



SMD POWER/BACKLIGHT INDUCTORS

RSB402,402L,403,403C,403CL,803,805,805C,811,1306,1306C Series

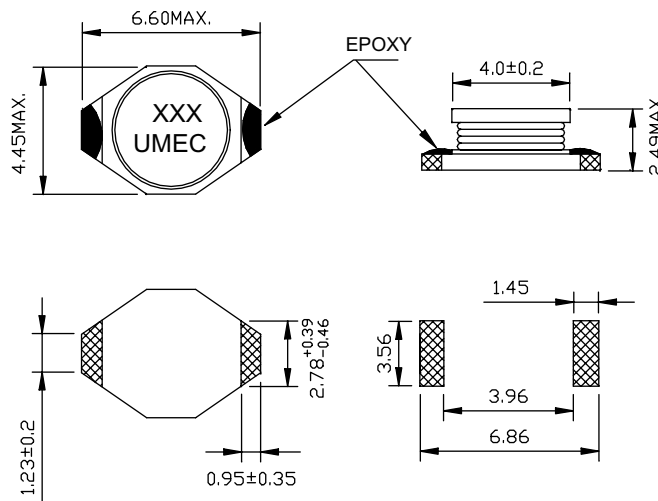
- Tiny and low-profile inductors that are designed for PCMCIA Type II and other space-conscious applications. Only 2.49mm high.
- RSB402 series is ideal for DC-DC conversion in NB computers, pagers, PDAs, flash memory programmers, and all types of battery powered equipment.
- Operating temperature range: -40°C to +85°C
- Tape and Reel package.

ELECTRICAL SPECIFICATIONS @25°C

| UMEC PART NUMBER | MARK | $L \pm 20\%^{1}$ (μH) | DCR(Ω) Max. | SRF typ. (MHz) | I_{sat}^2 (Adc) | I_{rms}^3 (Arms) |
|------------------|------|---------------------------------------|-------------------------|-------------------|-----------------------------|------------------------------|
| RSB402-1R0 | 1R0 | 1.0 | 0.09 | 180 | 2.3 | 2.7 |
| RSB402-1R5 | 1R5 | 1.5 | 0.09 | 140 | 2.1 | 2.5 |
| RSB402-2R2 | 2R2 | 2.2 | 0.10 | 125 | 1.8 | 2.1 |
| RSB402-3R3 | 3R3 | 3.3 | 0.12 | 100 | 1.6 | 1.9 |
| RSB402-4R7 | 4R7 | 4.7 | 0.13 | 80 | 1.2 | 1.8 |
| RSB402-6R8 | 6R8 | 6.8 | 0.165 | 60 | 0.96 | 1.6 |
| RSB402-100 | 100 | 10 | 0.19 | 50 | 0.88 | 1.5 |
| RSB402-150 | 150 | 15 | 0.32 | 40 | 0.72 | 1.1 |
| RSB402-220 | 220 | 22 | 0.54 | 30 | 0.56 | 1.0 |
| RSB402-330 | 330 | 33 | 0.74 | 20 | 0.46 | 0.9 |

1. Inductance tested at 100KHz, 0.1V, L_s
2. Inductance drop=10% typ. at rated I_{sat} .
3. $\Delta T=40^\circ\text{C}$ rise typ. at I_{rms} .

DIMENSION & DRAWING





SMD POWER/BACKLIGHT INDUCTORS

RSB402,402L,403,403C,403CL,803,805,805C,811,1306,1306C Series

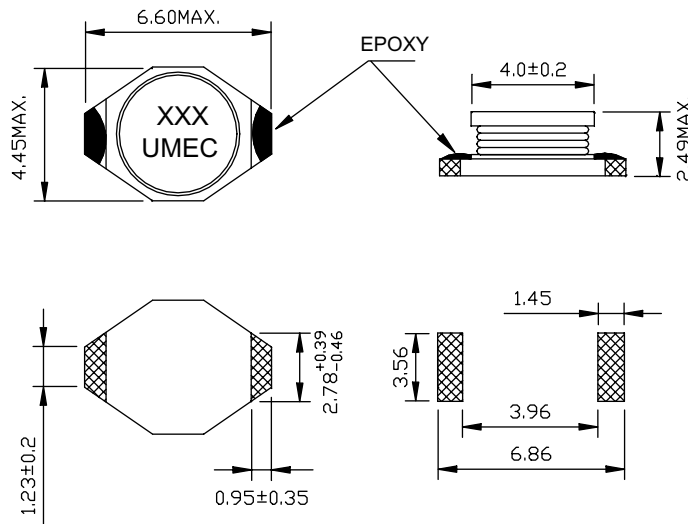
- These low profile series has the high breakdown voltage ratings required for backlight applications. Only 2.49mm high, Standard inductance values range from 1 to 6.8mH and custom value are available to meet specific requirement.
- Operating temperature range: -40°C to +85°C
- The insulation of core-winding should be 10MΩmin.

