

Features

- Formerly J.W. Miller® model
- Current rating up to 3 A
- Inductance range: 0.1 μ H to 100,000 μ H
- Shielded
- RoHS compliant*

Applications

- Signal processing
- Telecommunications
- Dense board designs

BOURNS®

8250 Series – Shielded RF Choke

Electrical Specifications (@ 25 °C)

| Part Number | Inductance (μ H) ± 10 % | Q Min. | Test Freq. (MHz) | SRF (MHz) Min. | DCR (Ω) max. | Idc (mA) | Isat (mA) |
|--------------|----------------------------------|--------|------------------|----------------|-----------------------|----------|-----------|
| 8250-R10K-RC | 0.10 | 50 | 25 | 400 | 0.026 | 3000 | 3000 |
| 8250-R12K-RC | 0.12 | 50 | 25 | 400 | 0.029 | 2860 | 2860 |
| 8250-R15K-RC | 0.15 | 50 | 25 | 400 | 0.034 | 2600 | 2600 |
| 8250-R18K-RC | 0.18 | 50 | 25 | 400 | 0.044 | 2300 | 2300 |
| 8250-R22K-RC | 0.22 | 50 | 25 | 400 | 0.056 | 2050 | 2050 |
| 8250-R27K-RC | 0.27 | 50 | 25 | 400 | 0.090 | 1625 | 1625 |
| 8250-R33K-RC | 0.33 | 47 | 25 | 325 | 0.122 | 1400 | 1400 |
| 8250-R39K-RC | 0.39 | 47 | 25 | 390 | 0.161 | 1220 | 1220 |
| 8250-R47K-RC | 0.47 | 47 | 25 | 264 | 0.218 | 1060 | 1060 |
| 8250-R56K-RC | 0.56 | 45 | 25 | 249 | 0.290 | 900 | 900 |
| 8250-R68K-RC | 0.68 | 43 | 25 | 221 | 0.382 | 790 | 790 |
| 8250-R82K-RC | 0.82 | 41 | 25 | 200 | 0.450 | 725 | 725 |
| 8250-1R0K-RC | 1.0 | 42 | 25 | 156 | 0.054 | 2080 | 2080 |
| 8250-1R2K-RC | 1.2 | 43 | 7.9 | 144 | 0.070 | 1840 | 1840 |
| 8250-1R5K-RC | 1.5 | 41 | 7.9 | 128 | 0.096 | 1560 | 1560 |
| 8250-1R8K-RC | 1.8 | 42 | 7.9 | 121 | 0.107 | 1480 | 1480 |
| 8250-2R2K-RC | 2.2 | 42 | 7.9 | 108 | 0.142 | 1290 | 1290 |
| 8250-2R7K-RC | 2.7 | 41 | 7.9 | 96 | 0.284 | 1130 | 1130 |
| 8250-3R3K-RC | 3.3 | 41 | 7.9 | 88 | 0.260 | 950 | 950 |
| 8250-3R9K-RC | 3.9 | 41 | 7.9 | 84 | 0.354 | 815 | 815 |
| 8250-4R7K-RC | 4.7 | 42 | 7.9 | 72 | 0.168 | 710 | 710 |
| 8250-5R6K-RC | 5.6 | 42 | 7.9 | 69 | 0.511 | 680 | 680 |
| 8250-6R8K-RC | 6.8 | 42 | 7.9 | 62 | 0.750 | 560 | 560 |
| 8250-8R2K-RC | 8.2 | 46 | 7.9 | 58 | 0.828 | 535 | 535 |
| 8250-100K-RC | 10 | 46 | 7.9 | 53 | 1.270 | 532 | 532 |
| 8250-120K-RC | 12 | 50 | 2.5 | 47 | 1.760 | 368 | 368 |
| 8250-150K-RC | 15 | 50 | 2.5 | 41 | 2.300 | 325 | 325 |
| 8250-180K-RC | 18 | 50 | 2.5 | 43 | 0.677 | 596 | 235 |
| 8250-220K-RC | 22 | 50 | 2.5 | 38 | 0.742 | 565 | 220 |
| 8250-270K-RC | 27 | 50 | 2.5 | 36 | 0.850 | 526 | 200 |
| 8250-330K-RC | 33 | 50 | 2.5 | 33 | 0.928 | 505 | 190 |
| 8250-390K-RC | 39 | 50 | 2.5 | 29.4 | 1.28 | 429 | 180 |
| 8250-470K-RC | 47 | 55 | 2.5 | 26.5 | 1.48 | 400 | 175 |
| 8250-560K-RC | 56 | 55 | 2.5 | 25 | 1.64 | 380 | 160 |
| 8250-680K-RC | 68 | 55 | 2.5 | 23 | 2.20 | 328 | 150 |
| 8250-820K-RC | 82 | 55 | 2.5 | 14 | 1.96 | 349 | 140 |
| 8250-101K-RC | 100 | 65 | 2.5 | 12 | 2.28 | 322 | 120 |
| 8250-121K-RC | 120 | 65 | 0.79 | 11.2 | 2.45 | 311 | 95 |
| 8250-151K-RC | 150 | 65 | 0.79 | 10.5 | 2.79 | 294 | 90 |
| 8250-181K-RC | 180 | 65 | 0.79 | 10.0 | 3.08 | 277 | 85 |
| 8250-221K-RC | 220 | 65 | 0.79 | 9.4 | 3.48 | 251 | 80 |
| 8250-271K-RC | 270 | 65 | 0.79 | 8.0 | 4.55 | 231 | 70 |
| 8250-331K-RC | 330 | 65 | 0.79 | 7.3 | 5.10 | 215 | 65 |
| 8250-391K-RC | 390 | 65 | 0.79 | 6.9 | 5.62 | 205 | 60 |
| 8250-471K-RC | 470 | 70 | 0.79 | 6.5 | 6.45 | 192 | 58 |
| 8250-561K-RC | 560 | 70 | 0.79 | 6.0 | 8.00 | 174 | 55 |
| 8250-681K-RC | 680 | 75 | 0.79 | 5.6 | 8.85 | 163 | 50 |

