

**NEW!**

# Power Inductors – AGP4233



- AEC-Q200 Grade 1 qualified
- High current, high inductance power inductors
- Designed for high current power supply applications
- Flat wire windings provide extremely low DC and AC resistance.
- Shield has solderable tabs for additional mounting stability.

**Core material** Ferrite**Environmental** RoHS compliant, halogen free**Terminations** RoHS compliant tin-silver over copper**Shield tabs** RoHS compliant bright tin over nickel over stainless steel**Weight** 135 g**Ambient temperature** –40°C to +125°C with Irms current, +125°C to +165°C with derated current**Storage temperature** Component: –40°C to +85°C.  
Tray packaging: –40°C to +80°C**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** 9 parts per tray**PCB washing** Tested with pure water or alcohol only. For other solvents, see Doc787\_PCB\_Washing.pdf

| Part number   | Inductance <sup>1</sup><br>±20% (µH) | DCR (mOhms) <sup>2</sup> |      | SRF typ<br>(MHz) | Isat (A) <sup>3</sup> |          |          | Irms (A) <sup>4</sup> |           |
|---------------|--------------------------------------|--------------------------|------|------------------|-----------------------|----------|----------|-----------------------|-----------|
|               |                                      | nom                      | max  |                  | 10% drop              | 20% drop | 30% drop | 20°C rise             | 40°C rise |
| AGP4233-682ME | 6.8                                  | 2.80                     | 2.95 | 21.7             | 92.0                  | 97.8     | 101.8    | 24                    | 34        |
| AGP4233-103ME | 10                                   | 2.80                     | 2.95 | 18.8             | 56.0                  | 60.0     | 63.0     | 24                    | 34        |
| AGP4233-153ME | 15                                   | 2.80                     | 2.95 | 15.2             | 45.0                  | 47.0     | 49.0     | 24                    | 34        |
| AGP4233-223ME | 22                                   | 2.80                     | 2.95 | 12.0             | 32.8                  | 35.4     | 36.6     | 24                    | 34        |
| AGP4233-333ME | 33                                   | 2.80                     | 2.95 | 10.0             | 22.5                  | 24.7     | 25.8     | 24                    | 34        |
| AGP4233-473ME | 47                                   | 2.80                     | 2.95 | 8.5              | 16.0                  | 17.6     | 18.6     | 24                    | 34        |
| AGP4233-683ME | 68                                   | 2.80                     | 2.95 | 6.4              | 10.6                  | 12.2     | 13.0     | 24                    | 34        |
| AGP4233-104ME | 100                                  | 2.80                     | 2.95 | 5.2              | 6.88                  | 7.80     | 8.36     | 24                    | 34        |
| AGP4233-154ME | 150                                  | 2.80                     | 2.95 | 4.2              | 4.18                  | 4.96     | 5.40     | 24                    | 34        |
| AGP4233-224ME | 220                                  | 10.5                     | 11.5 | 5.0              | 6.40                  | 7.20     | 7.60     | 12.4                  | 17.5      |
| AGP4233-334ME | 330                                  | 10.5                     | 11.5 | 4.1              | 4.20                  | 4.70     | 5.00     | 12.4                  | 17.5      |
| AGP4233-474ME | 470                                  | 10.5                     | 11.5 | 3.6              | 2.60                  | 3.20     | 3.40     | 12.4                  | 17.5      |

1. Inductance tested at 100 kHz, 0.1 Vrms on Agilent/HP 4192A.

2. DCR measured on a Keithley 580 micro-ohmmeter or equivalent.

3. DC current at which the inductance drops the specified amount from its value without current.

4. Current that causes the specified temperature rise of the winding from 25°C ambient.

Temperature rise of the core is usually less than that of the winding.

When Irms is greater than Isat, Isat is the more critical specification and Irms is shown in gray type.

5. Electrical specifications at 25°C.

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



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Document 917-1 Revised 12/12/14

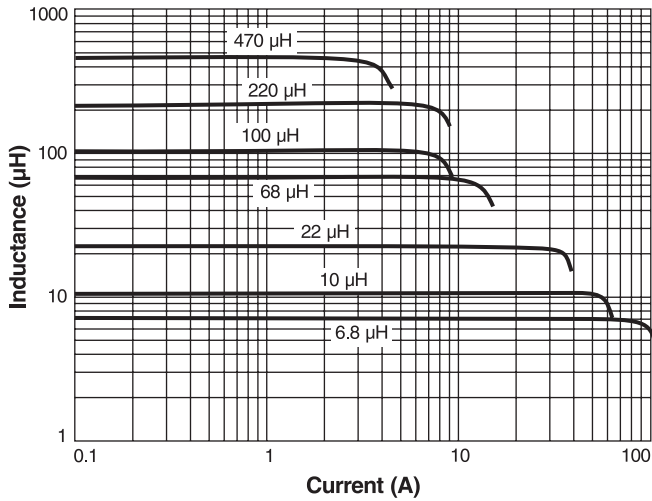
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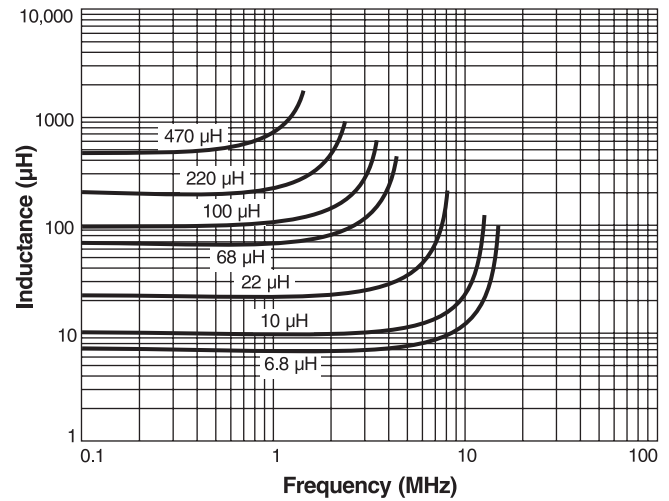
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# Power Inductors - AGP4233 Series