ELECTRICAL SPECIFICATIONS @25°C

| UMEC PART NUMBER | MARK | $L \pm 20\% ^1$ (mH) | DCR(Ω) max. | I_{sat}^2 (mA) | I_{rms}^3 (mA) |
|------------------|------|----------------------|-------------|------------------|------------------|
| RSB402L-102 | 102 | 1.0 | 19 | 100 | 150 |
| RSB402L-152 | 152 | 1.5 | 21 | 75 | 140 |
| RSB402L-222 | 222 | 2.2 | 42 | 60 | 100 |
| RSB402L-332 | 332 | 3.3 | 52 | 50 | 90 |
| RSB402L-472 | 472 | 4.7 | 80 | 45 | 75 |
| RSB402L-682 | 682 | 6.8 | 125 | 40 | 60 |

1. Inductance tested at 100KHz, 0.1V, L_s
2. Inductance drop=10% typ.
3. $\Delta T=40^\circ C$ rise typ. at I_{rms} .

DIMENSION & DRAWING





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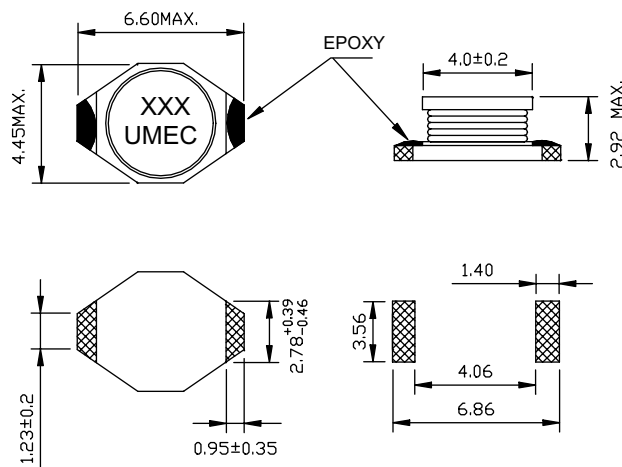
- These series are high energy storage and very low resistance suit for DC-DC conversion in NB computers, PDAs, step-up or step-down converters, flash memory programmers, etc.
- Operating temperature range: -40°C to +85°C
- Tape and Reel package.

ELECTRICAL SPECIFICATIONS @25°C

| UMEC PART NUMBER | MARK | $L \pm 20\%^{1}$ (μH) | DCR(Ω) max. | SRF typ. (MHz) | I_{sat}^2 (A \cdot c) | I_{rms}^3 (Arms) |
|------------------|------|---------------------------------------|-------------------------|-------------------|-------------------------------------|------------------------------|
| RSB403-1R0 | 1R0 | 1.0 | 0.05 | 130 | 2.90 | 2.9 |
| RSB403-1R5 | 1R5 | 1.5 | 0.05 | 115 | 2.60 | 2.8 |
| RSB403-2R2 | 2R2 | 2.2 | 0.07 | 90 | 2.30 | 2.4 |
| RSB403-3R3 | 3R3 | 3.3 | 0.08 | 70 | 2.00 | 2.0 |
| RSB403-4R7 | 4R7 | 4.7 | 0.09 | 50 | 1.50 | 1.5 |
| RSB403-6R8 | 6R8 | 6.8 | 0.13 | 45 | 1.20 | 1.4 |
| RSB403-100 | 100 | 10 | 0.16 | 35 | 1.10 | 1.1 |
| RSB403-150 | 150 | 15 | 0.23 | 30 | 0.90 | 1.2 |
| RSB403-220 | 220 | 22 | 0.37 | 20 | 0.70 | 0.8 |
| RSB403-330 | 330 | 33 | 0.51 | 15 | 0.58 | 0.6 |
| RSB403-470 | 470 | 47 | 0.64 | 14 | 0.50 | 0.5 |
| RSB403-680 | 680 | 68 | 0.86 | 11 | 0.40 | 0.4 |
| RSB403-101 | 101 | 100 | 1.27 | 9 | 0.31 | 0.3 |
| RSB403-151 | 151 | 150 | 2.00 | 6 | 0.27 | 0.25 |
| RSB403-221 | 221 | 220 | 3.11 | 5.5 | 0.22 | 0.2 |
| RSB403-331 | 331 | 330 | 3.80 | 5 | 0.18 | 0.16 |
| RSB403-471 | 471 | 470 | 5.06 | 4 | 0.16 | 0.15 |
| RSB403-681 | 681 | 680 | 9.20 | 3 | 0.14 | 0.12 |
| RSB403-102 | 102 | 1000 | 13.8 | 2 | 0.10 | 0.07 |

