



# Power Injection Chokes for PoC 1210POC



- Optimized for AEC-Q200 power over coax (PoC) applications
- Small size to reduce board area of overall system solutions
- High impedance ( $\geq 1\text{k}\Omega$ ) maintained over a wide band frequency range to isolate AC signal from the DC power
- AEC-Q200 Grade 1 qualified ( $-40^\circ\text{C}$  to  $+125^\circ\text{C}$  ambient)

**Core material** Ferrite

**Environmental** RoHS compliant

**Terminations** RoHS compliant matte tin over nickel over silver-platinum-glass frit.

**Weight** 115 – 125 mg

**Ambient temperature**  $-40^\circ\text{C}$  to  $+125^\circ\text{C}$  with ( $15^\circ\text{C}$  rise) Irms current.

**Maximum part temperature**  $+140^\circ\text{C}$  (ambient + temp rise).

**Storage temperature** Component:  $-40^\circ\text{C}$  to  $+140^\circ\text{C}$ .

Tape and reel packaging:  $-40^\circ\text{C}$  to  $+80^\circ\text{C}$

**Resistance to soldering heat** Max three 40 second reflows at  $+260^\circ\text{C}$ , parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at  $<30^\circ\text{C}$  / 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

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

Part number <sup>1</sup>	L <sup>2</sup> $\pm 20\%$ ( $\mu\text{H}$ )	DCR (Ohms) <sup>3</sup>		SRF typ <sup>4</sup> (MHz)	Isat (mA) <sup>5</sup>					Irms typ (mA)		
		typ	max		25°C	85°C	105°C	125°C	140°C	at 25°C <sup>6</sup>	at 85°C <sup>7</sup>	at 125°C <sup>8</sup>
1210POC-682MR_	6.8	0.20	0.24	120	1400	1000	930	800	700	1360	1230	800
1210POC-103MR_	10.0	0.29	0.34	95	1100	850	760	660	560	1130	1020	570
1210POC-223MR_	22.0	0.76	0.88	70	720	580	520	450	390	700	630	400

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

**1210POC-223MRC**

**Packaging:** **C** = 7" machine-ready reel. EIA-481 embossed plastic tape. Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge). See dimensional drawing for packaging information.

**D** = 13" machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked. See dimensional drawing for packaging information.

2. Inductance tested at 100 kHz, 0.1 Vrms, 200 mA DC using HP4263 w/SMD-B test fixture or equivalent

3. DCR measured using a micro-ohmmeter.

4. SRF measured using an Agilent/HP 5071C network analyzer and a Coilcraft SMD-D test fixture.

5. DC current that causes 30% inductance drop from its initial value at 200 mA at specified temperature.

6. Current that causes a  $40^\circ\text{C}$  rise at  $25^\circ\text{C}$ .

7. Current that causes a  $40^\circ\text{C}$  rise at  $85^\circ\text{C}$ .

8. Current that causes a  $15^\circ\text{C}$  rise at  $125^\circ\text{C}$ .

9. Electrical specifications at  $25^\circ\text{C}$ .

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



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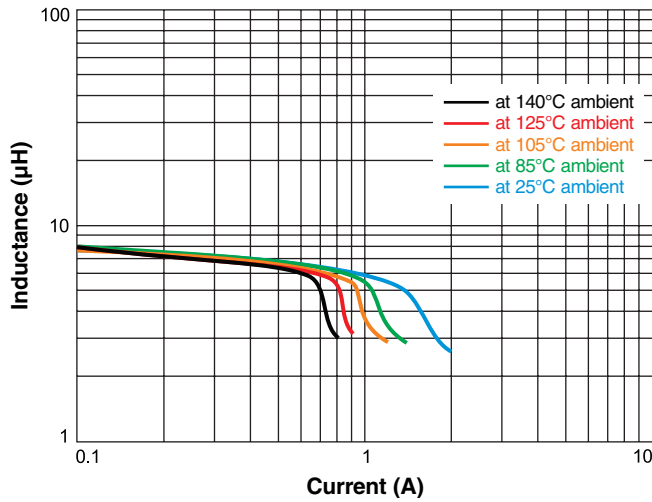
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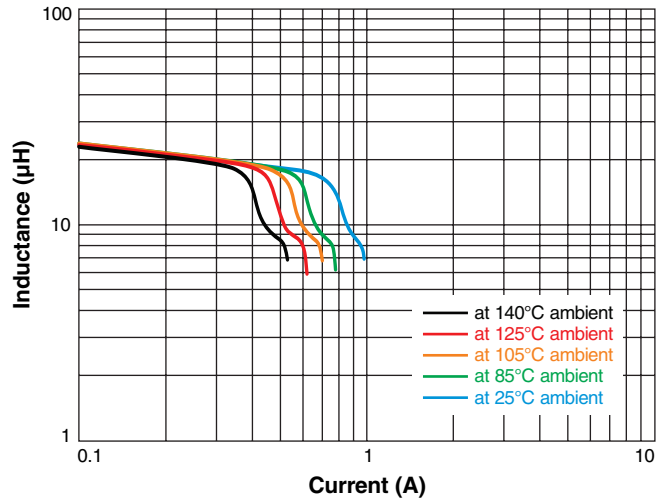