~ Continued on page 2 ~

*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

Additional Information

Click these links for more information:



General Specifications

Temperature Rise 35 °C at Idc
 Rated Current..... Inductance drop 5 %
 typical at Isat
 Operating Temperature
 -55 °C to +105 °C
 Storage Temperature
 -55 °C to +105 °C

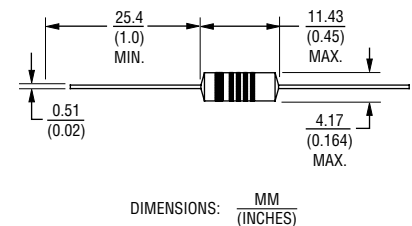
Materials

Core Material..... Ferrite
 Wire..... Enameled copper
 Terminal Coating..... Sn

Packaging

Standard..... 500 pcs. per bag
 Optional..... 2500 pcs. per 14-inch reel

Product Dimensions



NOTE: The wire diameter used on these products is from 0.025 to 0.21 mm. Due to the inductor wire termination being made on the connection pin, careful handling during assembly is required to ensure that the lead is not subjected to any stress close to the termination point. If bending/shaping of the pin is required, maintain stability and avoid excessive or abrupt forces to keep the parts centered and the leads secure on both sides. The bend radius should be located several millimeters away from the wire termination point to ensure that it is not stressed, with possible stretching or snapping occurring.