1. Inductance tested at 100KHz, 0.1V, L_s
2. Inductance drop=10% typ. at rated I_{sat} .
3. $\Delta T=15^\circ\text{C}$ rise typ. at I_{rms} .

DIMENSION & DRAWING





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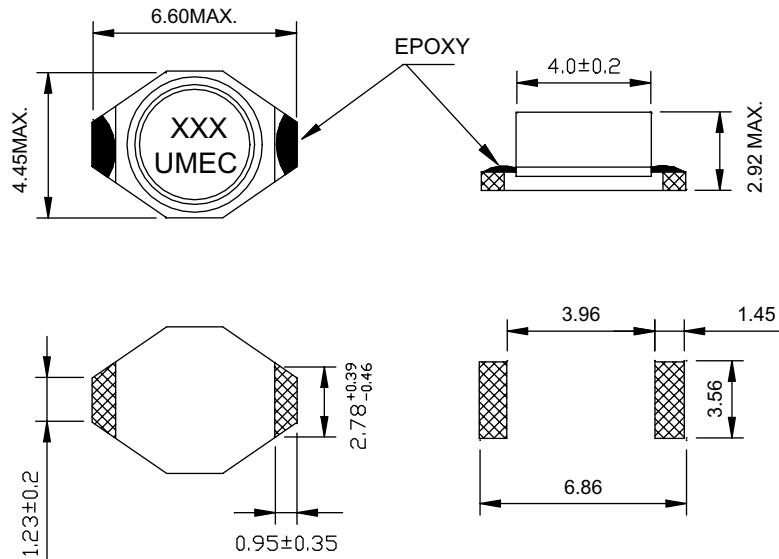
- These tiny shielded inductors are specially engineered for demanding backlighting applications. They feature high breakdown voltage and exceptional efficiency:DCR is 10% to 60% lower than other inductors.
- These shielded inductors are designed with a flat top and constructed of heat resistant materials to ensure trouble-free assembly and reflow operations. In addition to the standard values shown, custom inductors are also available.
- Operating temperature range: -40°C to +85°C
- The insulation of core-winding should be 10MΩmin.

ELECTRICAL SPECIFICATIONS @25°C

| UMEC PART NUMBER | MARK | $L \pm 20\%^{1}$ (mH) | DCR(Ω) max. | SRF typ. (MHz) | I_{max}^{2} (mA) |
|------------------|------|-----------------------|-------------|----------------|--------------------|
| RSB403CL-102 | 102 | 1.0 | 9 | 2 | 100 |
| RSB403CL-152 | 152 | 1.5 | 11 | 1 | 80 |
| RSB403CL-222 | 222 | 2.2 | 19 | 1 | 50 |
| RSB403CL-332 | 332 | 3.3 | 24 | 1 | 40 |
| RSB403CL-472 | 472 | 4.7 | 30 | 1 | 30 |
| RSB403CL-682 | 682 | 6.8 | 56 | 0.9 | 20 |
| RSB403CL-103 | 103 | 10.0 | 74 | 0.8 | 10 |

