

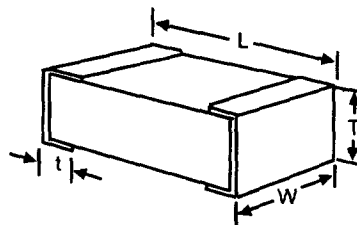
# MULTILAYER CHIP INDUCTORS

## HIGH FREQUENCY PERFORMANCE

# MHI SERIES

### FEATURES

- Multilayer structure ensures outstanding reliability for today's high frequency applications
- Advanced monolithic construction especially suited for high frequency applications
- Excellent Q and SRF characteristics
- Operating temperature range: -25°C to +105°C
- Standard tolerances: ±5%, 10%, 20%



**RCD Type MHI-0201 is the world's smallest chip inductor!**

| Ind. (nH) | Test Freq. (MHz) | MHI 0201* |                |                 |                    | MHI 0402 |                |                 |                    | MHI 0603 |                |                 |                    | MHI 0805 |                |                 |                    |
|-----------|------------------|-----------|----------------|-----------------|--------------------|----------|----------------|-----------------|--------------------|----------|----------------|-----------------|--------------------|----------|----------------|-----------------|--------------------|
|           |                  | Q Min.    | SRF Min. (MHz) | DCR Max. (Ohms) | Rated Current (mA) | Q Min.   | SRF Min. (MHz) | DCR Max. (Ohms) | Rated Current (mA) | Q Min.   | SRF Min. (MHz) | DCR Max. (Ohms) | Rated Current (mA) | Q Min.   | SRF Min. (MHz) | DCR Max. (Ohms) | Rated Current (mA) |
| 0.6       | 100              | 11        | >6,000         | 0.08            | 420                | -        | -              | -               | -                  | -        | -              | -               | -                  | -        | -              | -               | -                  |
| 0.8       | 100              | 11        | >6,000         | 0.09            | 410                | -        | -              | -               | -                  | -        | -              | -               | -                  | -        | -              | -               | -                  |
| 1.0       | 100              | 11        | >6,000         | 0.10            | 400                | 9        | >6,000         | .12             | 300                | -        | -              | -               | -                  | -        | -              | -               | -                  |
| 1.2       | 100              | 11        | >6,000         | 0.13            | 280                | 9        | >6,000         | .12             | 300                | -        | -              | -               | -                  | -        | -              | -               | -                  |
| 1.5       | 100              | 11        | >6,000         | 0.16            | 280                | 10       | >6,000         | .13             | 300                | 12       | >6,000         | 0.10            | 500                | 10       | >6,000         | 0.10            | 500                |
| 1.8       | 100              | 11        | >6,000         | 0.16            | 275                | 10       | >6,000         | .14             | 300                | 12       | >6,000         | 0.10            | 500                | 10       | >6,000         | 0.10            | 500                |
| 2.2       | 100              | 11        | >6,000         | 0.18            | 220                | 10       | >6,000         | .16             | 300                | 12       | >6,000         | 0.10            | 500                | 11       | >6,000         | 0.10            | 500                |
| 2.7       | 100              | 11        | >6,000         | 0.21            | 220                | 10       | >6,000         | .17             | 300                | 13       | >6,000         | 0.10            | 500                | 12       | >6,000         | 0.10            | 500                |
| 3.3       | 100              | 11        | >6,000         | 0.30            | 190                | 10       | >6,000         | .19             | 300                | 14       | >6,000         | 0.12            | 500                | 13       | >6,000         | 0.13            | 500                |
| 3.9       | 100              | 11        | >6,000         | 0.45            | 170                | 10       | >6,000         | .22             | 300                | 13       | >6,000         | 0.14            | 500                | 13       | >6,000         | 0.15            | 500                |
| 4.7       | 100              | 11        | >6,000         | 0.55            | 160                | 10       | >6,000         | .24             | 300                | 13       | >6,000         | 0.16            | 500                | 14       | >6,000         | 0.20            | 500                |
| 5.6       | 100              | 11        | >6,000         | 0.68            | 140                | 10       | >6,000         | .27             | 300                | 14       | >6,000         | 0.18            | 500                | 14       | >6,000         | 0.23            | 500                |
| 6.8       | 100              | 11        | >6,000         | 0.75            | 130                | 10       | >6,000         | .32             | 250                | 14       | >6,000         | 0.22            | 500                | 15       | >6,000         | 0.25            | 500                |
| 8.2       | 100              | 11        | 5,500          | 0.86            | 110                | 10       | 5,500          | .37             | 250                | 14       | 5,500          | 0.24            | 500                | 15       | 5,500          | 0.28            | 500                |
| 10        | 100              | 11        | 4,500          | 1.10            | 100                | 10       | 4,500          | .42             | 250                | 14       | 2,800          | 0.26            | 300                | 15       | 2,500          | 0.30            | 500                |
| 12        | 100              | 11        | 3,700          | 1.25            | 90                 | 10       | 4,500          | .50             | 250                | 15       | 2,700          | 0.28            | 300                | 16       | 2,450          | 0.35            | 300                |
