



Beta Transformer Technology

February 2023



Your Solution Provider for... Connectivity, Power, and Control

Beta Overview



Bohemia, New York
(18,000 ft²)

Division HQ
Engineering Development
High Mix/Low Volume
Manufacturing Operations
AS9100 Certified
Space Production Operations
J-STD-001S Certified



Matamoros, Mexico
(10,000 ft²)

Production Operations
Production Engineering
Medium Volume / Mix
AS9100 Certified
ITAR-MLA
J-STD-001



Ensenada, Mexico
(18,000 ft²)

Production Operations
Production Engineering
High Volume/Low Mix
AS9100 Certified
ITAR-MLA
J-STD-001

Beta Product Lines



Interface Magnetics

MIL-STD-1553 Transformers
Active Transformers
Ethernet Transformers



Interconnect Products

Databus Coupler
Harness Assemblies
Box Couplers
Hand-Held Testers



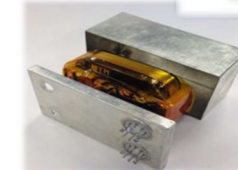
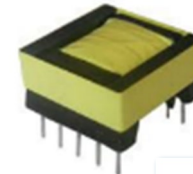
Wideband Magnetics

Balun Transformers
Impedance Adaptors
Isolation Transformers
Instrumentation Adaptors



Power Magnetics

Current Sense Transformers
Power Inductors
Common Mode Chokes
Gate Drive Transformers



Interface Products

■ High Speed Interface Transformers

- Data rates up to 3.2Gb/s
- Fibre Channel up to 2.125Gb/s
- SMPTE Video up to 1.485 Gb/s
- Ethernet

