line without prior notice.

© 2015 American Technical Ceramics Corp. All Rights Reserved.

ATC # 001-1143, Rev. F, 2/16



**AMERICAN TECHNICAL CERAMICS**

ATC // AVX Thin Film Technologies

ATC North America

[tfsales@atceramics.com](mailto:tfsales@atceramics.com)

[sales@atceramics.com](mailto:sales@atceramics.com)

**THE ENGINEERS' CHOICE®**

**www.atceramics.com**

