
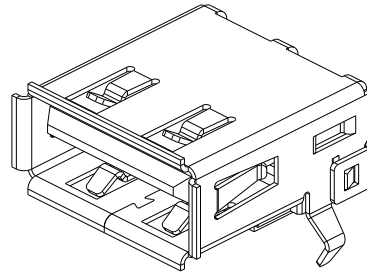
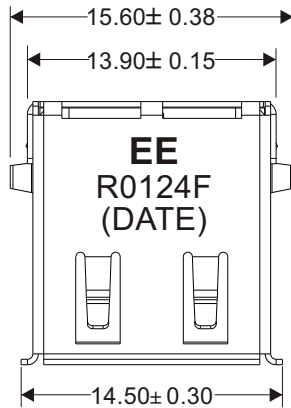
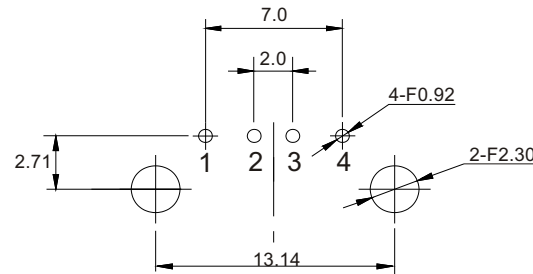
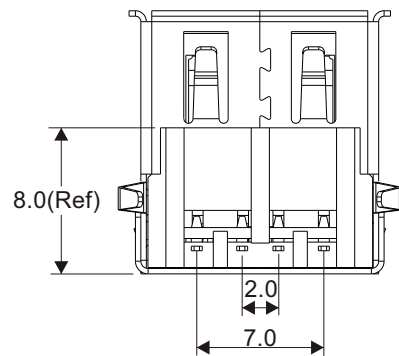
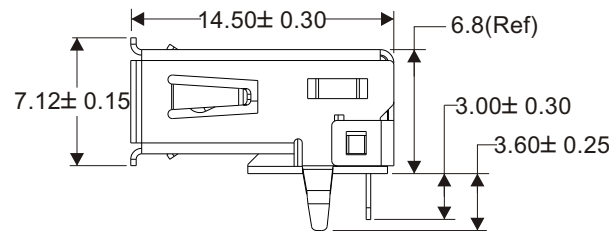
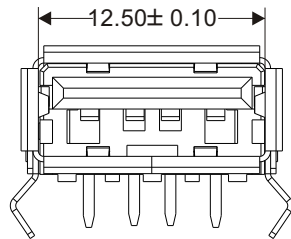


REVISIONS			
REV.	DESCRIPTION	ECN NO.	DATE
01	FIRST RELEASE	N/A	09/02/15
02	ADD MTBF INFORMATION	EE17753	03/06/17

PART NUMBER		PART DESCRIPTION		TITLE											
MD-R0124F		RoHS compliant per EU Directive 2011/65/EU		USB2.0A FILTER CONNECTOR											
<p align="center"><b>WARNING !</b></p> <p>ALL SHEETS OF THIS DOCUMENT ARE CONTROLLED DOCUMENTATION AND ARE NOT TO BE RELEASED OUTSIDE OF E&amp;E OR ITS SUB-CONTRACTORS WITHOUT AUTHORIZATION.</p>		UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCH/mm.		APPROVALS											
		<p align="center">TOLERANCE ARE:</p> <table border="0"> <tr> <td>INCH</td> <td>mm</td> <td>ANGLE</td> </tr> <tr> <td>.XXX ± .005</td> <td>.XX ± 0.13</td> <td>X.X ± 0.3</td> </tr> <tr> <td>.XX ± .02</td> <td>.X ± 0.5</td> <td>X. ± 1</td> </tr> </table>		INCH	mm	ANGLE	.XXX ± .005	.XX ± 0.13	X.X ± 0.3	.XX ± .02	.X ± 0.5	X. ± 1	DATE		 <p>E &amp; E Magnetic Products Ltd.</p>
		INCH	mm	ANGLE											
		.XXX ± .005	.XX ± 0.13	X.X ± 0.3											
		.XX ± .02	.X ± 0.5	X. ± 1											
DRAWN BY		J.S. CHEN		03/06/17											
PROJ. ENG		J.J. LI		03/06/17											
APPROVED BY		J.J. LI		03/06/17											
Q.A.		D. LUO		03/06/17											
DRAWING NO./MODEL		MD-R0124F		REV											
SCALE		DO NOT SCALE		PAGE 1 OF 5											



