## **F4P3216 TYPE**

#### **FEATURE**

- 1. High common mode impedance at high frequency effects excel noise suppression performance
- 2. Suitable for differential signal line like USB2.0, IEEE 1394 and LVDS

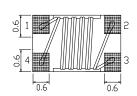
#### Applications

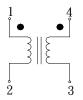
- 1. Ideal for use as common-mode chokes for USB1.1/USB2.0/IEEE 1394 interface
- Shape and Dimension and Schematics and Land Patterns(mm)

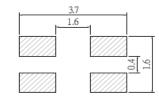
F4P 3216 (1206)











### Specification

Dimension in m/m

<u>specification</u>				Billionololi III III/III	
Common Mode Impedance	Rated Current	Rated Voltage (Vdc)	Insulation Resistance	Withstand Voltage	DC Resistance (max.)
(6) (16.6.466=2676)	(mA)	(122)	(M ohm)	(Vdc)	(ohm)
67 (Typ.) at 100MHz	500	50	10 min	125	0.30
75 (Typ.) at 100MHz	500	50	10 min	125	0.30
90 (Typ.) at 100MHz	500	50	10 min	125	0.30
100 (Typ.) at 100MHz	500	50	10 min	125	0.30
120 (Typ.) at 100MHz	370	50	10 min	125	0.30
160 (Typ.) at 100MHz	340	50	10 min	125	0.40
180 (Typ.) at 100MHz	340	50	10 min	125	0.40
260 (Typ.) at 100MHz	310	50	10 min	125	0.50
370 (Typ.) at 100MHz	280	50	10 min	125	0.40
600 (Typ.) at 100MHz	260	50	10 min	125	0.80
1000 (Typ.) at 100MHz	230	50	10 min	125	1.00
2200 (Typ.) at 100MHz	200	50	10 min	125	1.20
	(ohm) ( tolerance±25%)  67 (Typ.) at 100MHz  75 (Typ.) at 100MHz  90 (Typ.) at 100MHz  100 (Typ.) at 100MHz  120 (Typ.) at 100MHz  160 (Typ.) at 100MHz  180 (Typ.) at 100MHz  260 (Typ.) at 100MHz  370 (Typ.) at 100MHz  600 (Typ.) at 100MHz	(ohm) ( tolerance±25%)       Current (mA)         67 (Typ.) at 100MHz       500         75 (Typ.) at 100MHz       500         90 (Typ.) at 100MHz       500         100 (Typ.) at 100MHz       500         120 (Typ.) at 100MHz       370         160 (Typ.) at 100MHz       340         180 (Typ.) at 100MHz       340         260 (Typ.) at 100MHz       310         370 (Typ.) at 100MHz       280         600 (Typ.) at 100MHz       260         1000 (Typ.) at 100MHz       230	(ohm) ( tolerance±25%)       Current (mA)       (Vdc)         67 (Typ.) at 100MHz       500       50         75 (Typ.) at 100MHz       500       50         90 (Typ.) at 100MHz       500       50         100 (Typ.) at 100MHz       500       50         120 (Typ.) at 100MHz       370       50         160 (Typ.) at 100MHz       340       50         180 (Typ.) at 100MHz       340       50         260 (Typ.) at 100MHz       310       50         370 (Typ.) at 100MHz       280       50         600 (Typ.) at 100MHz       260       50         1000 (Typ.) at 100MHz       230       50	(ohm) ( tolerance±25%)         Current (mA)         (Vdc)         Resistance (M ohm)           67 (Typ.) at 100MHz         500         50         10 min           75 (Typ.) at 100MHz         500         50         10 min           90 (Typ.) at 100MHz         500         50         10 min           100 (Typ.) at 100MHz         500         50         10 min           120 (Typ.) at 100MHz         370         50         10 min           160 (Typ.) at 100MHz         340         50         10 min           260 (Typ.) at 100MHz         310         50         10 min           370 (Typ.) at 100MHz         280         50         10 min           600 (Typ.) at 100MHz         260         50         10 min           1000 (Typ.) at 100MHz         230         50         10 min	Common Mode Impedance (ohm) ( tolerance±25%)         Rated Current (mA)         Rated Voltage (Vdc)         Insulation Resistance (M ohm)         Withstand Voltage (Vdc)           67 (Typ.) at 100MHz         500         50         10 min         125           75 (Typ.) at 100MHz         500         50         10 min         125           90 (Typ.) at 100MHz         500         50         10 min         125           100 (Typ.) at 100MHz         500         50         10 min         125           120 (Typ.) at 100MHz         370         50         10 min         125           160 (Typ.) at 100MHz         340         50         10 min         125           180 (Typ.) at 100MHz         340         50         10 min         125           260 (Typ.) at 100MHz         310         50         10 min         125           370 (Typ.) at 100MHz         280         50         10 min         125           600 (Typ.) at 100MHz         260         50         10 min         125           1000 (Typ.) at 100MHz         230         50         10 min         125

