RoHS COMPLIANT

SMT Data Line EMI Filters

CQ7584-AL
CJ5100-AL
CR7856-AL

- Low profile (<5.0 mm) compact surface mount packages
- Ideal for use to suppress up to 100 MHz common mode noise for general differential signal line filtering
- Provides over 40 dB common mode noise attenuation
- Inductances from 0.47 mH to 4.7 mH
- Up to 0.85 Arms
- 500 Vrms Isolation (hipot)
- Upon request, additional values may be available for particular applications

Core material Ferrite

Terminations RoHS compliant tin-silver-copper over tin over nickel over phos bronze

Weight 0.22 – 0.27 g

Ambient temperature –40°C to +85°C with Irms current

Maximum part temperature +125°C (ambient + temp rise)

Storage temperature Component: –40°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)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)
38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

Packaging
CQ7584-AL 250/7″ reel; 1000/13″ reel Plastic tape: 16 mm wide, 0.4 mm thick, 12 mm pocket spacing, 4.8 mm pocket depth
CJ5100-AL 250/7″ reel; 1000/13″ reel Plastic tape: 16 mm wide, 0.4 mm thick, 12 mm pocket spacing, 4.9 mm pocket depth
CR7856-AL 250/7″ reel; 1000/13″ reel Plastic tape: 16 mm wide, 0.4 mm thick, 12 mm pocket spacing, 4.8 mm pocket depth

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

Part number	Common mode peak impedance (kOhms)	Cutoff frequency (MHz)	Inductance (mH) nom	Inductance (mH) min	Irms (A)	DCR max (Ohms)	Isolation (Vrms)	Length max (mm)	Width max (mm)	Height max (mm)	Page
CQ7584-AL	6.81 @ 4.1 MHz	760	2.20	1.54	0.65	0.40	500	9.4	5.6	4.8	2
CJ5100-AL	4.49 @ 9.9 MHz	920	0.47	0.329	0.85	0.24	500	9.4	6.0	4.8	3
CR7856-AL	7.65 @ 0.76 MHz	460	4.70	3.29	0.47	1.3	500	9.4	5.5	4.9	4

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SMT Data Line EMI Filter – CQ7584-AL

Part number[1]	Common mode impedance max (kOhms)	Cutoff frequency[2] (MHz)	Inductance (mH)[3] nom	Inductance (mH)[3] min	Irms[4] (A)	DCR max[5] (Ohms)	Isolation[6] (Vrms)
CQ7584-AL_	6.81 @ 4.4 MHz	760	2.20	1.54	0.65	0.40	500

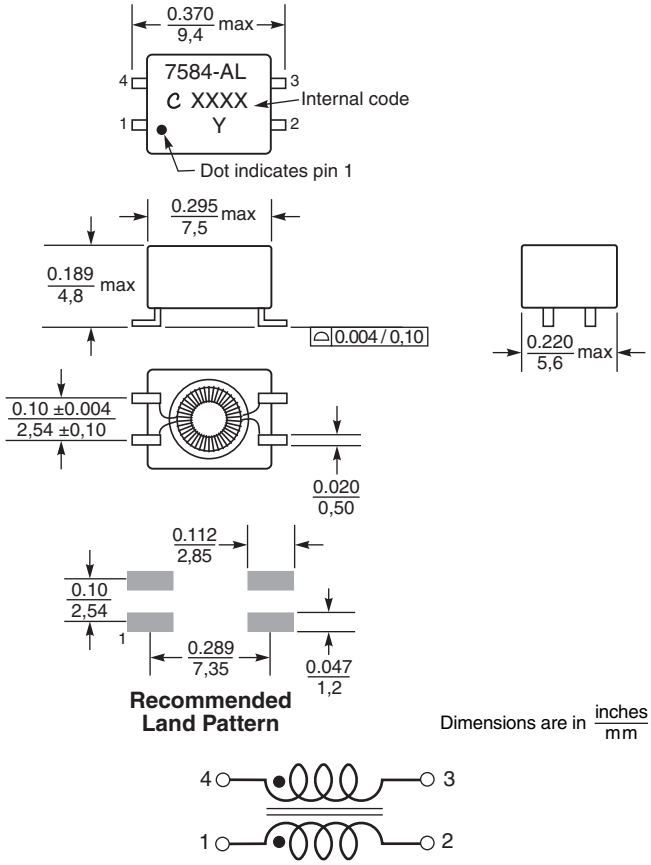
1. When ordering, please specify **packaging** code:

CQ7584-ALC

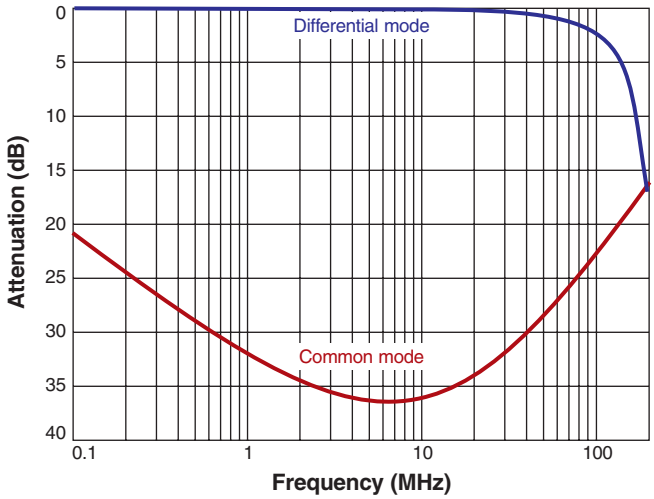
Packaging: **C** = 7″ machine-ready reel. EIA-481 embossed plastic tape (250 parts per full reel).
B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter C instead.
D = 13″ machine-ready reel. EIA-481 embossed plastic tape Factory order only, not stocked (1000 parts per full reel).

2. Frequency at which the differential mode attenuation equals 3 dB
3. Inductance shown for each winding, measured at 10 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4263B LCR meter or equivalent.
4. Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
5. DCR is specified per winding.
6. Isolation (hipot) measured for two seconds.
7. Electrical specifications at 25°C.

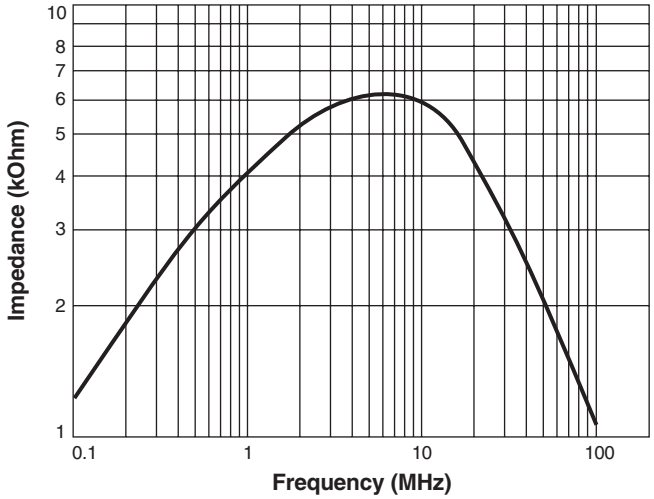
Refer to Doc 362 “Soldering Surface Mount Components” before soldering.



Typical Attenuation



Typical Impedance versus Frequency



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SMT Data Line EMI Filter – CJ5100-AL

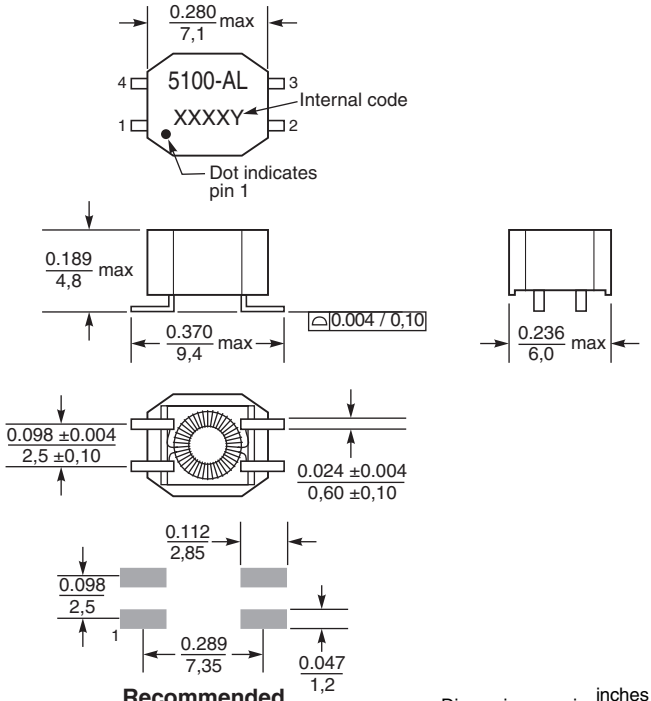
Part number[1]	Common mode impedance max (kOhms)	Cutoff frequency[2] (MHz)	Inductance (mH)[3] nom	Inductance (mH)[3] min	Irms[4] (A)	DCR max[5] (Ohms)	Isolation[6] (Vrms)
CJ5100-AL_	4.49 @ 9.9MHz	920	0.47	0.329	0.85	0.24	500