1. Dimensions are specified in mm.
2. Flamability rating UL94-V0.
3. Quality class: 5000 mating cycles, MTBF=212206 Hours per MIL-HDBK-217F.
4. Mating force: 35N max and Unmating force: 10N min.
5. Shield material: Brass with Nickel plating.
6. Contact material: Phosphor Bronze with Gold plating for contact area.
7. Insulator material: LCP Black, UL 94-V0



Recommended hole pattern  
Viewed from component side

## MECHANICAL OUTLINE



E & E Magnetic Products Ltd.

DRAWING NO./MODEL

MD-R0124F

REV

02

SCALE

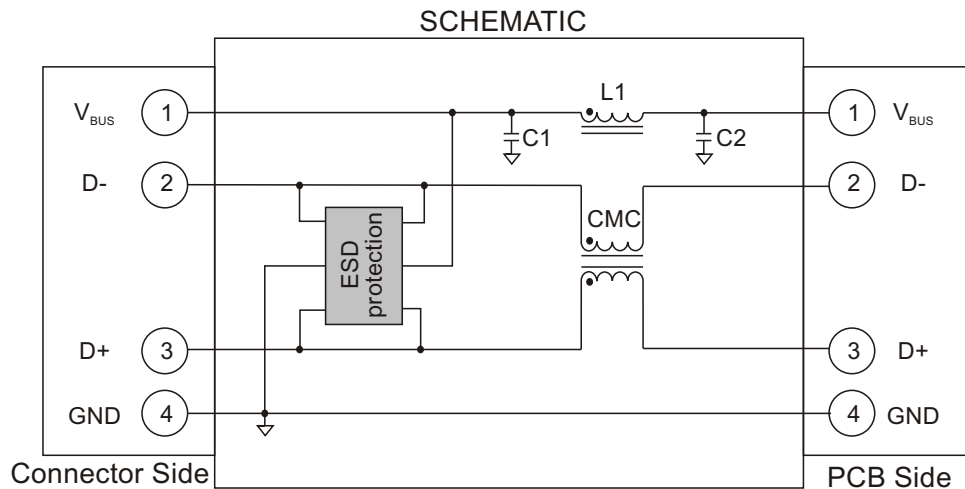
DO NOT SCALE

PAGE

2

OF

5



**ELECTRICAL SPECIFICATION @20°C, 33% RH:**

PARAMETERS	UNIT	VALUE
Common Mode Impedance (D+:D-) @100MHz		100 Typ
DC Resistance $V_{BUS}$		0.20 Max
DC Resistance D+, D-		0.35 Max
DC Operating Voltage	VDC	5 Max
(Reverse)Breakdown Voltage@ $I_{BV}=1mA$	VDC	6 Min
Low Level Contact Resistance	m	30 Max
Insertion Capacitance(D+:D-)@1MHz	pF	1.0 Typ
Rated Current $V_{BUS}$	mA	1000 Max
Rated Current D+, D-	mA	330 Max
ESD Clamping Voltage D+, D- ( $I_{pp}=1A, tp=8/20us$ )	VDC	10.5 Typ
ESD Clamping Voltage $V_{BUS}$ ( $I_{pp}=1A, tp=8/20us$ )	VDC	9.0 Typ