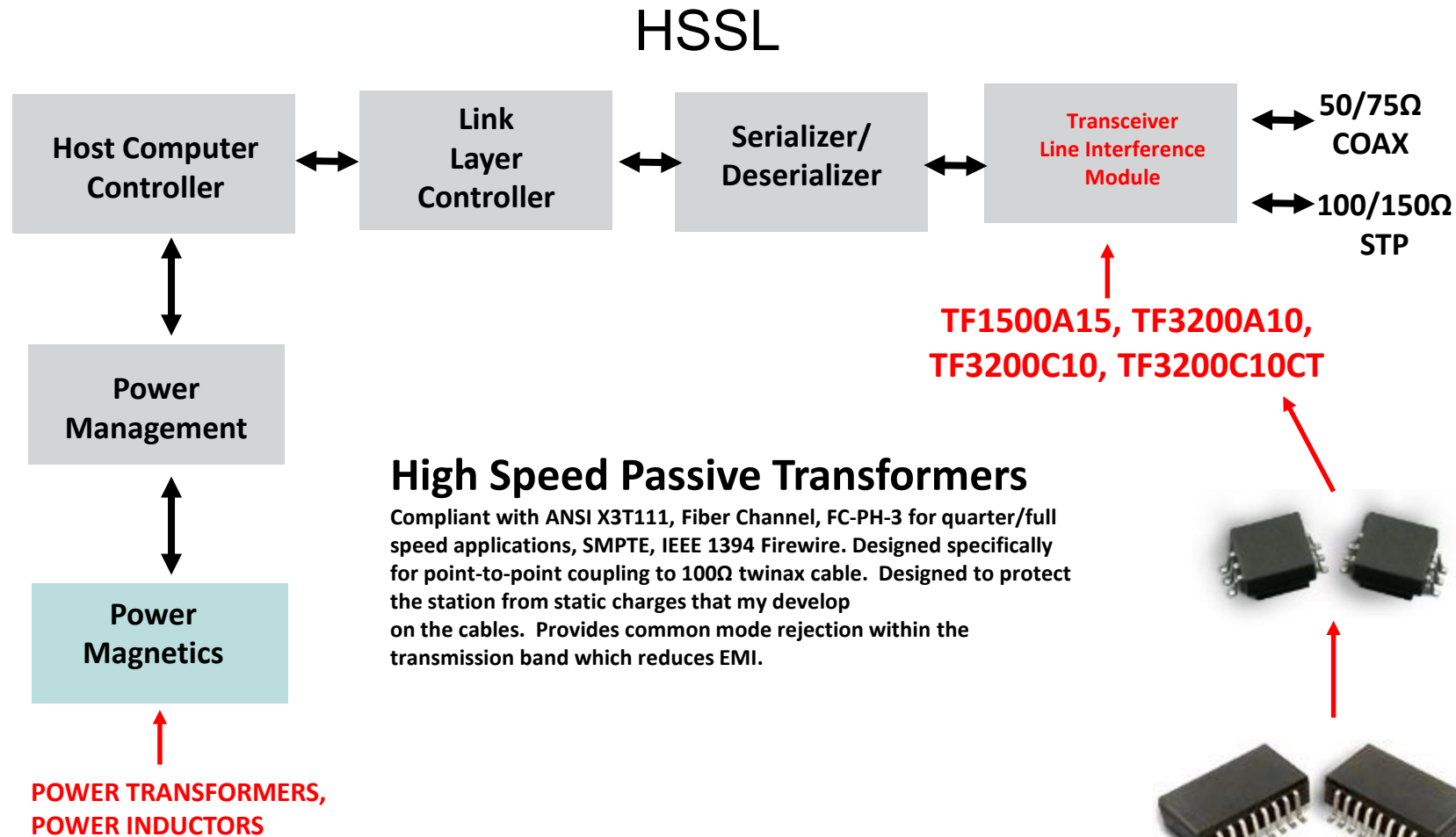
■ Part Families

- TGB-XXXX
- TF3200XX
- TR500A10
- GEM-1101
- GES-1001



Beta Transformer

Interface Products

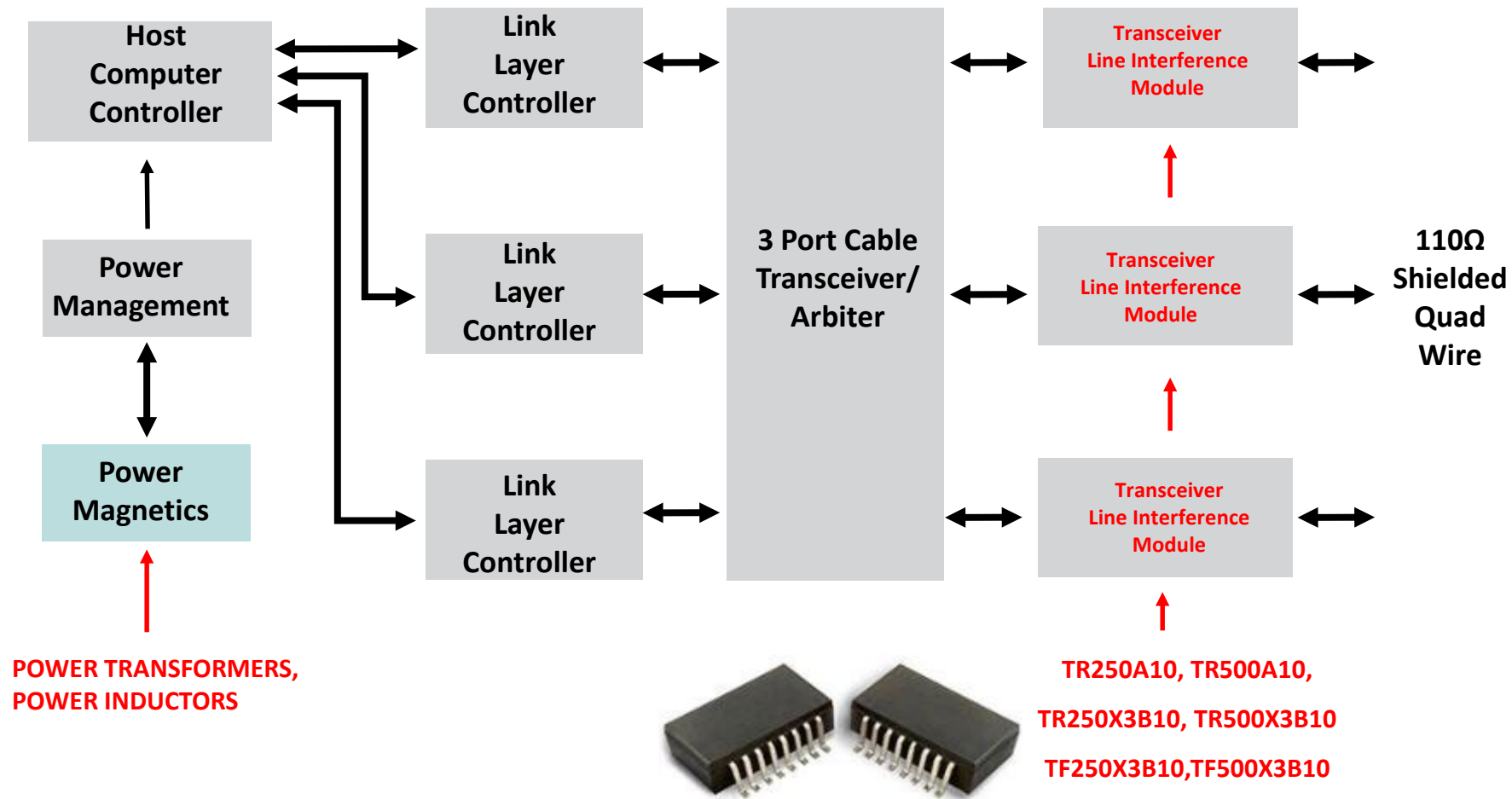


Beta Transformer

Interface Products



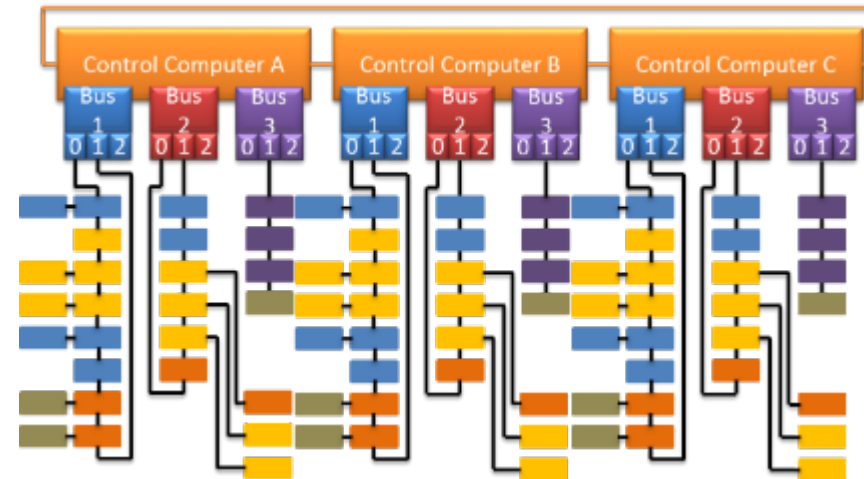
AS5643 (Firewire 1394b, S100 β / S200 β / S400 β data rates)



Interface Products - Firewire

■ Active Transceivers

- Single Channel
- Triple Channel
- S100, S200, S400



Interconnect Products

- **Databus Couplers**
 - Single Stub / Multi-Stub
 - Mux Couplers
 - In-line
 - Connectorized
 - Space Rated



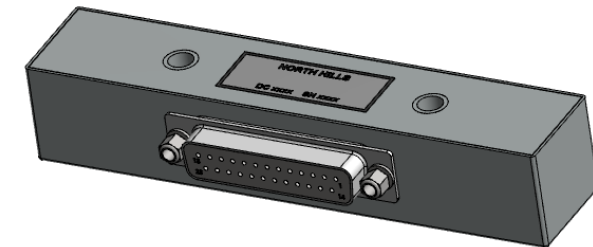
Beta Transformer

Interconnect Products



■ Designed and qualified box and in-line couplers for use on the following platforms and customers :