1. Inductance tested at 100KHz, 0.1V, L_S
2. $\Delta T=30^{\circ}C$ temperature rise at I_{max} .

DIMENSION & DRAWING





SMD POWER/BACKLIGHT INDUCTORS

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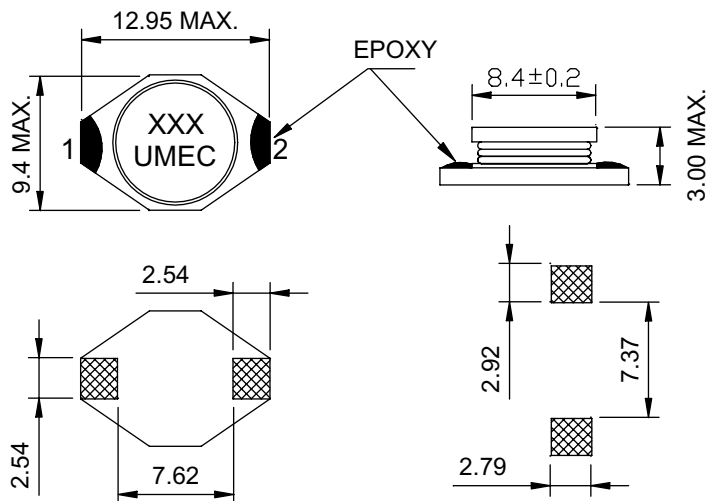
- These Series of surface mount power inductors are ideal for PDA, palmtop and other handheld applications.
- Inductance ratings from 10 to 1000uH and handle currents up to 2 Amps. With a height of only 3 mm, custom inductors are available to meet your exact requirements.
- Operating temperature range: -40°C to +85°C

ELECTRICAL SPECIFICATIONS @25°C

| UMEC PART NUMBER | MARK | $L \pm 20\% ^1$ (μ H) | DCR(Ω) Max. | SRF typ (MHz) | I_{sat}^2 (A) | I_{rms}^3 (A) |
|------------------|------|-------------------------------|-------------------------|------------------|--------------------|--------------------|
| RSB803-100 | 100 | 10 | 0.11 | 35 | 2.4 | 2.0 |
| RSB803-150 | 150 | 15 | 0.15 | 33 | 2.0 | 1.5 |
| RSB803-220 | 220 | 22 | 0.23 | 25 | 1.6 | 1.3 |
| RSB803-330 | 330 | 33 | 0.30 | 19 | 1.4 | 1.1 |
| RSB803-470 | 470 | 47 | 0.39 | 14 | 1.0 | 0.8 |
| RSB803-680 | 680 | 68 | 0.66 | 12 | 0.9 | 0.7 |
| RSB803-101 | 101 | 100 | 0.84 | 10 | 0.7 | 0.6 |
| RSB803-151 | 151 | 150 | 1.2 | 8 | 0.6 | 0.5 |
| RSB803-221 | 221 | 220 | 1.9 | 6 | 0.5 | 0.4 |
| RSB803-331 | 331 | 330 | 2.7 | 5 | 0.4 | 0.3 |
| RSB803-471 | 471 | 470 | 4.0 | 4 | 0.3 | 0.2 |
| RSB803-681 | 681 | 680 | 5.3 | 3 | 0.2 | 0.1 |
| RSB803-102 | 102 | 1000 | 8.4 | 2.5 | 0.1 | 0.05 |

1. Inductance tested at 100KHz, 0.1V, L_s
2. Inductance drop=10% typ. at rated I_{sat} .
3. $\Delta T=30^\circ C$ rise typ. at I_{rms} .

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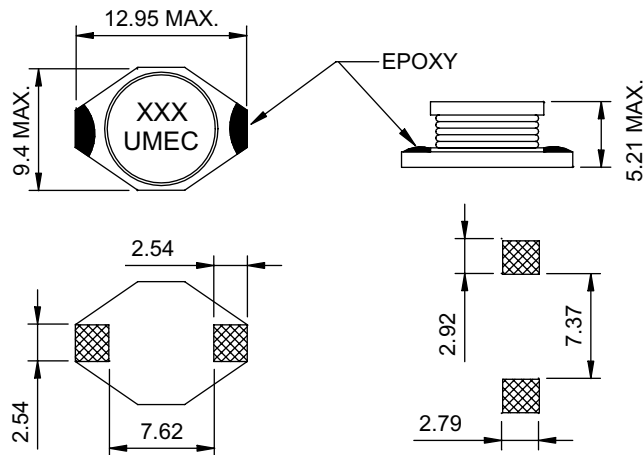
- These series of surface mount power inductors is designed for the smallest possible size, lowest cost, and highest performance. Their high energy storage and very low resistance make them the ideal inductors for DC-DC conversion in NB computers, PDAs, step-up or step-down converters, flash memory programmer, etc.
- Operating temperature range: -40°C to +85°C