**Absolute Maximum Ratings:**

PARAMETERS	UNIT	VALUE
Operating supply voltage ( $V_{BUS}$ )	V	6
ESD contact discharge IEC61000-4-2 ( $V_{ESD}, D+/D-$ )	kV	8
ESD Withstand voltage air IEC61000-4-2 ( $V_{ESD}, V_{BUS}$ )	kV	15
DC voltage at any I/O pin min. ( D+/D-)	GND-0.5	V
DC voltage at any I/O pin max. ( D+/D-)	$V_{BUS}+0.5$	V

8. Operating Temperature: -40°C TO +85°C.
9. Storage Temperature. : -20°C TO +60°C.
10. High Speed up to 480Mbit/s.
11. ESD protection of data channels and  $V_{BUS}$ .
12. Common mode noise rejection for D+, D- and differential mode noise rejection for  $V_{BUS}$ .
13. Provides ESD protection for each channel to : IEC61000-4-2(ESD) 15kV(air), 8kV(contact). IEC61000-4-4(EFT) 40A (5/50nS). 200Watts Peak Pulse Power ( $tp=8/20us$ ).
14. Ultra Low capacitance : 0.6pF typical.
15. Fast turn on and low Clamping Voltage.



**E & E Magnetic Products Ltd.**

DRAWING NO./MODEL

**MD-R0124F**

REV

**02**

SCALE

**DO NOT SCALE**

PAGE

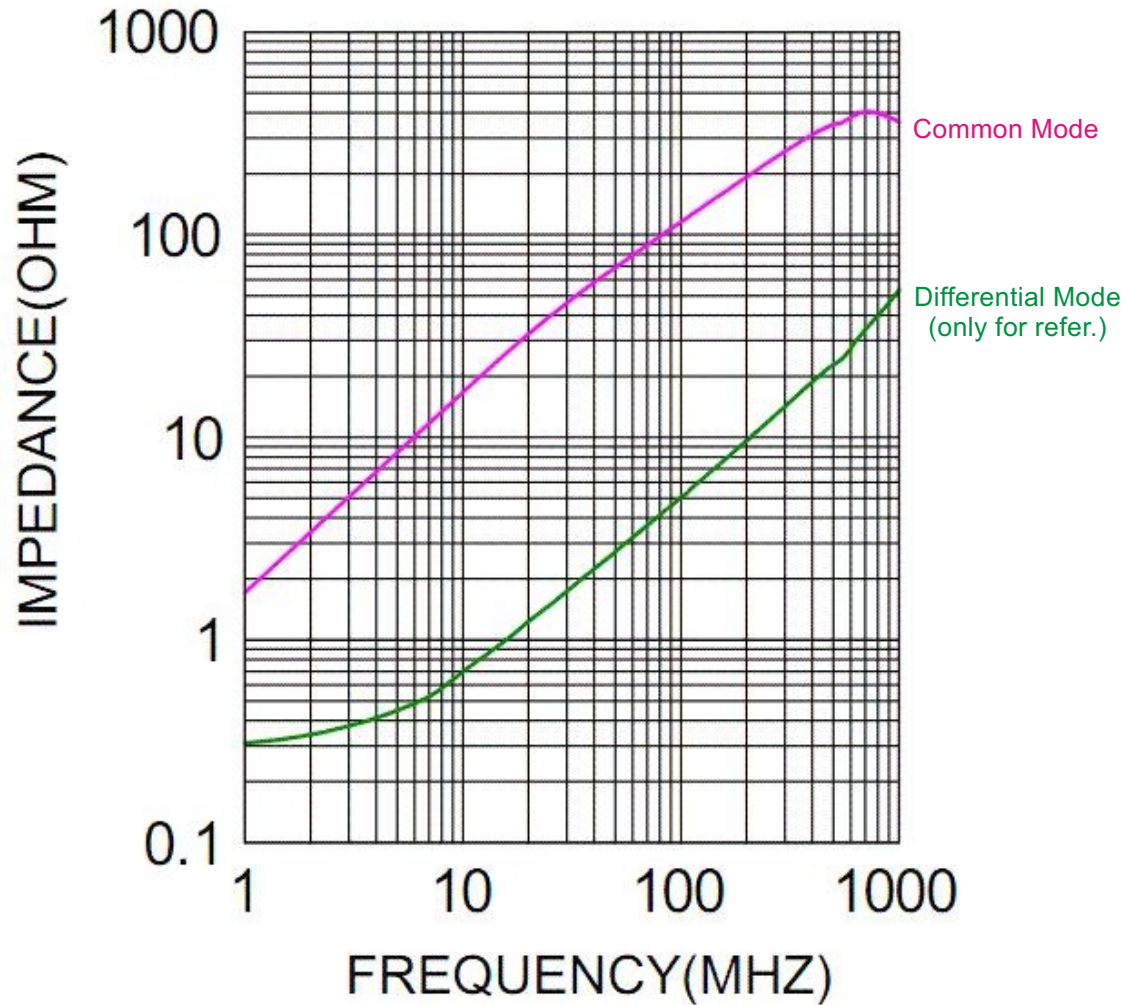
OF

**3**

PAGE

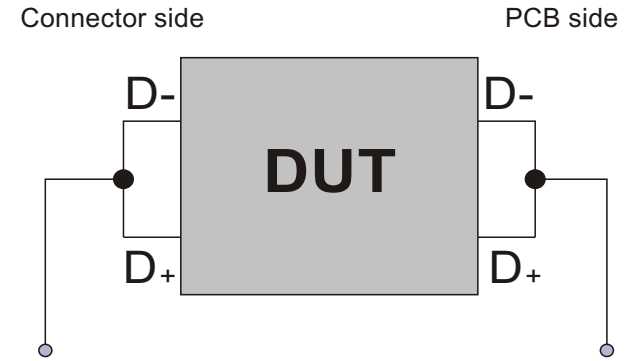
**5**

### Typical Impedance Characteristics D+/D-:

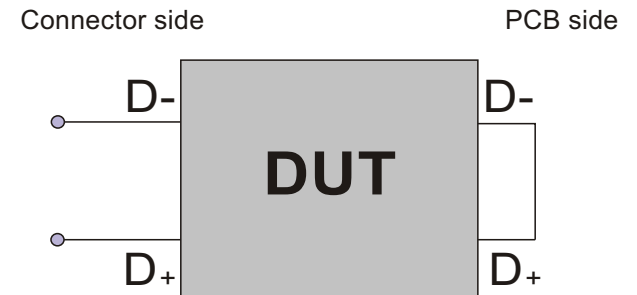


### Test Setup:

#### Common Mode



#### Differential Mode



E & E Magnetic Products Ltd.