- F-35
- F-18
- F-16
- KF-21
- Eurofighter
- Apache Helicopter
- Predator
- Abrams
- Stryker
- RiWP
- MLRS / HIMARS
- Atlas
- N-SAT-110
- GPS III
- ISS
- GOES
- Titan
- Atlas
- N-SAT-110

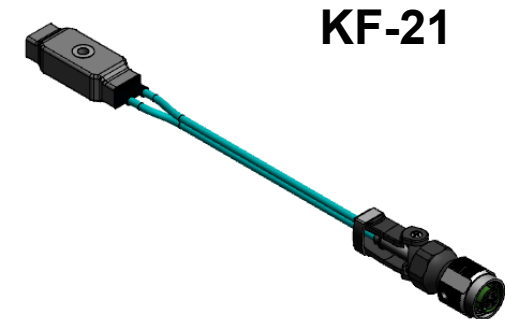


Magnetics

Interconnect Products



- Custom designs and harness integrations
- Single coupler with bus / subs terminated with connectors
- Multiple couplers harnessed together
- Multiple couplers harnessed together terminated with connectors.
 - Satellite and other space programs
 - Aircraft and ground vehicle programs
 - Bradley
 - M270
 - KF-21



Satellite



Interconnect Products

- **Databus Testers**
 - Test open/shorts
 - Crossovers
 - Short to Shield
 - Insertion loss / Return loss
- **DBT100A**
- **DBT200**
- **DBT300**