1. When ordering, please specify **packaging** code:

   CJ5100-ALC

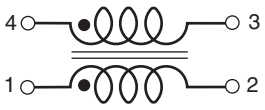
   Packaging: **C** = 7″ machine-ready reel. EIA-481 embossed plastic tape (250 parts per full reel).
   B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter C instead.
   D = 13″ machine-ready reel. EIA-481 embossed plastic tape Factory order only, not stocked (1000 parts per full reel).
2. Frequency at which the differential mode attenuation equals 3 dB
3. Inductance shown for each winding, measured at 100 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4263B LCR meter or equivalent.
4. Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
5. DCR is specified per winding.
6. Isolation (hipot) measured for two seconds.
7. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

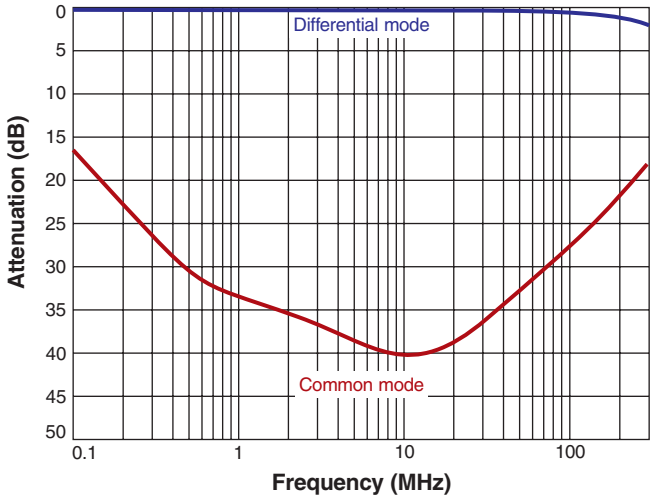


Recommended Land Pattern

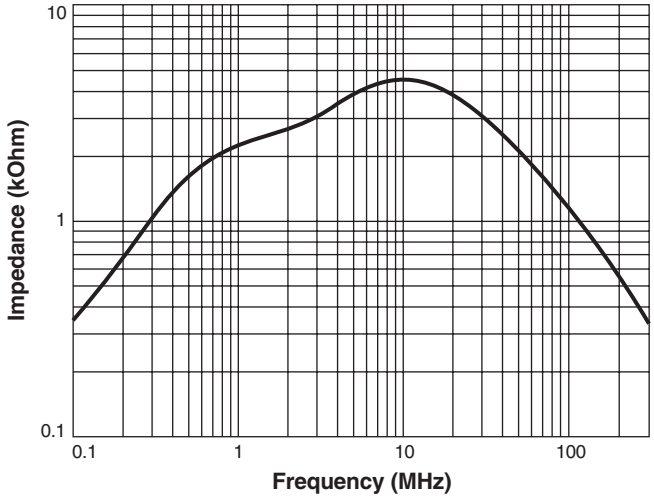
Dimensions are in inches / mm



Typical Attenuation



Typical Impedance versus Frequency



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SMT Data Line EMI Filter – CR7856-AL