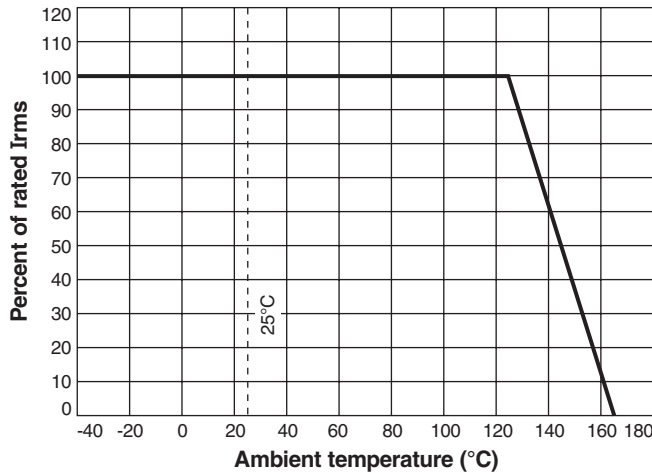
## Typical L vs Current



## Typical L vs Frequency



## Irms Derating

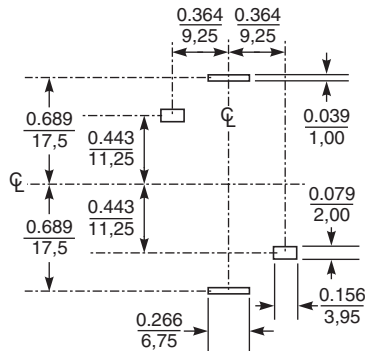
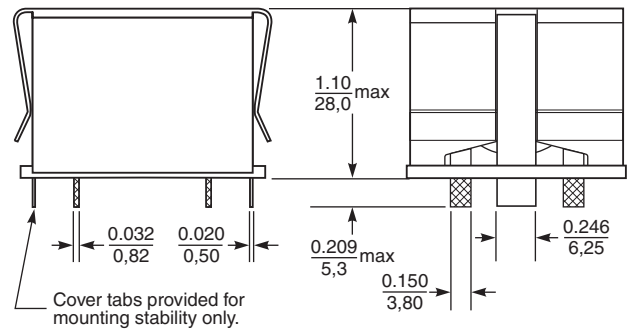
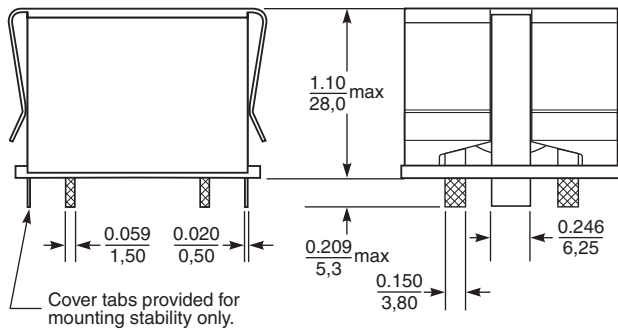
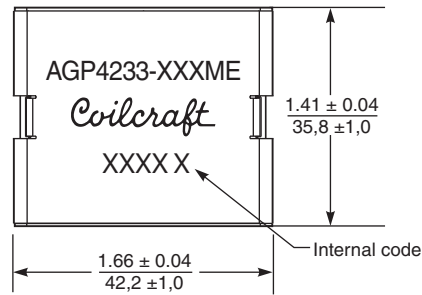
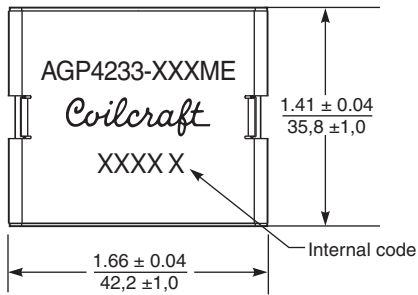


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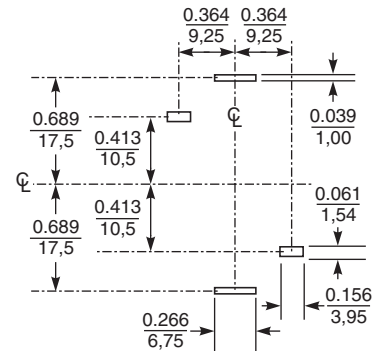
# Power Inductors - AGP4233 Series

**6.8 - 150  $\mu$ H**

**220 - 470  $\mu$ H**



**Recommended PC board layout**



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

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Document 917-3 Revised 12/12/14

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