Interconnect Products

■ Databus Accessories

- Cable Assemblies
- Terminators
- Hookup wires
- Dust Caps
- Relays

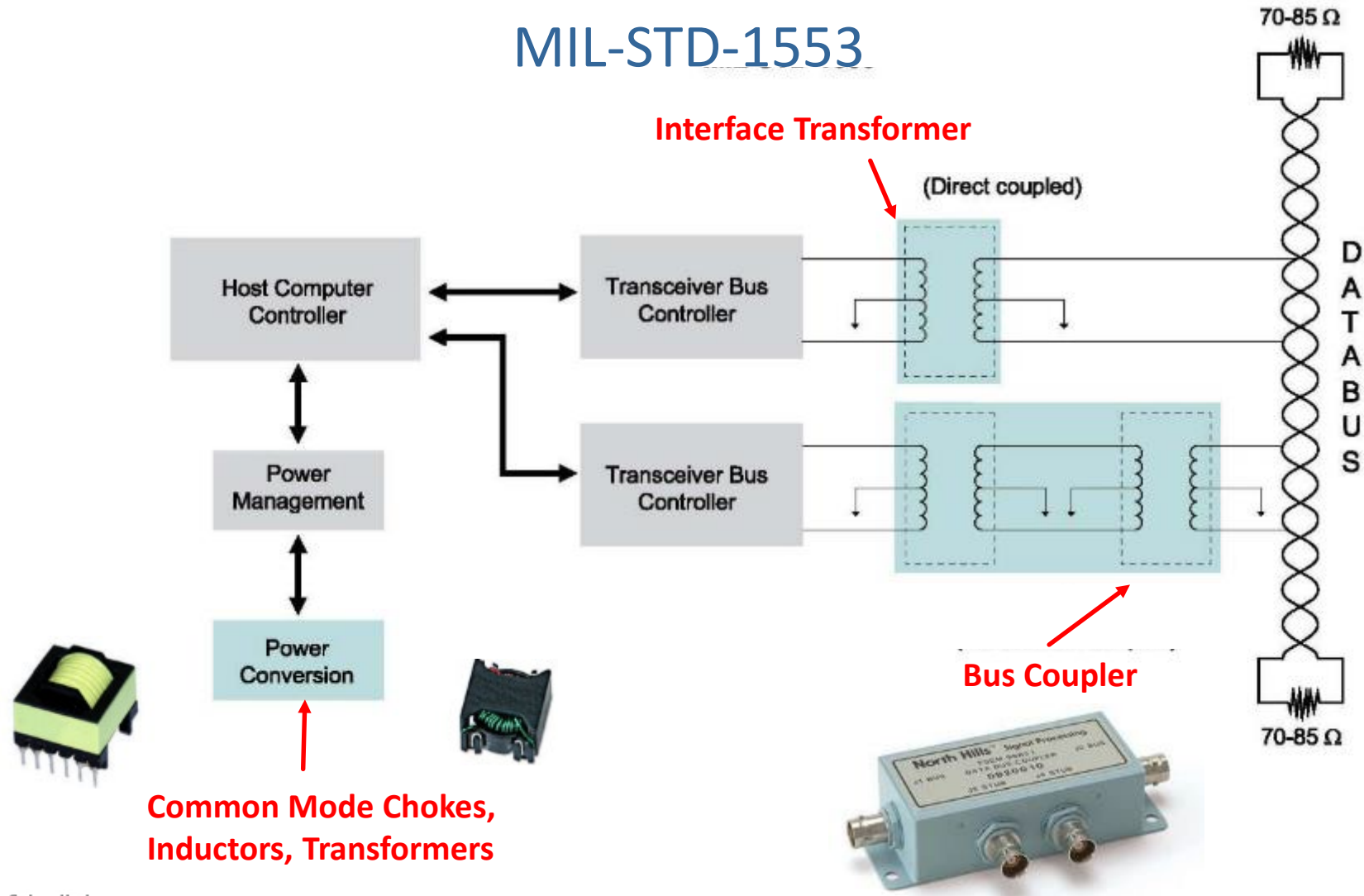


Beta Transformer

Interface Products



MIL-STD-1553



Company Confidential

■ MIL-STD-1553 Interface Transformers

- MIL-PRF-21038/27-(1 thru 31), QPL listed series
- MLP-2xxx series, smallest SMT single
- MLP-3xxx series, smallest Thru-hole single
- DSS-3xxx series, small, low-profile SMT dual
- TSM-2xxx series, smallest SMT dual
- TST-9xxx series, smallest Thru-hole dual
- DSS-2xxx series, lowest profile dual
- HLP-6xxx series, hermetically sealed single
- DHP-1xxx series, hermetically sealed dual



