

Description

- High performance, low profile, surface mount power inductors with a molybdenum permalloy core
- Small footprint and closed magnetic field construction ensure low EMI
- Low DCR and high efficiency
- Frequency range up to 500kHz
- RoHS compliant (-R option)

Applications

- PC cards, cellular telephones, pagers, and disk drives
- GPS systems

Environmental Data

- Storage temperature range: -40C to +125C
- Operating ambient temperature range: -40C to +85C (range is application specific).
- Infrared reflow temperature: +240°C for 30 seconds maximum



Packaging

- Supplied in tape and reel packaging, 3900 per reel

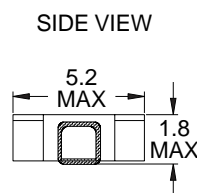
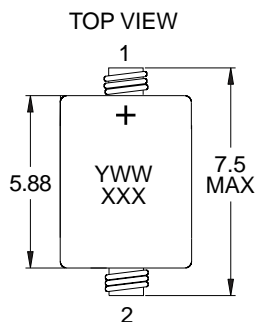
| Part Number | Inductance μH (rated) | OCL ⁽¹⁾ $\mu\text{H}\pm 20\%$ | DCR ⁽²⁾ typ. Ω | I RMS ⁽³⁾ Amperes | I SAT ⁽⁴⁾ Amperes | Volt ⁽⁵⁾ μsec |
|-------------|----------------------------------|--|----------------------------------|------------------------------|------------------------------|-------------------------------------|
| MP2A-R47 | 0.47 | 0.47 | 0.024 | 3.52 | 5.80 | 1.20 |
| MP2A-R68 | 0.68 | 0.68 | 0.027 | 3.31 | 4.83 | 1.27 |
| MP2A-1R0 | 1.00 | 1.21 | 0.067 | 2.11 | 3.63 | 2.00 |
| MP2A-1R5 | 1.50 | 1.54 | 0.073 | 2.02 | 3.22 | 2.09 |
| MP2A-2R2 | 2.20 | 2.30 | 0.086 | 1.87 | 2.64 | 2.26 |
| MP2A-3R3 | 3.30 | 3.21 | 0.098 | 1.75 | 2.23 | 2.42 |
| MP2A-4R7 | 4.70 | 4.86 | 0.117 | 1.60 | 1.81 | 2.64 |
| MP2A-6R8 | 6.80 | 6.85 | 0.136 | 1.49 | 1.53 | 2.84 |
| MP2A-8R2 | 8.20 | 8.54 | 0.167 | 1.34 | 1.54 | 3.15 |
| MP2A-100 | 10.00 | 10.02 | 0.179 | 1.29 | 1.42 | 3.26 |
| MP2A-150 | 15.00 | 15.18 | 0.217 | 1.18 | 1.16 | 3.59 |
| MP2A-220 | 22.00 | 21.40 | 0.311 | 0.98 | 0.97 | 4.30 |
| MP2A-330 | 33.00 | 32.74 | 0.476 | 0.79 | 0.79 | 5.32 |
| MP2A-470 | 47.00 | 46.48 | 0.727 | 0.64 | 0.66 | 6.57 |
| MP2A-680 | 68.00 | 68.53 | 1.108 | 0.52 | 0.54 | 8.11 |
| MP2A-820 | 82.00 | 81.15 | 1.463 | 0.45 | 0.50 | 9.32 |
| MP2A-101 | 100.00 | 99.65 | 2.015 | 0.39 | 0.45 | 10.94 |

Notes: (1) Open Circuit Inductance Test Parameters: 100 kHz, .25Vrms, 0.0Adc.
 (2) DCR limits 20°C.
 (3) RMS current for an approximate ΔT of 40°C without core loss. It is recommended that the temperature of the part not exceed 125°C.

