



Your Solution Provider for...  
Transformers and Magnetics

 **BETA  
TRANSFORMER  
TECHNOLOGY  
CORPORATION**  
A subsidiary of Data Device Corporation

# Beta Transformer

## Supplier of Military/Aerospace Magnetics for Over 35 Years

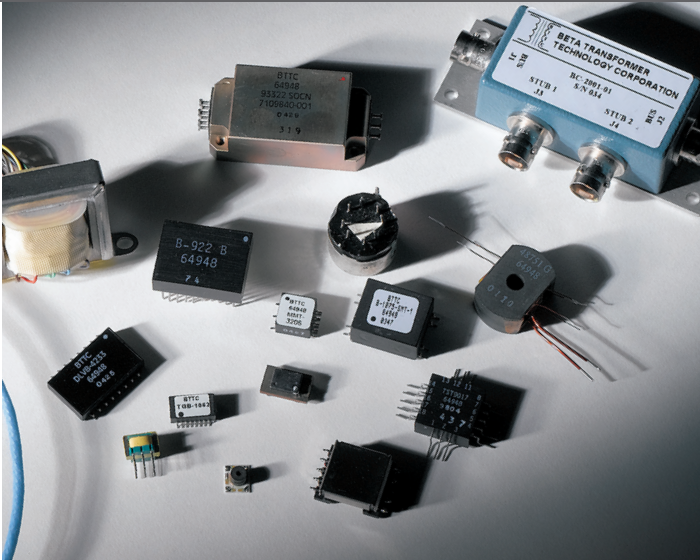
### Company Profile

Founded in 1979, Beta Transformer Technology Corporation (BTTC) has long stood as the leader in state-of-the-art, standard, custom, military, space-level, and industrial magnetics. Beta's high speed Fiber Channel and Gigabit Ethernet data bus magnetics, precision Scott-T transformers, MIL-PRF-27 reference and power transformers, and MIL-PRF-21038 miniature low-power pulse transformers, represent the culmination of over three decades of technological innovation and product enhancement.

BTTC's parent company, DDC, is a world leader in the design and manufacture of high-reliability Connectivity, Power and Control solutions (Data Networking; Power Distribution, Control and Conversion; Motor Control and Motion Feedback) for aerospace, defense, and industrial applications. With awards for quality, delivery, and support, DDC has served these industries as a trusted resource for more than 50 years... providing proven solutions that are optimized for efficiency, reliability, and performance. Data Device Corporation brands include DDC, Beta Transformer Technology Corporation, National Hybrid Inc., Pascall Electronics Ltd., and XCEL Power Systems Ltd. DDC is headquartered in Bohemia, NY and has manufacturing operations in New York, California, Mexico, and the United Kingdom.

### Custom Capabilities

Beta offers a broad line of magnetic components, MIL-STD-1553 pulse transformers and couplers, Ethernet and Fiber Channel transformers, Switch Mode magnetics, Scott-T transformers, power transformers and inductors.



### Applications

Beta's magnetic solutions are designed into a host of military and commercial applications including F-35, F-22 and F-18 fighters, C-17 transport, M1A2 tank, and Boeing's 747, 757, 777 and 787 aircraft. As testament to the extreme reliability of our products, Beta's epoxy-cased and hermetically sealed, pulse transformers are qualified and used in the International Space Station.

### Manufacturing Facilities

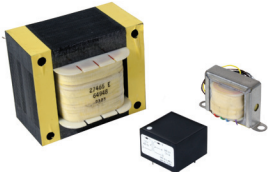
Located in Bohemia, New York, Beta's modern 15,000 square foot, AS9100 and ISO 9001 registered manufacturing plant offers high quality magnetics design and manufacturing. Beta's state of the art and diverse manufacturing capabilities are enhanced by a highly trained, quality driven staff, employing statistical process quality control and continual process improvement. For high volume magnetics requiring globally competitive pricing, utilizes its AS9100 certified facility in Ensenada, Mexico





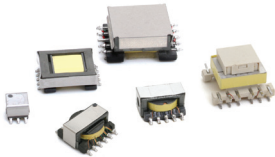
# Power

## Power Transformers



Beta specializes in providing power magnetics for high-reliability aerospace applications in accordance with MIL-PRF-27. Power capabilities range from 1 to 200 VA at 50/60 Hz and from 1 to 700 VA at 360/400 Hz. Beta's Design Engineers ensure that EMI/RFI isolation, input/output voltages, and package type are optimized for superior performance and reliability. Beta's power transformers are available in a variety of package configurations including: open frame, potted, pc-board mount and chassis mount.