Wideband Products

- **High Speed Baluns**
 - SMPTE Video
 - Single / Dual Channel
 - Ground Isolated
 - Flange Mount
 - Surface mount
 - Miniaturized

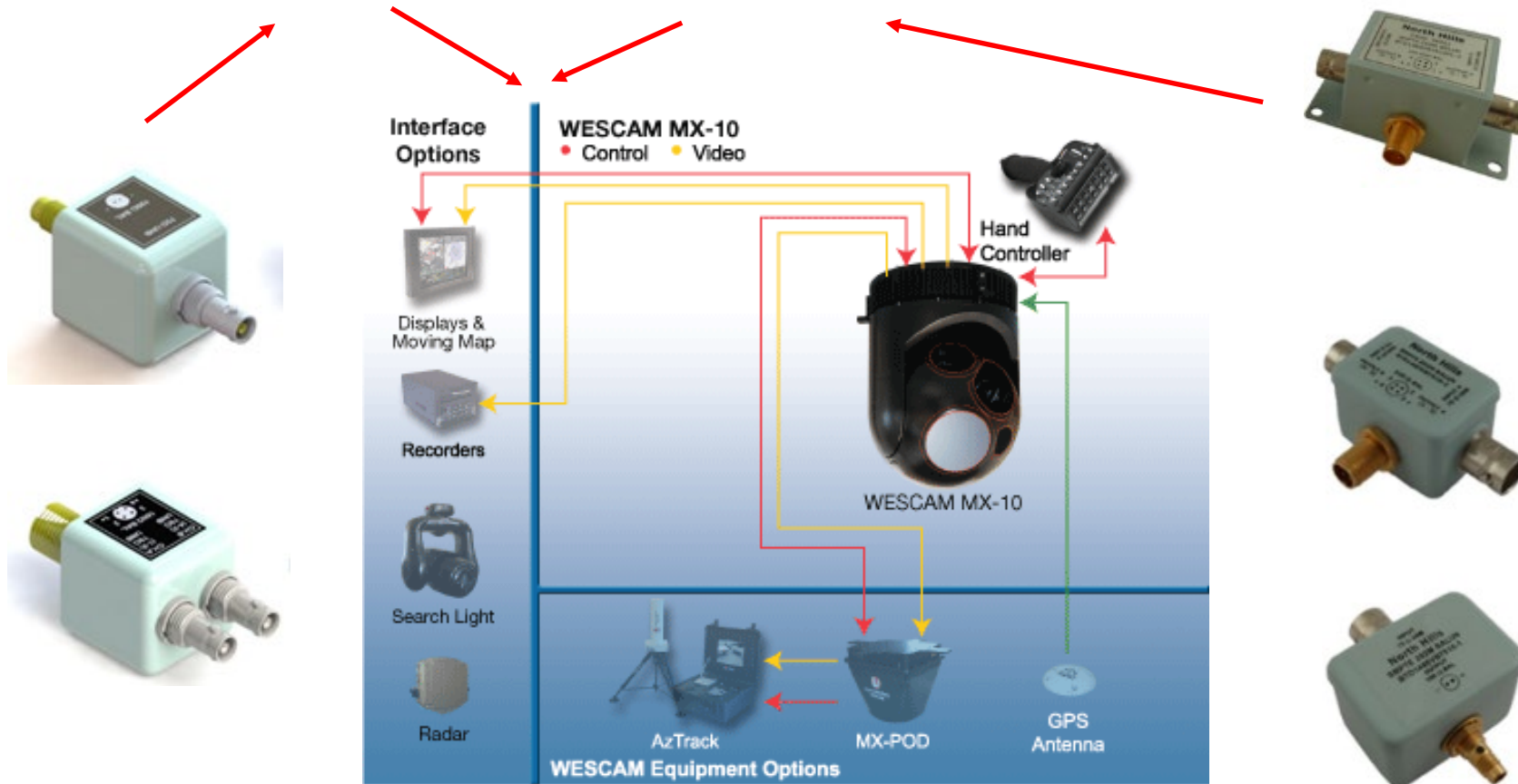


Beta Transformer

Wideband Products



BTDM1485VB7510-XX, BTD1485VB7510-XX



Transforms 100 Ω balanced differential signal to 75 Ω , grounded unbalanced signal.