ELECTRICAL SPECIFICATIONS @25°C

| UMEC PART NUMBER | MARK | $L \pm 20\%^{1}$ (μH) | DCR(Ω) Max. | SRF typ. (MHz) | I_{sat}^{2} (A) | I_{rms}^{3} (A) |
|------------------|------|---------------------------------------|-------------------------|-------------------|-----------------------------|-----------------------------|
| RSB805-1R0 | 1R0 | 1.0 | 0.009 | 100 | 9.0 | 6.8 |
| RSB805-1R5 | 1R5 | 1.5 | 0.010 | 90 | 8.0 | 6.4 |
| RSB805-2R2 | 2R2 | 2.2 | 0.012 | 80 | 7.0 | 6.1 |
| RSB805-3R3 | 3R3 | 3.3 | 0.015 | 65 | 6.4 | 5.4 |
| RSB805-4R7 | 4R7 | 4.7 | 0.018 | 45 | 5.4 | 4.8 |
| RSB805-6R8 | 6R8 | 6.8 | 0.027 | 38 | 4.6 | 4.4 |
| RSB805-100 | 100 | 10 | 0.038 | 30 | 3.8 | 3.9 |
| RSB805-150 | 150 | 15 | 0.046 | 27 | 3.0 | 3.1 |
| RSB805-220 | 220 | 22 | 0.085 | 19 | 2.6 | 2.7 |
| RSB805-330 | 330 | 33 | 0.10 | 15 | 2.0 | 2.1 |
| RSB805-470 | 470 | 47 | 0.14 | 12 | 1.6 | 1.8 |
| RSB805-680 | 680 | 68 | 0.20 | 10 | 1.4 | 1.5 |
| RSB805-101 | 101 | 100 | 0.28 | 9 | 1.2 | 1.3 |
| RSB805-151 | 151 | 150 | 0.40 | 6 | 1.0 | 1.0 |
| RSB805-221 | 221 | 220 | 0.61 | 5 | 0.8 | 0.8 |
| RSB805-331 | 331 | 330 | 1.02 | 4.5 | 0.6 | 0.6 |
| RSB805-471 | 471 | 470 | 1.27 | 3.5 | 0.5 | 0.5 |
| RSB805-681 | 681 | 680 | 2.02 | 2.5 | 0.4 | 0.4 |
| RSB805-102 | 102 | 1000 | 3.00 | 2.0 | 0.3 | 0.3 |

1. Inductance tested at 100KHz, 0.1V, L_s
2. Inductance drop=10% typ. at rated I_{sat} .
3. $\Delta T=15^\circ\text{C}$ rise typ. at I_{rms} .
4. SRF >13MHz measured using HP8753D network analyzer;
<13MHz using HP4192A.

DIMENSION & DRAWING





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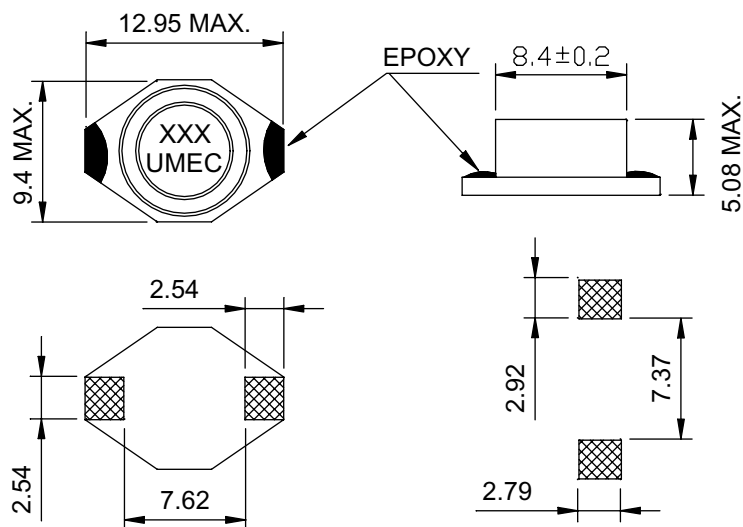
- They are ideal for high performance DC-DC converter applications, especially those requiring shielding.
- Saturation current ratings up to 5.6A and rms current ratings as high as 5A are available. DC resistance as low as 0.018Ω keeps power losses to a minimum.
- Operating temperature range: -40°C to +85°C

