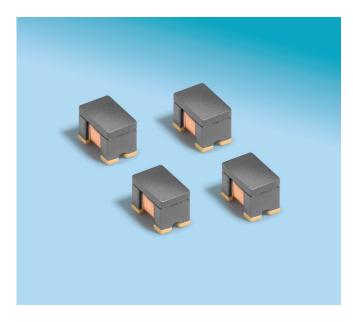
## utgassing Compliant USB Chokes AR336FRA



- For common mode noise suppression in high speed differential signal lines: USB2.0, IEEE1394, LVDS, etc.
- Up to 3.4 GHz differential mode 3 dB cutoff frequency
- Up to 2 kOhms common mode peak impedance
- Up to 35 dB common mode noise attenuation.
- Passes NASA low outgassing specifications

## Core material Ferrite

Terminations Tin-lead (63/37) over tin over nickel over silver-palladium-glass frit. Other terminations available at additional cost. Weight 13.8 – 15.8 mg

Ambient temperature -40°C to +105°C with Irms current

Maximum part temperature +125°C (ambient + temp rise). Storage temperature Component: -55°C to +125°C.

Tape and reel packaging: -40°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Packaging 2000/7" reel; 7500/13" reel; Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.5 mm pocket depth

	Common mode peak impedance	Cutoff frequency <sup>2</sup>	Common mode attenuation typ (dB)			Inductance <sup>3</sup>	DCR max <sup>4</sup>	<b>Isolation</b> <sup>5</sup>	Imax
Part number <sup>1</sup>	· (kOhms)	(ĠHz)	10 MHz	100 MHz	500 MHz	min (nH)	(Ohms)	(Vrms)	(mA)
AR336FRA421MPZ	>0.22 @ >3.0 GHz	3.5	0.9	4.5	7.1	23	0.12	250	500
AR336FRA901MPZ	>0.29 @ >3.0 GHz	2.5	0.5	7.3	12.4	47	0.17	250	500
AR336FRA172MPZ	0.64 @ 1.8 GHz	1.8	4.4	12.3	16.9	84	0.25	250	500
AR336FRA262MPZ	0.82 @ 1.8 GHz	1.5	7.6	15.3	20.1	147	0.26	250	500
AR336FRA372MPZ	1.06 @ 1.4 GHz	0.82	9.7	18.5	23.4	189	0.32	250	500
AR336FRA502MPZ	1.42 @ 1.1 GHz	0.7	8.2	20.3	26.1	273	0.37	250	500
AR336FRA672MPZ	1.75 @ 0.93 GHz	0.46	12.5	22.9	28.2	322	0.45	250	500
AR336FRA902MPZ	2.06 @ 0.81 GHz	0.47	10.7	24.8	29.8	413	0.65	250	250

1. When ordering, please specify termination and screening codes:

## AR336FRA902MPZ

Termination: P = Tin-lead (63/37) over tin over nickel over silver-palladium-glass frit.

- C = Tin-lead (63/37) over gold over nickel over silverpalladium-glass frit
  - A = Gold over nickel over silver-palladium-glass frit
  - R = Tin over nickel over silver-palladium-glass frit. Not suitable for applications or screening with pure tin restrictions.
- Screening: Z = Unscreened
  - H = Coilcraft CP-SA-10001 Group A
  - G = Coilcraft CP-SA-10001 Group A (SLDC Option A)
  - D = Coilcraft CP-SA-10001 Group A (SLDC Option B)
  - F = ESCC3201 (F4 operational life performed at 90°C)
  - 1/2/3 = EEE-INST-002 (Family 1) Level 1/2/3
    - 4/5 = MIL-STD-981 (Family 11) Class B=4, Class S=5
    - · Screening performed to the document's latest revision.
    - · Lot qualification (Group B) available.
- 2 Frequency at which the differential mode attenuation equals -3 dB

3. Inductance measured at 100 MHz using an Agilent/HP 4286A impedance analyzer and a Coilcraft SMD-A fixture.

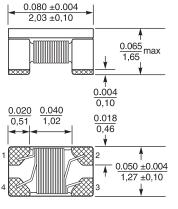
- 4. DCR is specified per winding.
- 5. Winding to winding isolation (hipot) tested for one minute.



1102 Silver Lake Road Cary, IL 60013 **CRITICAL PRODUCTS & SERVICES** Phone 800-981-0363

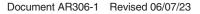
6. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



3 Dimensions are in inches 0.030 0.036 0.76 0.91 0.014 2 0.36

Note: Dimensions are before solder application. For maximum overall dimensions including solder, add 0.003 in / 0.076 mm to the maximum length, width and height.



Suggested

Land Pattern

0.020

0.51

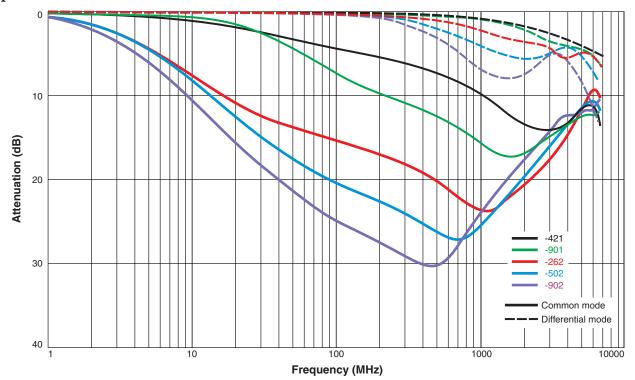
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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

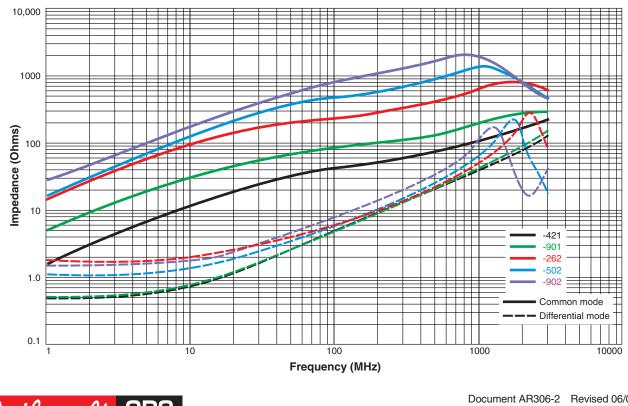
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## USB 2.0 Common Mode Filter – AR336FRA

Typical Attenuation (Ref: 50 Ohms)



**Typical Impedance vs Frequency** 





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