

# NEW PRODUCT INFORMATION

# Multi Layer Common Mode Filter

- RFCMF1220100M4T Series

# For USB 2.0/ IEEE 1394 Application

On USB 2.0/ IEEE 1394 interface, the frequency and strength of the noise have to be suppressed, a part called Common Mode Choke be chosen to provide the required noise attenuation, however, the higher impedance Common Mode Choke generally have a greater damaging effect and distortion on full speed and high speed signal quality.

The Common Mode Filter designed and maunfactured at Walsin Technology Corporation provide excellent noise suppression characteristics thank to high common mode impedance while with minimizing insertion loss to maintain the signal quality on the transmission line. Especially, most effective on meeting the EMI regulation of high speed USB 2.0 and IEEE 1394 interface circuit.

#### **FEATURES**

- Miniature footprint: 1.2 x 2.0 x 1.0 mm<sup>3</sup>.
- Low Differential Mode Insertion Loss maximum 1.0dB @ 240MHz
- High Common Mode attenuation minimum 9.0dB @ 130MHz ~ 1.0GHz
- Special 3D layout design to minimize phase shifting
- Reflow solderable SMD Devices

# **ELECTRICAL CHARACTERISTICS**

Item	Specification	
Common Mode Attenuation	Min. 9.0dB @ 130 MHz ~ 1GHz	
Differential Mode Insertion Loss	Max. 1 dB @ 240MHz	
DC Resistance	Max. 2.5 Ω	
Rated Current	200 mA	
Characteristic Impedance	90 Ω	
Operating Temperature	- 40 °C ~ +85 °C	

## **APPLICATIONS**

- USB 2.0/ IEEE 1394 high speed data transmission
- PC Related, DSC, Scanner, Data Storage, CD ROM W/R, Printer

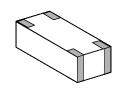
# **DIMENSION**

Figure	Symbol	Dimension
b T	L	1.20 ± 0.20 mm
	W	2.00 ± 0.20 mm
	Т	1.00 ± 0.20 mm
	Р	0.80 ± 0.10 mm
	а	0.45 ± 0.20 mm
	b	0.40 ± 0.20 mm

**Patent Pending** 



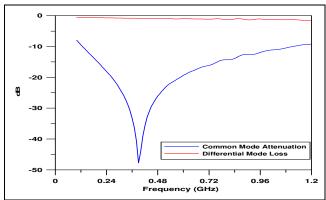
### **CONSTRUCTION and SCHEMATIC**





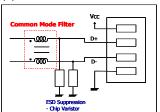
Outline and Schematic of USB 2.0/ IEEE 1394 Common Mode Filter

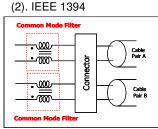
#### **ELECTRICAL PERFORMANCE**



### **APPLICATION CIRCUIT**

(1). USB 2.0





#### **CONTACT INFORMATION**

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Specification subject to change without prior notice.