ELECTRICAL SPECIFICATIONS @25°C

| UMEC PART NUMBER | MARK | $L \pm 20\% ^1$ (μ H) | DCR(Ω) Max. | SRF typ. (MHz) | I_{sat}^2 (A) | I_{rms}^3 (A) |
|------------------|------|-------------------------------|-------------------------|-------------------|--------------------|--------------------|
| RSB805C-1R0 | 1R0 | 1.0 | 0.021 | 140 | 5.6 | 5.0 |
| RSB805C-1R5 | 1R5 | 1.5 | 0.022 | 120 | 5.2 | 4.5 |
| RSB805C-2R2 | 2R2 | 2.2 | 0.032 | 80 | 5.0 | 3.8 |
| RSB805C-3R3 | 3R3 | 3.3 | 0.039 | 70 | 3.9 | 3.3 |
| RSB805C-4R7 | 4R7 | 4.7 | 0.054 | 40 | 3.2 | 2.7 |
| RSB805C-6R8 | 6R8 | 6.8 | 0.075 | 38 | 2.8 | 2.2 |
| RSB805C-100 | 100 | 10.0 | 0.101 | 35 | 2.4 | 2.0 |
| RSB805C-150 | 150 | 15.0 | 0.150 | 25 | 2.0 | 1.5 |
| RSB805C-220 | 220 | 22.0 | 0.207 | 19 | 1.6 | 1.3 |
| RSB805C-330 | 330 | 33.0 | 0.334 | 15 | 1.4 | 1.1 |
| RSB805C-470 | 470 | 47.0 | 0.472 | 13 | 1.0 | 0.8 |

1. Inductance tested at 100KHz, 0.1V, L_s
2. Inductance drop 10% typ. at I_{sat} .
3. $\Delta T = 15^\circ C$ rise up at I_{rms} .

DIMENSION & DRAWING





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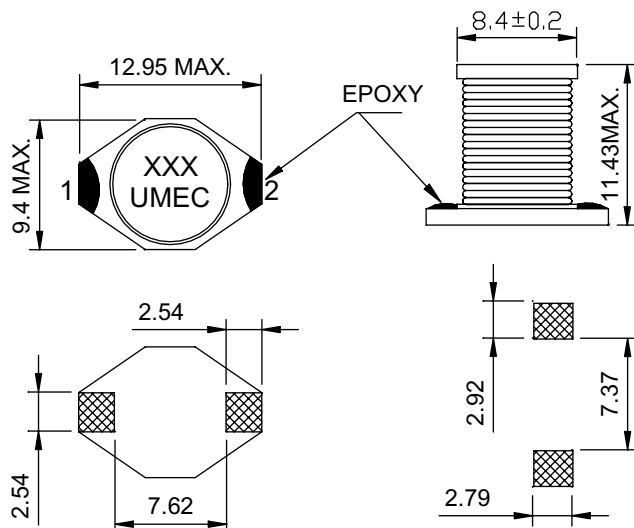
- These surface mount power inductors provide excellent current carrying capabilities in a small footprint component-up to 3.5Arms with an 8Adc saturation current rating for a 10uH part.
- In addition to the standard versions shown below, custom inductors are available to meet your exact requirements.
- Operating temperature range: -40°C to +85°C

ELECTRICAL SPECIFICATIONS @25°C

| UMEC PART NUMBER | MARK | $L \pm 20\%^{1}$ (μ H) | DCR(Ω) Max. | SRF typ. (MHz) | I_{sat}^{2} (A) | I_{rms}^{3} (A) |
|------------------|------|--------------------------------|-------------------------|-------------------|----------------------|----------------------|
| RSB811-100 | 100 | 10 | 0.040 | 22 | 8.0 | 3.5 |
| RSB811-150 | 150 | 15 | 0.050 | 18 | 7.0 | 3.0 |
| RSB811-220 | 220 | 22 | 0.066 | 11 | 5.5 | 2.5 |
| RSB811-330 | 330 | 33 | 0.080 | 9 | 4.0 | 2.0 |
| RSB811-470 | 470 | 47 | 0.110 | 8 | 3.8 | 1.6 |
| RSB811-680 | 680 | 68 | 0.17 | 7 | 3.0 | 1.2 |
| RSB811-101 | 101 | 100 | 0.22 | 5 | 2.5 | 1.2 |
| RSB811-151 | 151 | 150 | 0.34 | 4 | 2.0 | 0.9 |
| RSB811-221 | 221 | 220 | 0.44 | 3.5 | 1.6 | 0.7 |
| RSB811-331 | 331 | 330 | 0.70 | 2.5 | 1.2 | 0.6 |
| RSB811-471 | 471 | 470 | 0.95 | 2 | 1.0 | 0.3 |
| RSB811-681 | 681 | 680 | 1.2 | 2 | 1.0 | 0.2 |
| RSB811-102 | 102 | 1000 | 2.0 | 1.5 | 0.8 | 0.1 |