# 1210POC Power Injection Chokes for PoC

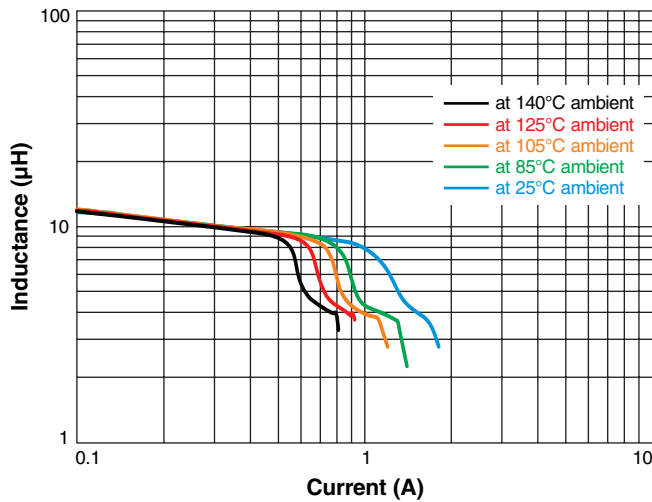
## L vs Current – 1210POC-682



## L vs Current – 1210POC-223



## L vs Current – 1210POC-103



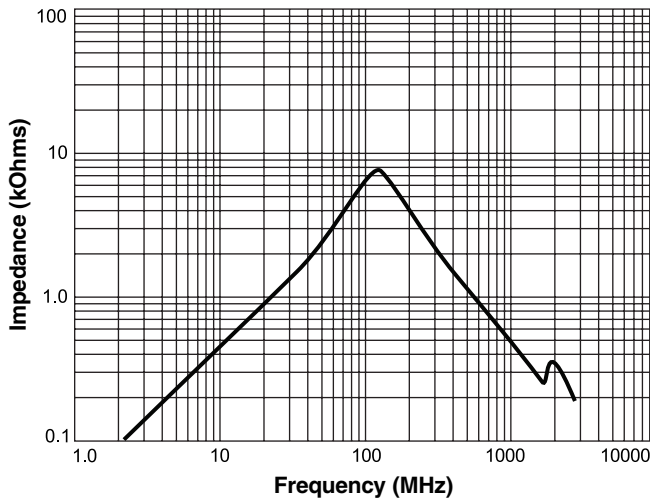
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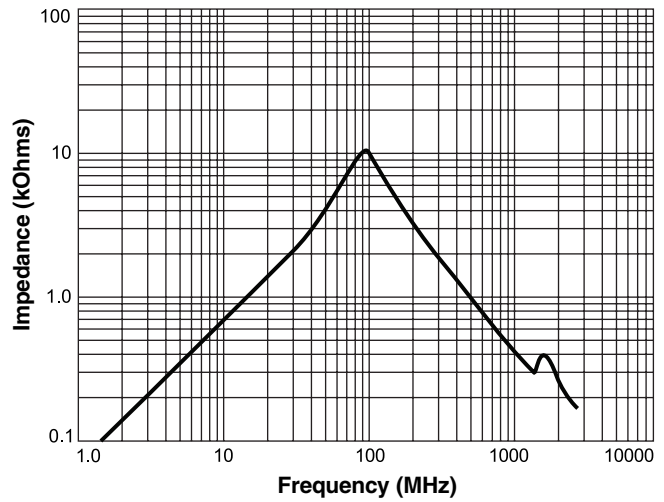


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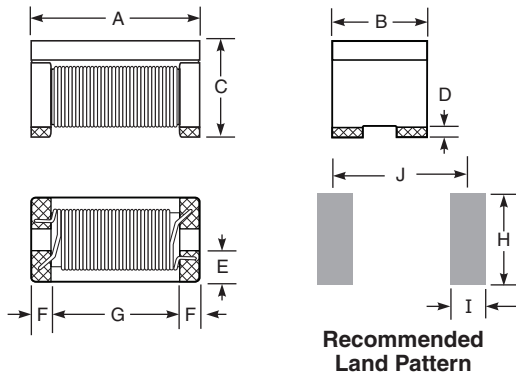
## Impedance vs Frequency – 1210POC-682



## Impedance vs Frequency – 1210POC-103



## Dimensions – 1210POC

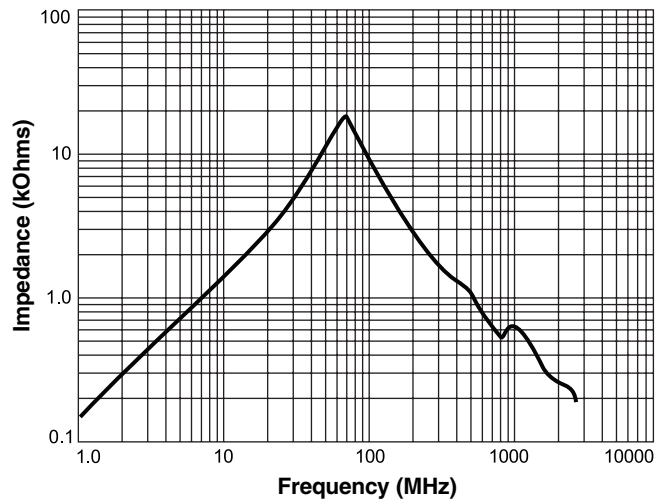


Dimensions are in  $\frac{\text{inches}}{\text{mm}}$

A	B	C	D	E	F	G	H	I	J	
max	max	max								in
0.13	0.105	0.118	0.004	0.037	0.020	0.080	0.104	0.026	0.100	
3,30	2,67	3,00	1,02	0,94	0,51	2,03	2,65	0,65	2,54	mm

**Packaging** 750/7" reel; 3000/13" reel; Plastic tape: 12 mm wide, 0.25 mm thick, 8 mm pocket spacing, 2.72 mm pocket depth

## Impedance vs Frequency – 1210POC-223



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