

USB 2.0 PREMIUM INTERFACE

STEUSB2071



Overview

The STEUSB2071 is a USB2.0 low-pass filtered interface. It will pass the following USB2.0 Data rates 1.5Mbps, 12Mbps, and 480Mbps. The filter is designed to pass these data rates while providing greater than 80dB RF isolation from 740MHz to 40GHz.

Applications

The primary application is for use in RF Shielded Test Enclosures. The interface will also work well in RF Screen Room applications, or anywhere you need to pass USB2.0 data while maintaining a high level of RF isolation.

Features

- Passive Filtering.
- USB2.0 Type B Input Connector.
- USB2.0 Type A Output Connector.
- Single Flange Nut for mounting.
- RF Gasket Washers to provide high quality RF bond.
- Port Savers.
- Strain Relief Post.



STEUSB2071 Interface Specifications

Power Requirements: None, Passive

Ports:
Non-Pipe Data Port (NPS) USB2.0 Type B.
Pipe Data Port (PS): USB2.0 Type A.

Compatible Data Protocols:
Low Speed (LS): 1.5Mbps, USB1.0.
Full Speed (FS): 12Mbps, USB1.1.
High Speed (HS): 480Mbps, UB2.0.

Electrical:
Non-Pipe Data Port (Label Side): USB Connection to Outside of Enclosure.
Pipe Data Port: USB Connection to Inside of Enclosure.
Data Lines: 2 each, DC to 450MHz RF Bandwidth.
Power Lines: 2 each, +5VDVC and Ground.
Data Line Impedance: 90Ω, Typical.
Maximum Voltage: 5VDVC.
DC Current: 2 Amps maximum.
Data Resistance: <0.5 ohm.

Conductive Insertion Loss: (Data Lines):
DC to 50MHz: Unspecified.
50 - 100MHz: <0.1 dB.
250MHz: <0.8 dB.
350MHz: <2.4 dB.
480MHz: <3.3 dB.
700MHz to 740Mhz: >70 dB, >80dB typical.
740MHz to 40GHz: >80 dB, >90dB typical.

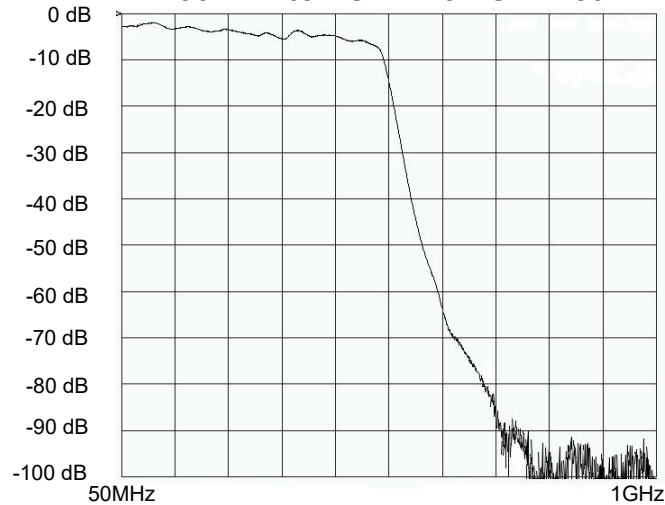
Conductive Insertion Loss: (DC Power Lines):
10MHz to 50MHz: >40 dB.
50MHz to 40GHz: >80 dB, >90dB typical.

Mechanical:
Construction: Milled Aluminum, Electroless Nickel Plated.
Dimensions: 3.55" (90.2mm)H x 2.2" (55.9mm)W x 2.25" (31.8mm)D.
Operating Temperature: -40°F (-40°C) to +185°F (+85°C).
Weight: 0.75 lbs (0.3kg). With nut and RF gasket.
Mounting: 1.0"-20 UNF threaded pipe with matching nut.
Maximum Panel Thickness: 0.4" (11mm).

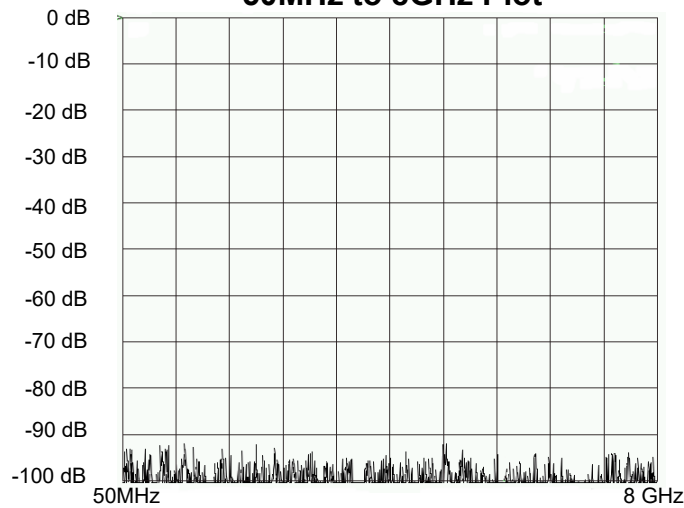


STEUSB2071 Typical Conductive Insertion Loss Plots

50MHz to 1GHz Roll Off Plot



50MHz to 8GHz Plot



1GHz to 40GHz Plot