1. Inductance tested at 100KHz, 0.1V, L_s
2. L drop 10% typ. at I_{sat} .
3. $\Delta T = 20^\circ C$ typ. at I_{rms} .

DIMENSION & DRAWING





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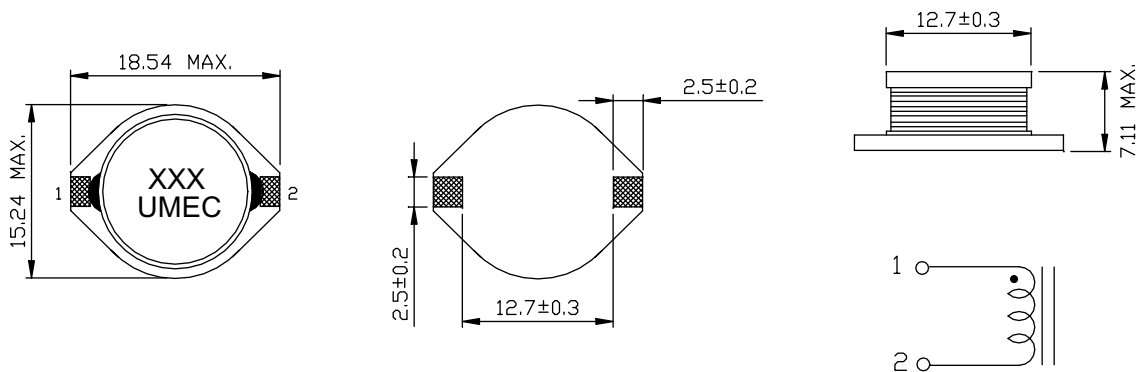
- These series of surface mount power inductors is designed for the higher current requirements of the Pentium Pro and other portable and handheld devices.
- The maximum rated current is 8.6Arms with a saturation current of 20Amps for a 1uH inductor. Exceptionally low dc resistance (as low as 0.009Ω) keeps power losses to a minimum.
- Operating temperature range: -40°C to +85°C

ELECTRICAL SPECIFICATIONS @25°C

| UMEC PART NUMBER | MARK | $L \pm 20\%^{1}$ (μH) | DCR(Ω) Max. | SRF typ ² (MHz) | Isat ³ (A) | Irms ⁴ (A) |
|------------------|------|-----------------------|-------------|----------------------------|-----------------------|-----------------------|
| RSB1306-1R0 | 1R0 | 1.0 | 0.009 | 80 | 20 | 8.6 |
| RSB1306-2R2 | 2R2 | 2.2 | 0.014 | 80 | 16 | 7.1 |
| RSB1306-3R3 | 3R3 | 3.3 | 0.018 | 60 | 14 | 6.2 |
| RSB1306-5R6 | 5R6 | 5.6 | 0.020 | 40 | 12 | 5.3 |
| RSB1306-100 | 100 | 10 | 0.031 | 30 | 10 | 4.3 |
| RSB1306-150 | 150 | 15 | 0.036 | 22 | 8.0 | 4.0 |
| RSB1306-220 | 220 | 22 | 0.047 | 20 | 7.0 | 3.5 |
| RSB1306-330 | 330 | 33 | 0.066 | 15 | 5.5 | 3.0 |
| RSB1306-470 | 470 | 47 | 0.086 | 9 | 4.5 | 2.6 |
| RSB1306-680 | 680 | 68 | 0.13 | 8 | 3.5 | 2.3 |
| RSB1306-101 | 101 | 100 | 0.19 | 7 | 3.0 | 1.8 |
| RSB1306-151 | 151 | 150 | 0.25 | 6 | 2.6 | 1.5 |
| RSB1306-221 | 221 | 220 | 0.38 | 5 | 2.4 | 1.2 |
| RSB1306-331 | 331 | 330 | 0.56 | 4 | 1.9 | 1.0 |
| RSB1306-471 | 471 | 470 | 0.85 | 3 | 1.4 | 0.82 |
| RSB1306-681 | 681 | 680 | 1.1 | 2.5 | 1.2 | 0.72 |
| RSB1306-102 | 102 | 1000 | 1.8 | 2 | 1.0 | 0.56 |

