



# Power Injection Chokes for PoC 1205POC



- Optimized for AEC-Q200 power over coax (PoC) applications
- Small size to reduce board area of overall system solutions
- Board area is only 3.87mm<sup>2</sup>
- 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, halogen free

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

**Weight** 36 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>
1205POC-682MR_	6.8	0.36	0.41	220	780	640	580	520	470	880	800	460
1205POC-103MR_ <sup>9</sup>	10.0	0.90	1.00	165	670	520	460	410	360	560	500	300

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

**1205POC-103MRC**

**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°C rise at 25°C.

7. Current that causes a 40°C rise at 85°C.

8. Current that causes a 15°C rise at 125°C.

9. 1205POC-103 previously named WA8506-103.

10. Electrical specifications at 25°C.

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



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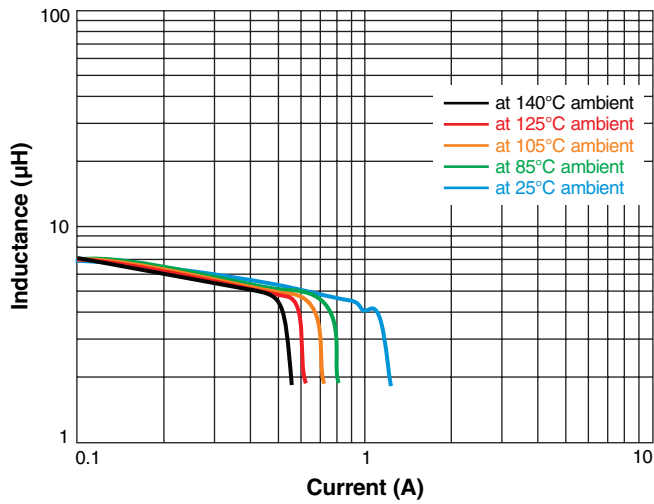
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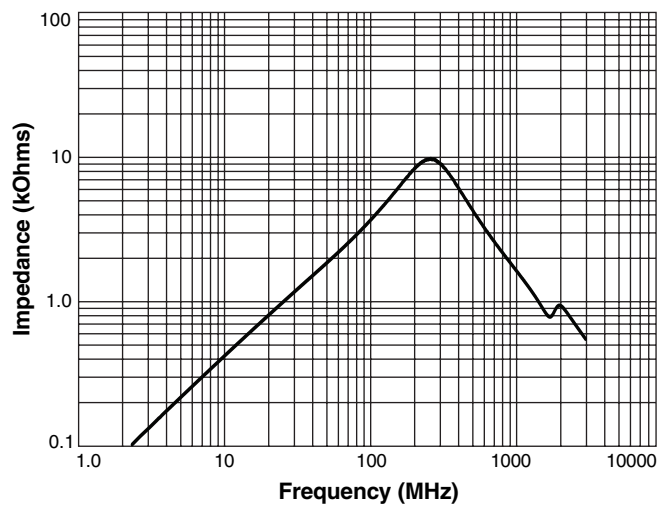


# 1205POC Power Injection Chokes for PoC

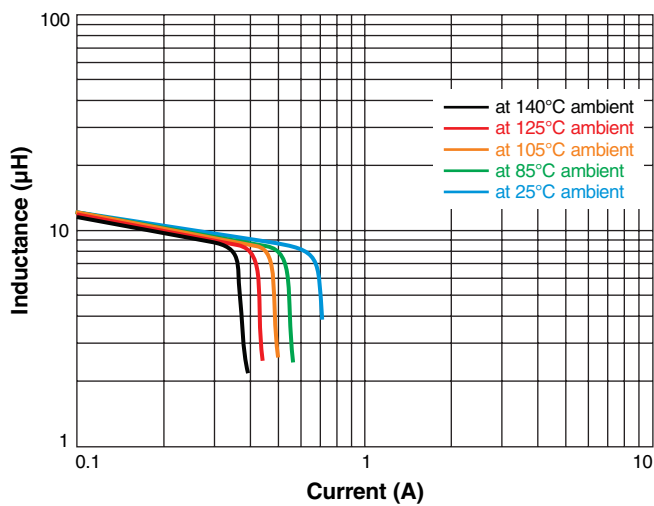
## L vs Current – 1205POC-682



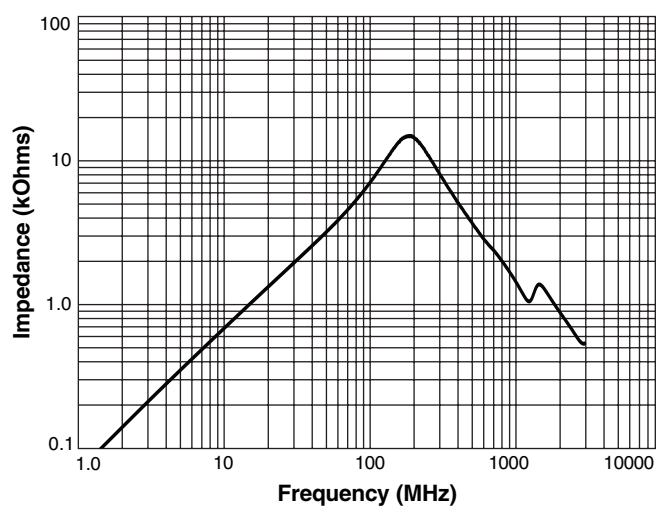
## Impedance vs Frequency – 1205POC-682



## L vs Current – 1205POC-103



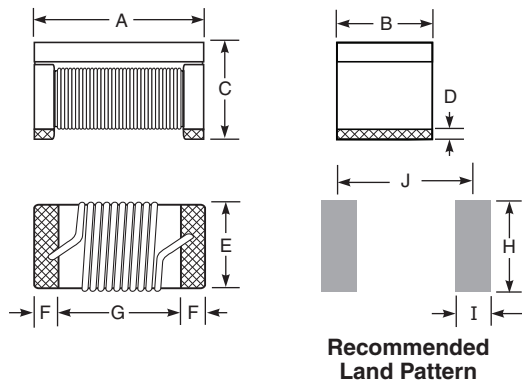
## Impedance vs Frequency – 1205POC-103





# 1205POC Power Injection Chokes for PoC

## Dimensions – 1205POC-103



A max	B max	C max	D	E	F	G	H	I	J	
0.126	0.055	0.093	0.006	0.050	0.012	0.096	0.055	0.018	0.107	inches
3,20	1,40	2,36	0,15	1,27	0,31	2,44	1,40	0,45	2,72	mm

**Packaging** 1000/7" reel; 3500/13" reel; Plastic tape: 12 mm wide, 0.35 mm thick, 8 mm pocket spacing, 2.36 mm pocket depth