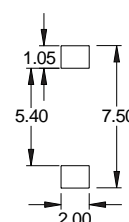
(4) Peak current for approximately 30% rolloff at 20°C.
 (5) Applied Volt-Time product (V- μs) across the inductor. This value represents the applied V- μs at 300KHz necessary to generate a core loss equal to 10% of the total losses for 40°C temperature rise.

| OPTION CODE | |
|-------------|------------------------|
| Option Code | Description |
| -R | RoHS compliant version |

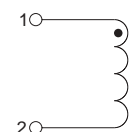
Mechanical Diagrams



PCB PAD LAYOUT



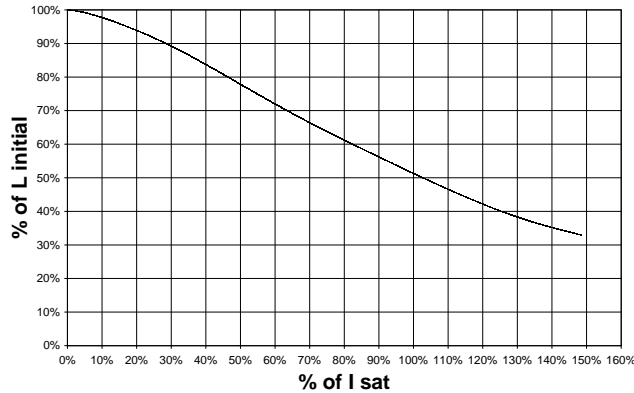
SCHEMATIC



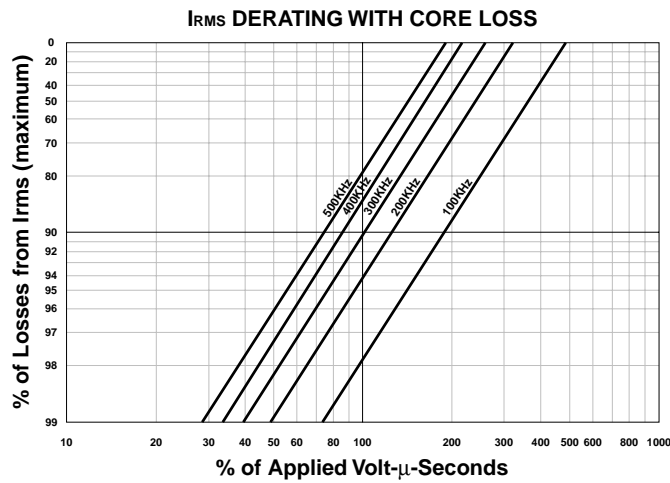
Dimensions in Millimeters.
 Specifications are subject to change without notice.

yww = Date Code
 xxx = Inductance value per family chart

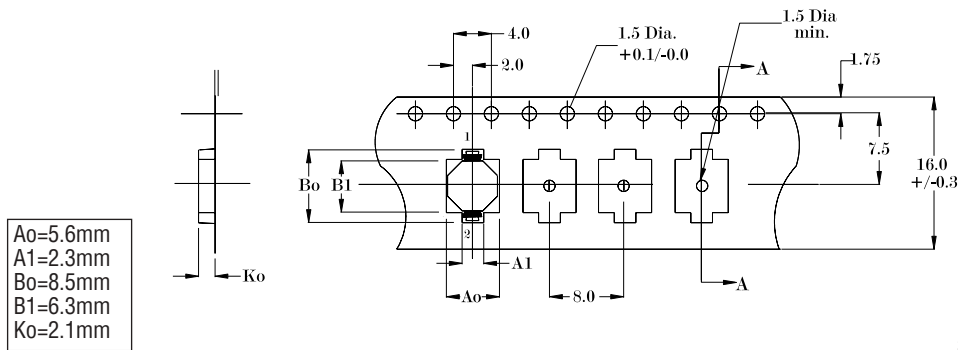
Rolloff



Core Loss



Packaging Information for MICRO-PAC™ & MICRO-PAC™ PLUS



**ACTUAL SIZE
MICRO-PAC PLUS**

Parts packaged on 13" Diameter reel,
3,900 parts per reel.