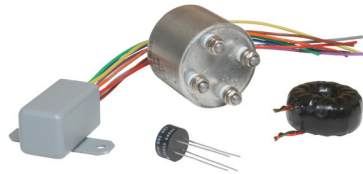
## Switch Mode Transformers



Beta offers custom switch mode transformers in flyback, forward, push-pull, and full bridge topologies. Beta uses unique winding technologies to minimize parasitic losses.

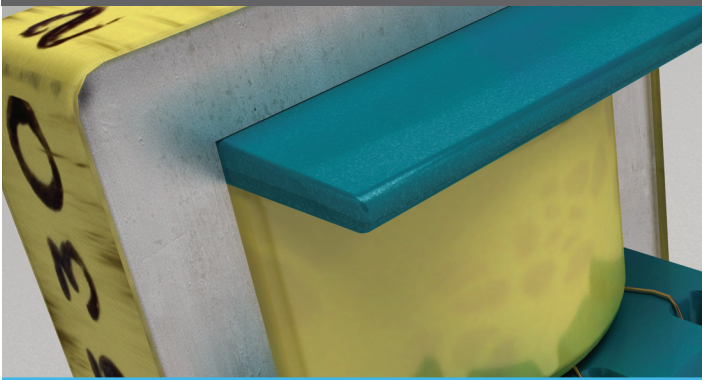


## Inductors



Beta utilizes cutting-edge materials to produce a wide variety of inductors that require minimal board space while providing optimal performance. Applications include EMI filtering and output inductors for switch-mode power supplies.

# Synchro/Resolver



Applications:

- Power or Signal Transformers
- Open Frame or Encapsulated
- Wide Temperature Range
- Size and Performance Tailored
- Military, Commercial and Space Level

Beta's Synchro/Resolver transformers are built to MIL-PRF-27, MIL-STD-202, and MIL-STD-2000 specifications. This line includes input, output, Scott-T's, and reference transformers to compliment Data Device Corporation's (DDC's) Synchro converters.

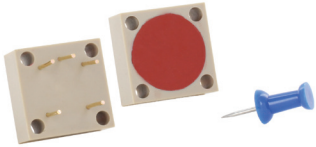
## Scott-T's & Reference Transformers



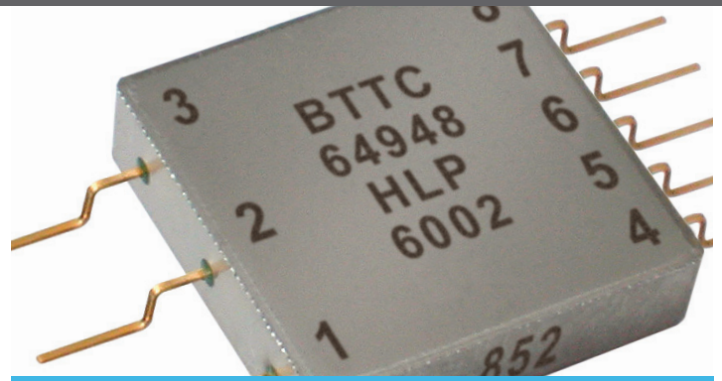
Beta's Scott-T transformers, with wire windings from 15 to 51 AWG, ensure highly accurate and reliable Synchro/Resolver data transmission. The cores used in Beta Scott-T's are carefully screened to provide accurate sine and cosine angle signal transfer. Electrostatic isolation from unit to unit is optimized and the leakage reactances are kept to a well-balanced minimum to maintain high accuracy under various loads and environmental conditions. Beta's Scott-T's offer high linearity and achieve accuracies of better than 20 arc seconds. Shielding can also be added, if required, to maintain high accuracy in extreme environments.

# High Reliability

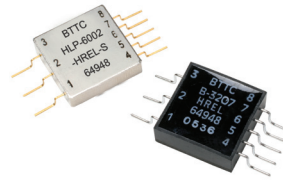
## Oil & Gas Exploration: Downhole Transformers



These transformers are used in oil and gas exploration equipment. They operate in temperatures as high as 250°C without damage. Applications include downhole sensor arrays, power conversion, and communication applications. Beta specializes in designing custom transformers to meet unique size constraints, functionality, and performance requirements.