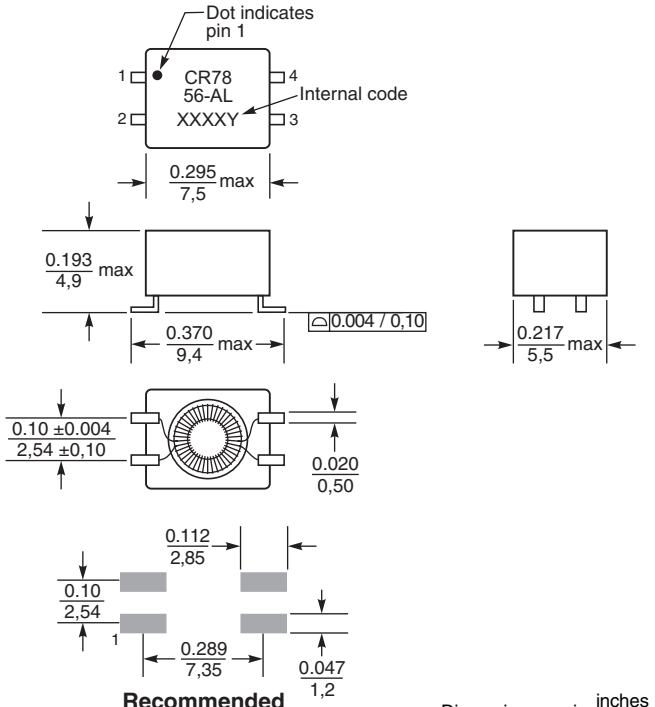
Part number[1]	Common mode impedance max (kOhms)	Cutoff frequency[2] (MHz)	Inductance (mH)[3] nom	Inductance (mH)[3] min	Irms[4] (A)	DCR max[5] (Ohms)	Isolation[6] (Vrms)
CR7856-AL_	111.17 @ 1.9 MHz	460	4.70	3.29	0.47	1.3	500

1. When ordering, please specify **packaging** code:

   CR7856-ALC

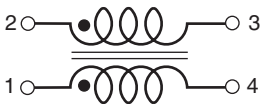
   Packaging: **C** = 7″ machine-ready reel. EIA-481 embossed plastic tape (250 parts per full reel).
   B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added ($25 charge), use code letter C instead.
   D = 13″ machine-ready reel. EIA-481 embossed plastic tape Factory order only, not stocked (1000 parts per full reel).
2. Frequency at which the differential mode attenuation equals 3 dB
3. Inductance shown for each winding, measured at 10 kHz, 0.1 Vrms, 0 Adc on an Agilent/HP 4263B LCR meter or equivalent.
4. Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
5. DCR is specified per winding.
6. Isolation (hipot) measured for two seconds.
7. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

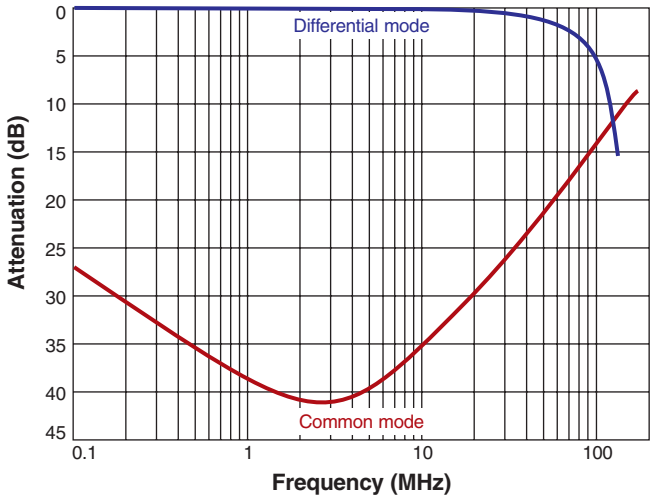


Recommended Land Pattern

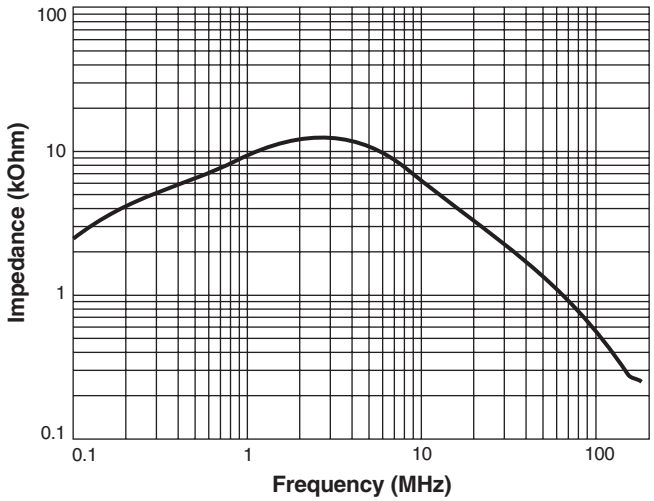
Dimensions are in inches / mm



Typical Attenuation



Typical Impedance versus Frequency



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