■ Power Transformers

- Full Range of Custom Power Magnetics
- Capabilities Up to 10KVA, 100A, 2000V
- Frequencies Up to 3MHz
- Switch Mode
- Pulse
- Single Phase
- Three Phase
- Fly-back



■ Chokes

- Common Mode, Differential, Snubber

■ Reactors

■ Inductors

■ Couplers

■ Scott-T Transformers

■ Signal Transformers

- Transmission frequencies Up to 3 GHz



- **MIL-PRF-27 Transformers**

- **MPT Series, MIL-PRF-27/39,40,41,42-(1 thru 42), QPL listed series**

- 400 Hz, 2 VA to 9 VA, Thru-hole power transformers
 - 115 Vrms or 26 Vrms input voltage options
 - 6 Vrms to 240 Vrms output voltage options



- **Custom MIL-PRF-27 parts**

- Beta has been making custom M27 parts since 1980.

- **Scott-T and Reference Transformers**

- Built and designed to meet the requirements of MIL-PRF-27 Grade 5 (potted), Class S (130°C)

- **Switchmode Transformers**

- Built and designed to meet the requirements of MIL-PRF-27 Grade 6 (open), Class S (130°C)



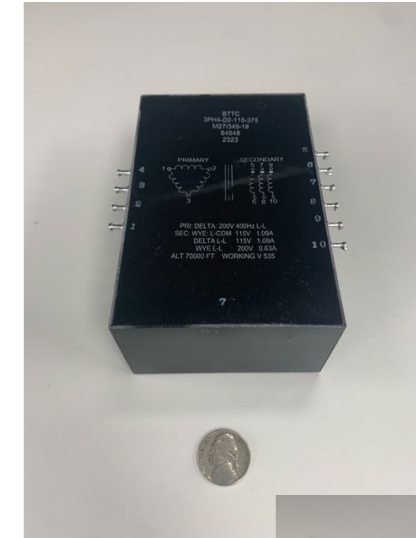
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Power Products



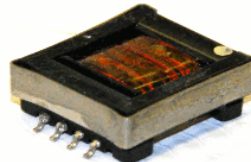
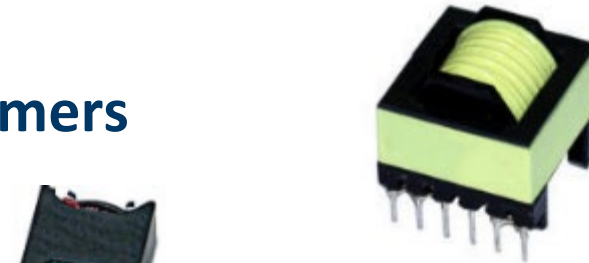
- Power Supply Magnetics Design Expertise