## Transformers for Space Flight



To fulfill the extreme requirements of space applications, Beta designs and manufactures transformers to MIL-STD-981. In addition, Beta's LPP-HREL specification details the screening of MIL-STD-1553 terminal interface transformers for High Reliability Space Applications, providing guidelines for up-screening of components to a level of quality and process control beyond that obtained by MIL-PRF-21038 "T-Level" devices.



# Custom Designed Magnetics

## Custom Designs



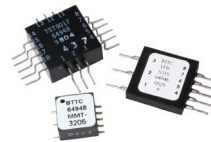
Beta provides custom configured transformers for nonstandard electrical and mechanical requirements. This advanced level of customization enables our design engineers to optimize individual parameters, such as EMI/RFI isolation and signal conditioning, for customer specific applications, yielding ideal form-fit solutions.

Beta's wide range of packaging configurations encompasses arrangements from open-frame, varnished units to hermetically sealed packages with demanding physical restraints. Beta offers many operating frequencies: 50/60Hz, 400Hz, 100kHz, and other; and power ranges to 10kVA.

Applications:

- Pulse, Power or Signal Transformers
- Open Frame or Encapsulated
- Wide Temperature Range
- Size and Performance Tailored
- Military, Commercial and Space Level

## Surface Mount Technology (SMT)



To facilitate automated manufacturing and minimum profile requirements, many of Beta's transformers are available in Surface Mount configurations, along with tape and reel packaging. These Surface Mount transformers, utilizing precision manufacturing and packaging processes, enable customers to optimize a project's cost and space effectiveness.

In addition to manufacturing Surface Mount transformers, we also offer customers the option of having Beta attach these SMT transformers, along with other surface mount components, to a customer-provided board. Component assemblies with pitches as small as .015" centers are achieved utilizing stencil printers, automated surface mount assemblers, and IR/convection reflow.



**The first choice for more than 35 years—Beta**

Beta is the world leader in state-of-the-art standard, custom, military, space-level, and industrial magnetics, representing the culmination of over three decades of technological innovation and product enhancement.

**Inside the U.S. - Call Toll-Free 1-800-DDC-5757**



**DDC Headquarters and Main Plant**  
 105 Wilbur Place, Bohemia, NY 11716-2426  
 Tel: (631) 567-5600 Fax: (631) 567-7358  
 Toll-Free, Customer Service: 1-800-DDC-5757  
[www.ddc-web.com](http://www.ddc-web.com)



**Beta Transformer Technology Corporation**  
 40 Ovrille Drive, Bohemia, NY 11716-2426  
 Tel: (631) 244-7393 Fax: (631) 224-8893  
[www.BTTC-Beta.com](http://www.BTTC-Beta.com)



**Outside the U.S. - Call 1-631-567-5600**

**United Kingdom: DDC Electronics, Ltd.**  
 Westbridge Business Park, Cothey Way, Ryde,  
 Isle of Wight PO33 1QT, England  
 Tel: +44 1635 811140

**France: DDC Electronique**  
 10 Rue Carle-Herbert  
 92400 Courbevoie France  
 Tel: +33-1-41-16-3424

**Germany: DDC Elektronik GmbH**  
 Triebstrasse 3, D-80993 München, Germany  
 Tel: +49 (0) 89-15 00 12-11

**Japan: DDC Electronics K.K.**  
 Suidobashi Sotobori-dori Bldg, 8F, 1-5, Koraku 1-chome,  
 Bunkyo-ku, Tokyo 112-0004, Japan  
 Tel: 81-3-3814-7688  
 Web site: [www.ddcjapan.co.jp](http://www.ddcjapan.co.jp)

**Asia: DDC - RO Registered in Singapore**  
 Blk-327 Hougang Ave 5 #05-164  
 Singapore 530327  
 Tel: +65 6489 4801

**India: DDC Electronics Private Limited**  
 C-31, C/O Quest Offices Pvt. Ltd.  
 10th Floor, Raheja Towers  
 M.G Road, Bangalore 560001, India  
 Tel: +91 080 301 10 200