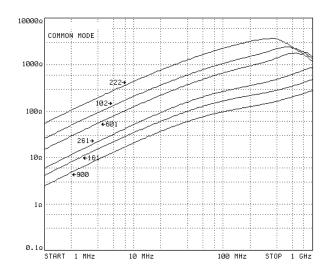
Note1. Measurement ambient temperature of electrical : at 20°C

Note2. Test equipment: HP4291A

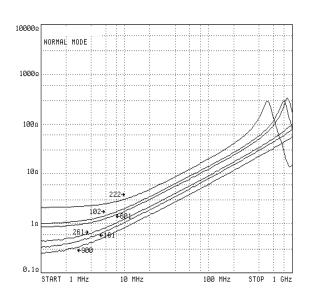
# FENG-JUI TECHNOLOGY CO., LTD EMI SOLOTION PRODUCTS-RoHS

#### ●F4P 3216

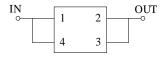
#### Common mode curve



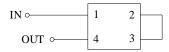
#### Normal mode curve



#### Test circuit



COMMON MODE



NORMAL MODE

#### **GENERAL CHARACTERISTICS**

- 1. Operating temperature range: -40 TO + 125°C (Includes temperature when the coil is heated)
- 2. External appearance: On visual inspection, the coil has no external defects.
- Terminal strength: After soldering. Between copper plate and terminals of coil. Push in two directions of X.Ywithstanding at below conditions.

Terminal should not peel off. (refer to figure at right) 0.5kg Min -F4P3216.

- 4. Insulating resistance: Over  $100M\Omega$  at 100V D.C. between coil and core.
- 5. Dielectric strength: No dielectric breakdown at 100V D.C. for 1 minute between coil and core.
- 6. Temperature characteristics: Inductance coefficient (0~2,000)x10-6/°C (-25~+80°C).
- 7. Humidity characteristics(Moisture Resistance): Inductance deviation within ±5%, after 96 hours in 90~95% relative humidity at 40 ±2°C and 1 hour drying under normal condition.
- 8. Vibration resistance: Inductance deviation within ±5%, after vibration for 1 hour. In each of three orientations at sweep vibration (10~55~10 Hz) with 1.5mm P-P amplitudes.
- 9. Shock resistance: Inductance deviation within ±5%, after being dropped once with 981m/s2 (100G) shock attitude upon a rubber block method shock testing machine, in three different orientations.
- 10. Resistance to Soldering Heat: 260°C, 10 seconds(See attached recommend reflow)
- 11. Storage environment: Storage condition: Temperature Range:  $10^{\circ}\text{C} \sim 35^{\circ}\text{C}$  (Generally:  $21^{\circ}\text{C} \sim 31^{\circ}\text{C}$ ) , Humidity Range:  $50\% \sim 80\%$  RH (Generally:  $65\% \sim 75\%$ ); Transportation condition: Temperature Range:  $-35^{\circ}\text{C} \sim 85^{\circ}\text{C}$  , Humidity Range:  $50\% \sim 95\%$  RH
- 12. Use components within 12 months. If 12 months or more have elapsed, check solderability before use.
- 13. Reflow profile recommend:

Lead-free heat endurance test

Lead-free the recommended reflow condition