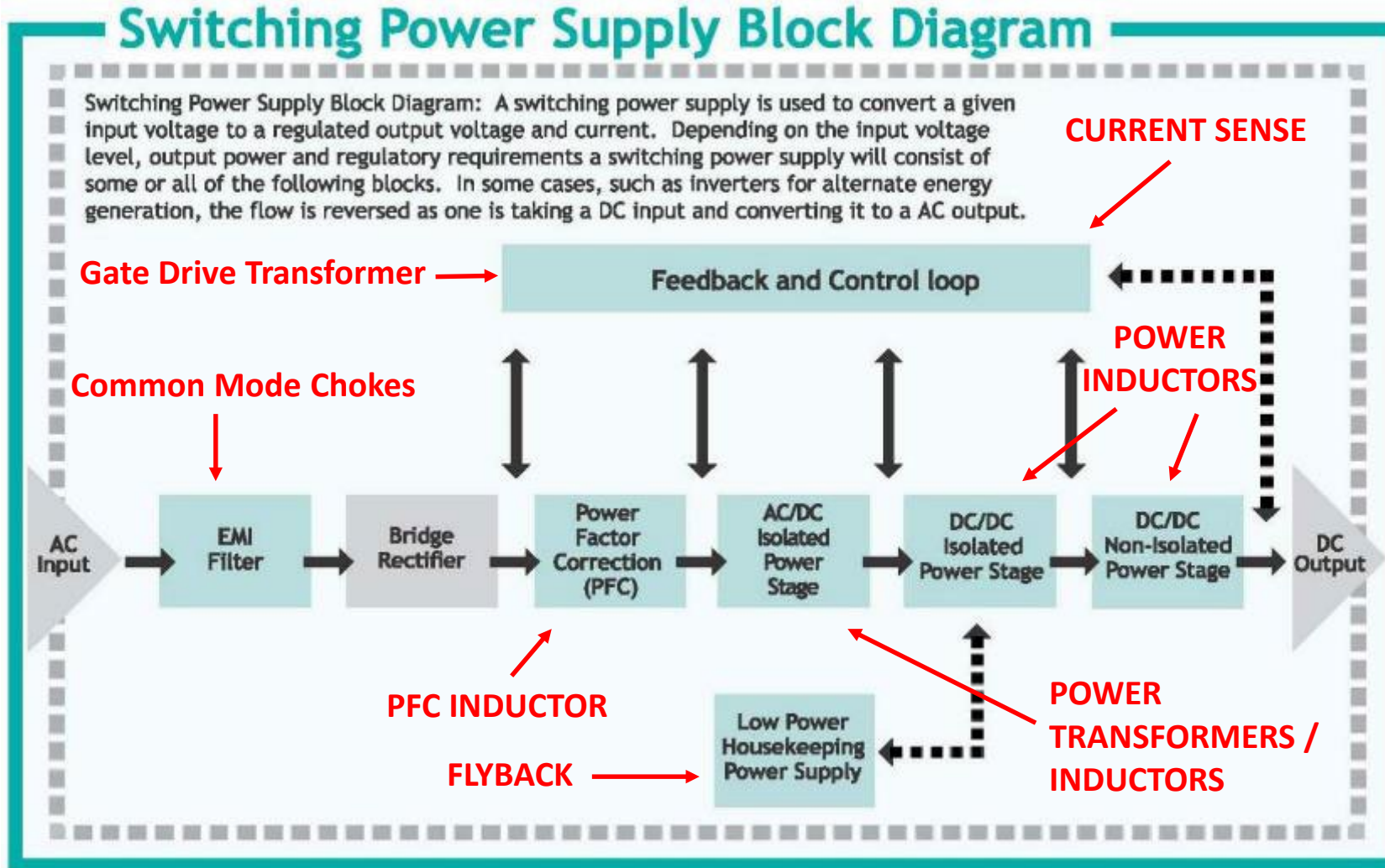
- Linear (50/60/400hz)
- Switchmode (25-500KHz) Power Transformers
- Signal Transformers
- Current Transformers
- Inductors (Buck, Boost)



Power Products

- **Board mounted inductors / transformers**
 - Surface mount / THT
 - Chokes
 - Common Mode / Differential Mode
 - Inductors
 - Input / Output Filters
- **Single / Three-Phase Current Transformers**
 - With / without burden resistance