WARNING
 Cancer and Reproductive Harm
www.P65Warnings.ca.gov

8250 Series – Shielded RF Choke



Electrical Specifications (@ 25 °C) - Continued

| Part Number | Inductance (μH) $\pm 10\%$ | Q Min. | Test Freq. (MHz) | SRF (MHz) Min. | DCR (Ω) max. | Idc (mA) | Isat (mA) |
|--------------|---|--------|------------------|----------------|-----------------------|----------|-----------|
| 8250-821K-RC | 820 | 70 | 0.79 | 4.8 | 10.4 | 151 | 45 |
| 8250-102K-RC | 1000 | 65 | 0.79 | 4.5 | 12.1 | 139 | 40 |
| 8250-122K-RC | 1200 | 70 | 0.25 | 2.6 | 15.1 | 125 | 35 |
| 8250-152K-RC | 1500 | 70 | 0.25 | 2.5 | 16.8 | 119 | 33 |
| 8250-182K-RC | 1800 | 70 | 0.25 | 2.3 | 19.1 | 111 | 30 |
| 8250-222K-RC | 2200 | 70 | 0.25 | 2.2 | 22.0 | 103 | 27 |
| 8250-272K-RC | 2700 | 70 | 0.25 | 2.1 | 25.1 | 97 | 25 |
| 8250-332K-RC | 3300 | 70 | 0.25 | 2 | 33.3 | 85 | 22 |
| 8250-392K-RC | 3900 | 70 | 0.25 | 1.8 | 36.8 | 80 | 20 |
| 8250-472K-RC | 4700 | 70 | 0.25 | 1.7 | 51.2 | 68 | 19 |
| 8250-562K-RC | 5600 | 70 | 0.25 | 1.6 | 54.6 | 66 | 17 |
| 8250-682K-RC | 6800 | 70 | 0.25 | 1.5 | 62 | 62 | 16 |
| 8250-822K-RC | 8200 | 70 | 0.25 | 1.4 | 86.6 | 52 | 15 |
| 8250-103K-RC | 10,000 | 70 | 0.25 | 1.3 | 93.1 | 50 | 14 |
| 8250-123K-RC | 12,000 | 50 | 0.079 | 0.88 | 84 | 53 | 13 |
| 8250-153K-RC | 15,000 | 50 | 0.079 | 0.78 | 97 | 49 | 12 |
| 8250-183K-RC | 18,000 | 50 | 0.079 | 0.72 | 104 | 48 | 10 |
| 8250-223K-RC | 22,000 | 50 | 0.079 | 0.57 | 145 | 40 | 9 |
| 8250-273K-RC | 27,000 | 50 | 0.079 | 0.46 | 195 | 34 | 8 |
| 8250-333K-RC | 33,000 | 50 | 0.079 | 0.42 | 222 | 32 | 7.5 |
| 8250-393K-RC | 39,000 | 50 | 0.079 | 0.42 | 242 | 31 | 6 |
| 8250-473K-RC | 47,000 | 50 | 0.079 | 0.37 | 317 | 27 | 5.5 |
| 8250-563K-RC | 56,000 | 50 | 0.079 | 0.36 | 362 | 25 | 5 |
| 8250-683K-RC | 68,000 | 50 | 0.079 | 0.35 | 410 | 24 | 4 |
| 8250-823K-RC | 82,000 | 50 | 0.079 | 0.34 | 440 | 23 | 3.5 |
| 8250-104K-RC | 100,000 | 50 | 0.079 | 0.32 | 484 | 22 | 3 |

How To Order

Model **8250 - 101K -** **- RC**

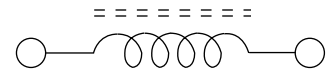
Value Code (see table)

Packaging Code
 Blank = 500 pcs. per bag
 TR = 2500 pcs. per reel

Compliance Code
 RC = RoHS Compliant

Examples:
 8250-151K-RC = 150 μH , packaged 500 pcs. per bag
 8250-R39K-TR-RC = 0.39 μH , packaged 2500 pcs. per 14-inch reel

Electrical Schematic



Americas: Tel: +1 951-781-5500
 Email: americus@bourns.com

Mexico: Tel: +52-614-478-0400
 Email: mexicus@bourns.com

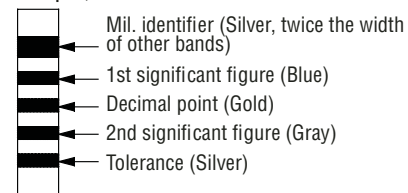
Asia: Tel: +886-2-2562-4117
 Email: asiacus@bourns.com

EMEA: Tel: +36 88 885 877
 Email: eurocus@bourns.com
www.bourns.com

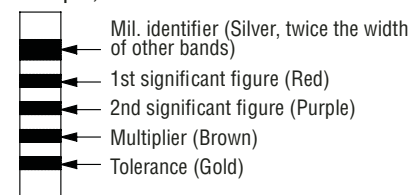
Typical Part Marking - MIL-STD Color Code

| Color | 1st & 2nd Significant Figure or Decimal Point | Multiplier | Tolerance |
|--------|---|------------|------------|
| Black | 0 | 1 | |
| Brown | 1 | 10 | |
| Red | 2 | 100 | |
| Orange | 3 | 1000 | |
| Yellow | 4 | | |
| Green | 5 | | |
| Blue | 6 | | |
| Violet | 7 | | |
| Gray | 8 | | |
| White | 9 | | |
| Silver | | | $\pm 10\%$ |
| Gold | Decimal Point | | $\pm 5\%$ |

Example for L value less than 10 μH
 6.8 μH , $\pm 10\%$



Example for L value 10 μH and higher
 270 μH , $\pm 5\%$



REV. 03/25

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 Users should verify actual device performance in their specific applications.
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