1. Inductance tested at 100KHz, 0.1V, L_s
2. SRF>13MHz measured using HP8753D network analyzer; <13MHz using HP4192A
3. Inductance drop=10% typ. at Isat.
4. $\Delta T=40^{\circ}C$ typ. at Irms.

DIMENSION & DRAWING





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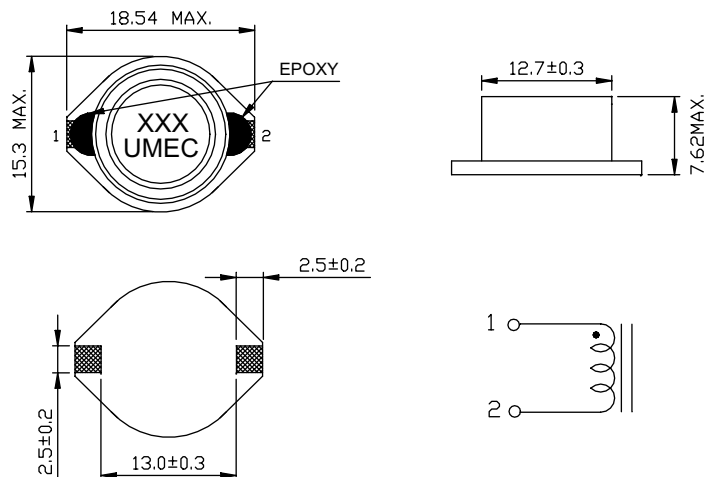
- These series is a family of magnetically shielded power inductors designed for the higher current requirement of portable computers, video recorders and other DC-DC conversion applications.
- They feature saturation current ratings as high as 8 Amps and rms current ratings up to 3.9 Amps. Low DC resistance (as low as 0.035 ohms) keeps power losses to a minimum.
- Operating temperature range: -40°C to +85°C

ELECTRICAL SPECIFICATIONS @25°C

| UMEC PART NUMBER | MARK | $L \pm 20\%^{1}$ (μH) | DCR(Ω) Max. | SRF typ. (MHz) | I_{sat}^{2} (A) | I_{rms}^{3} (A) |
|------------------|------|---------------------------------------|-------------------------|-------------------|-----------------------------|-----------------------------|
| RSB1306C-100 | 100 | 10 | 0.040 | 30 | 8.0 | 3.9 |
| RSB1306C-150 | 150 | 15 | 0.048 | 20 | 7.0 | 3.4 |
| RSB1306C-220 | 220 | 22 | 0.059 | 18 | 6.0 | 3.1 |
| RSB1306C-330 | 330 | 33 | 0.075 | 14 | 5.0 | 2.8 |
| RSB1306C-470 | 470 | 47 | 0.097 | 10 | 4.0 | 2.4 |
| RSB1306C-680 | 680 | 68 | 0.138 | 9 | 3.0 | 2.0 |
| RSB1306C-101 | 101 | 100 | 0.207 | 7 | 2.4 | 1.7 |
| RSB1306C-151 | 151 | 150 | 0.293 | 6 | 2.1 | 1.3 |
| RSB1306C-221 | 221 | 220 | 0.47 | 5 | 1.9 | 1.1 |
| RSB1306C-331 | 331 | 330 | 0.78 | 4 | 1.1 | 0.86 |
| RSB1306C-471 | 471 | 470 | 1.08 | 3 | 1.1 | 0.73 |
| RSB1306C-681 | 681 | 680 | 1.40 | 2.5 | 0.96 | 0.64 |
| RSB1306C-102 | 102 | 1000 | 2.01 | 2 | 0.80 | 0.53 |

1. Inductance tested at 100KHz, 0.1V, L_s
2. Inductance drop 10% typ. at I_{sat} .
3. $\Delta T=40^\circ\text{C}$ rise typ. at I_{rms} .

DIMENSION & DRAWING



*Specifications are subject to change without prior notice.

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