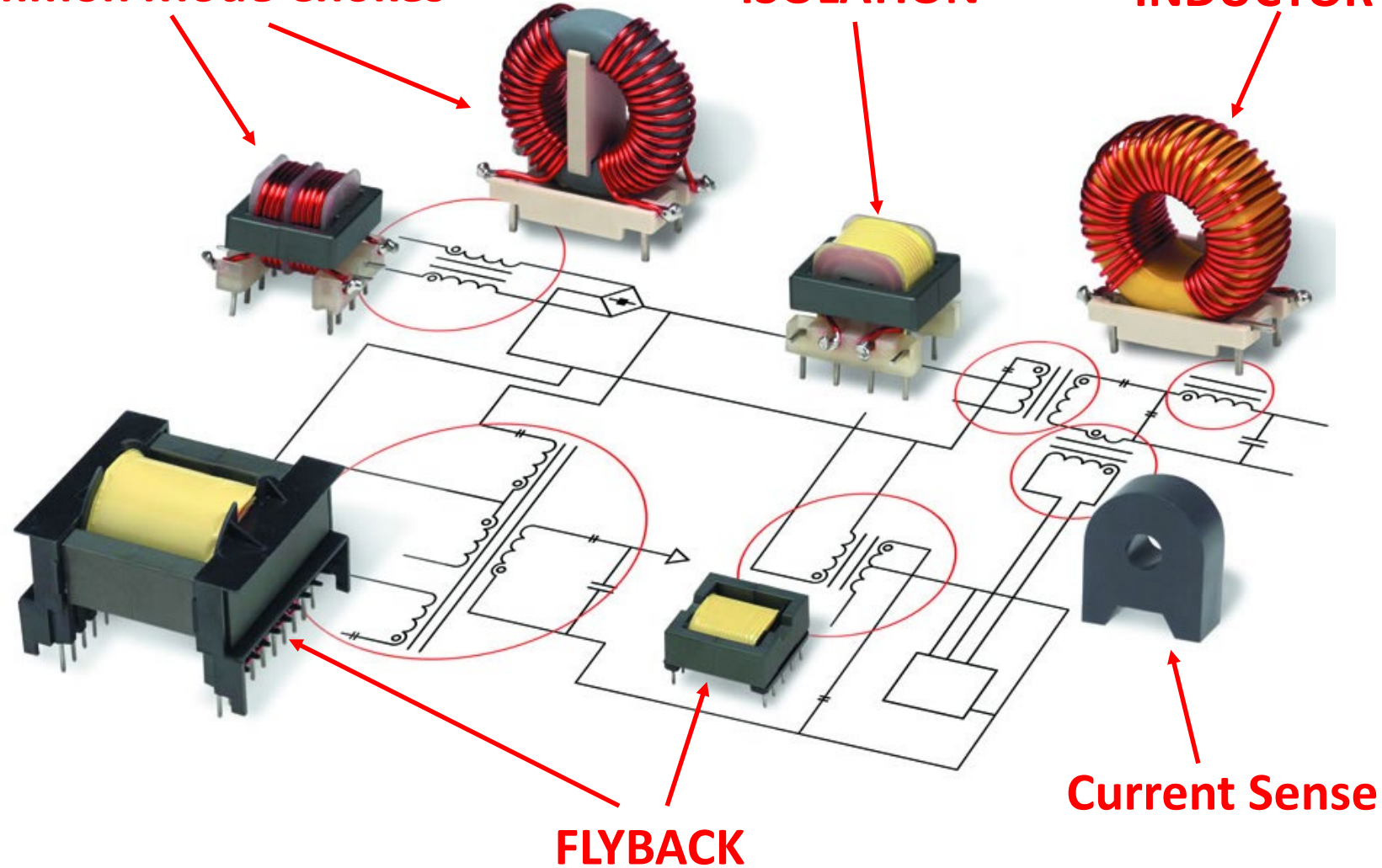
Beta Transformer Power Products



Common Mode Chokes

ISOLATION

INDUCTOR

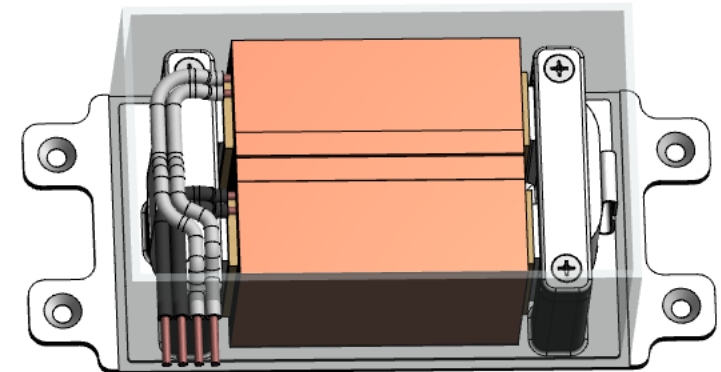


Beta Transformer

Capabilities



- **In house Environmental Testing:**
 - Thermal Shock chambers
 - Thermal Cycle chambers
 - Burn in ovens
 - Shock and Vibration table
 - EMI chamber
 - Vacuum chamber for Dielectric testing
- **Automate Test Stands**
- **CAD / 3D design software**
- **3D printing for prototype / modeling**



■ **Qualifications:**

- **ISO-9001 certified**
- **AS-9100 certified**
- **DSCC approved for MIL-PRF-21038/27-31 for 1553 transformers (in NY and MX)**
- **DSCC approved for MIL-PRF-27 power transformers**
- **Space Station Qualified (SSQ) for couplers and transformers**
- **Compliant o MIL-STD-981 (space magnetics)**
- **Manufacturing License Agreements (MLA) with the US DoD in place to build controlled items in Mexico**

Beta Power Product Strengths



Engineering

- 40 Years Developing / Manufacturing Magnetics
- High Level Technical Competence and Understanding of Magnetics Solutions
- Diverse engineering resources covering the entirety of transformer and inductor design/build capability up to 10kW
- Sustaining Engineering Support
- Obsolescence management

Manufacturing

- Harmonized Quality Systems across all locations
- Integrated ERP systems across all locations
- High Mix /Low Volume Capabilities
- Medium Mix/High Volume Capabilities
- Low Cost Manufacturing Locations
- U.S. Dept of State – Manufacturing License Agreement

