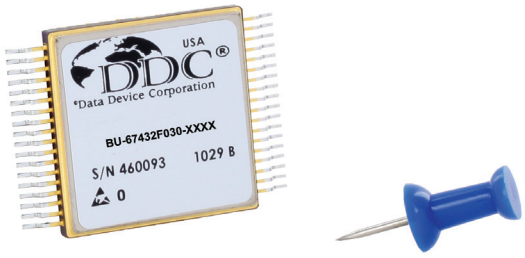
SPACE-PHY +5V Dual MIL-STD-1553 Transceiver/Transformer Device

Product Brief

Models: BU-67432F030L



SPACE-PHY is a completely integrated MIL-STD-1553 physical layer in a single package, including dual transceivers and transformers, suitable for connection to IP incorporated in an FPGA or custom MIL-STD-1553 protocol ASIC.

Key Features

- Dual-Redundant, Side-by-Side, MIL-STD-1553 Transceiver/Transformer Combo
- Compact Ceramic Flatpack Package
  - 1 in. x 1 in. x 0.25 in. (25.4 mm x 25.4 mm x 6.35 mm)
- Radiation Specifications
  - Total Dose: 100 krads
  - Latchup Immunity: 85.4 MeV-cm²/mg
  - Contact Factory for Radiation Reports and Test Conditions
- Dual Tap Secondaries
  - Secondaries' Center Taps Brought Out
- MIL-PRF-38534

Benefits

- Small Size Saves Space
- Replaces Two Transceivers and Two Transformers
- Single Package Simplifies Layout
- Improved Reliability (MTBF) with Single Package

Applications

- Launch Vehicles
- Military Satellites
- Research Satellites
- International Space Station
- Commercial Telecommunication Satellite

Quick Specs

POWER DISSIPATION (50% Utilization)	MIN	TYP	MAX
BU-67432F030L-XXXX	-	0.75 W	1.06 W

THERMAL	MIN	TYP	MAX
Operating Temperature	-55 °C	-	+125 °C
Storage Temperature	-55 °C	-	+150 °C

For more information: www.ddc-web.com/BU-67432F

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Overview

Hybrid Screening for High Reliability

Visual screening for space grade hybrids includes rigorous inspection for damaged die and wires, stray particles, and contamination. Additional screening procedures for space hybrids include:

- 100% Non-destructive wire bond pull (Standard)
- Condition "A" Visual Inspection (Standard)
- Particle Impact Noise Detection (PIND) testing with the use of getter material (Optional)
- Radiographic (X-ray) Inspection (Optional)
- 320-hour burn-in (Standard) {burn-in for Class H devices is 160 hours}
- Destructive Physical Analysis (DPA) testing (Optional)

DDC offers other optional services such as Pre-Cap Source Inspection, One Lot Date Code, Solder Dip, Variables Test Data, Element Evaluation/SEM Inspection, Configuration Control, and Program Management.

By combining DDC'S long history of producing high reliability microelectronics with its Class K DLA Certification, DDC'S MIL-STD-1553 space level products become the true Hi-Rel solution. DDC's ability to integrate a full MIL-STD-1553 space-grade physical layer into a single package results in a cost-effective, small size, low power, high performance and high reliability solutions for all MIL-STD-1553 space level requirements.

Ordering Information

BU-67432F030L-XXXX

Supplemental Process Requirements:
- **S** = Pre-Cap Source Inspection
- **L** = 100% Pull Test
- **Q** = 100% Pull Test and Pre-Cap Source Inspection
- **K** = One Lot Data Code
- **W** = One Lot Data Code and Pre-Cap Source Inspection
- **Y** = One Lot Date Code and 100% Pull Test
- **Z** = One Lot Date Code, Pre-Cap Source Inspection and 100% Pull Test
- **Blank** = None of the Above

Other Criteria:
- **0** = No X-Ray
- **1** = X-Ray

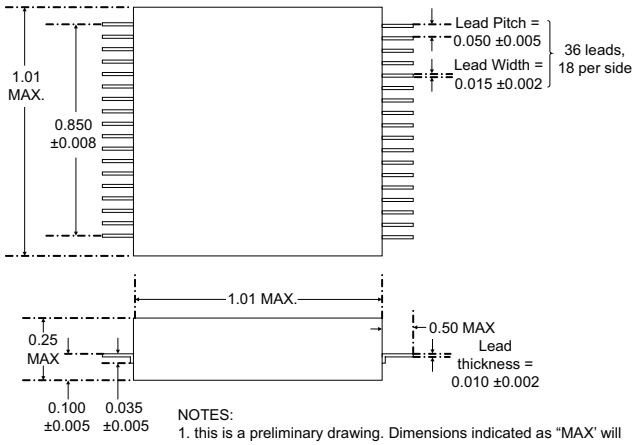
Process Requirements:
- **0** = Standard DDC Processing, no Burn-in
- **1** = MIL-PRF-38534 Compliant (notes 1, 3)
- **2** = B (note 2)
- **3** = MIL-PRF-38534 Compliant (notes 1, 3) with PIND Testing
- **4** = MIL-PRF-38534 Compliant (notes 1, 3) with Solder Dip
- **5** = MIL-PRF-38534 Compliant (notes 1, 3) with PIND Testing and Solder Dip
- **6** = B (note 2) with PIND Testing
- **7** = B (note 2) with Solder Dip
- **8** = B (note 2) with PIND Testing and Solder Dip, no Burn-In

Temperature Grade/Data Requirements
- **1** = -55°C to +125°C
- **4** = -55°C to +125°C with Variables Test Data

Package:
- **F** = Flat Pack
- **G** = Gull Leads (Above "Process Requirements" must include solder dip)

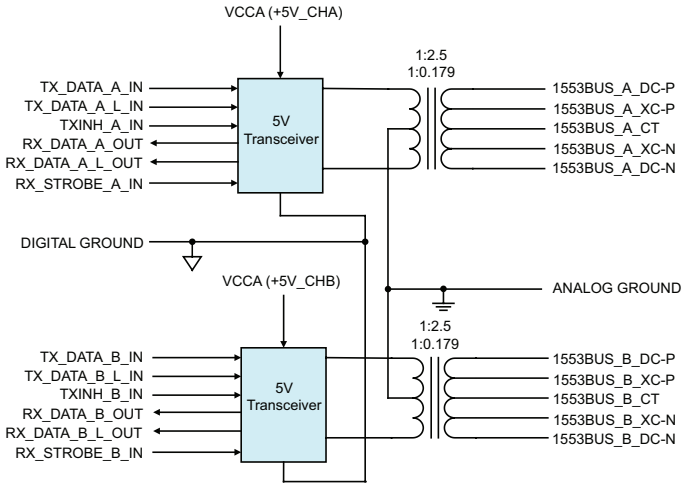
Notes:
1. Standard processing on this device includes 320 hours of burn-in.
2. Standard DDC Processing, with 160 hour burn-in and full temperature (-55°C to +125°C) test.
3. MIL-PRF-38534 product grading is designated with the following dash numbers:
   Class H is a -11XX, 13XX, 14XX, 15XX, 41XX, 43XX, 44XX, 45XX
   These products contain tin-lead solder finish as applicable to solder dip requirements.

Mechanical Outline



NOTES:
1. this is a preliminary drawing. Dimensions indicated as "MAX' will not be exceeded, but all dimensions are subject to change.
2. All dimension are in inches.

Block Diagram



DATA DEVICE CORPORATION
REGISTERED TO:
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EN9100:2009, JIS Q9100:2009
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