DRAWING NO./MODEL

MD-R0124F

REV

02

SCALE

DO NOT SCALE

PAGE

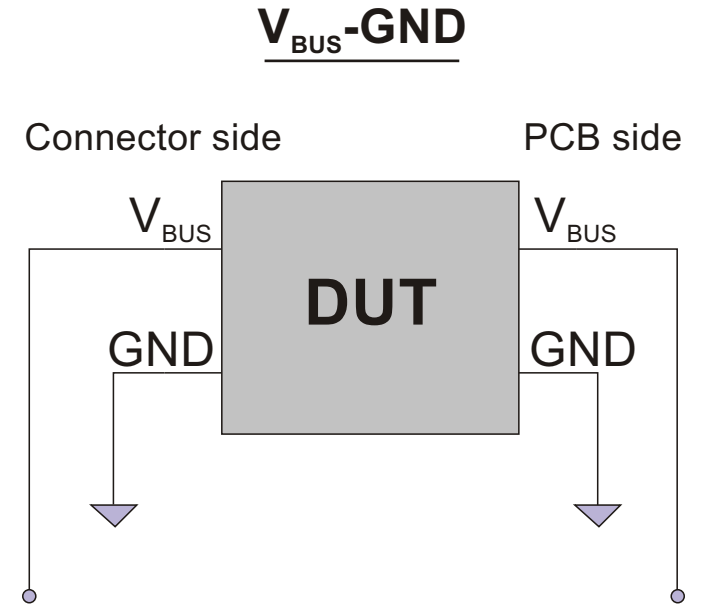
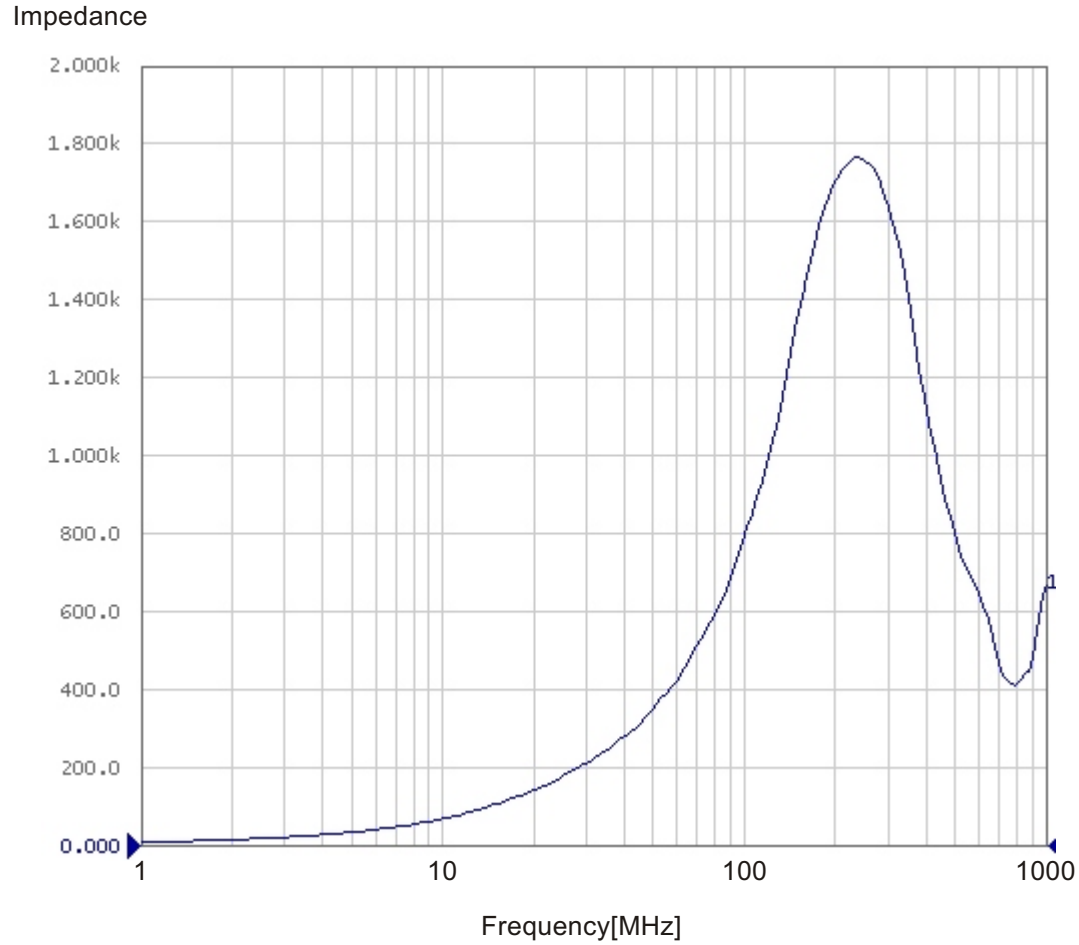
4


OF

5

# Typical Impedance Characteristics $V_{BUS}$ -GND:

# Test Setup:



 <b>E &amp; E Magnetic Products Ltd.</b>			
DRAWING NO./MODEL			REV
<b>MD-R0124F</b>			<b>02</b>
SCALE	PAGE	OF	
<b>DO NOT SCALE</b>	<b>5</b>	<b>5</b>	<b>5</b>