| 15        | 100              | 11        | 3,300          | 1.50            | 90                 | 10       | 2,500          | .55             | 250                | 15       | 2,400          | 0.32            | 300                | 16       | 2,200          | 0.40            | 300                |
| 18        | 100              | -         | -              | -               | -                  | 10       | 2,700          | .65             | 200                | 15       | 2,050          | 0.35            | 300                | 17       | 1,750          | 0.45            | 300                |
| 22        | 100              | -         | -              | -               | -                  | 10       | 1,800          | .80             | 200                | 16       | 1,650          | 0.40            | 300                | 18       | 1,700          | 0.50            | 300                |
| 27        | 100              | -         | -              | -               | -                  | 10       | 1,500          | .90             | 200                | 16       | 1,750          | 0.45            | 300                | 17       | 1,550          | 0.55            | 300                |
| 33        | 100              | -         | -              | -               | -                  | -        | -              | -               | -                  | 16       | 1,500          | 0.55            | 300                | 18       | 1,350          | 0.60            | 300                |
| 39        | 100              | -         | -              | -               | -                  | -        | -              | -               | -                  | 16       | 1,500          | 0.60            | 300                | 18       | 1,300          | 0.65            | 300                |
| 47        | 100              | -         | -              | -               | -                  | -        | -              | -               | -                  | 16       | 1,200          | 0.70            | 300                | 18       | 1,200          | 0.70            | 300                |
| 56        | 100              | -         | -              | -               | -                  | -        | -              | -               | -                  | 16       | 1,150          | 0.75            | 300                | 19       | 1,150          | 0.75            | 300                |
| 68        | 100              | -         | -              | -               | -                  | -        | -              | -               | -                  | 16       | 1,050          | 0.85            | 300                | 19       | 1,000          | 0.80            | 300                |
| 82        | 100              | -         | -              | -               | -                  | -        | -              | -               | -                  | 16       | 1,000          | 0.95            | 300                | 19       | 950            | 0.90            | 300                |
| 100       | 100              | -         | -              | -               | -                  | -        | -              | -               | -                  | 16       | 945            | 1.00            | 300                | 23       | 900            | 0.90            | 300                |
| 120       | 100              | -         | -              | -               | -                  | -        | -              | -               | -                  | -        | -              | -               | -                  | 23       | 850            | 0.95            | 300                |
| 150       | 100              | -         | -              | -               | -                  | -        | -              | -               | -                  | -        | -              | -               | -                  | 22       | 850            | 1.00            | 300                |
| 180       | 100              | -         | -              | -               | -                  | -        | -              | -               | -                  | -        | -              | -               | -                  | 21       | 800            | 1.10            | 300                |
| 220       | 100              | -         | -              | -               | -                  | -        | -              | -               | -                  | -        | -              | -               | -                  | 20       | 800            | 1.20            | 300                |
| 270       | 50               | -         | -              | -               | -                  | -        | -              | -               | -                  | -        | -              | -               | -                  | 18       | 750            | 0.95            | 300                |
| 330       | 50               | -         | -              | -               | -                  | -        | -              | -               | -                  | -        | -              | -               | -                  | 18       | 750            | 1.00            | 300                |
| 390       | 50               | -         | -              | -               | -                  | -        | -              | -               | -                  | -        | -              | -               | -                  | 18       | 800            | 1.10            | 300                |
| 470       | 50               | -         | -              | -               | -                  | -        | -              | -               | -                  | -        | -              | -               | -                  | 16       | 450            | 1.20            | 300                |

\* 0201 chips are single layer construction utilizing RCD's proprietary film technology.

| Type MHI | L (Length)               | W (Width)               | T (Thick)               | t (Term. Thickness)     |
|----------|--------------------------|-------------------------|-------------------------|-------------------------|
| 0201     | .022±.003<br>[0.55±.075] | .011±.002<br>[0.28±.05] | .010±.002<br>[0.25±.05] | .006±.002<br>[0.15±.05] |
| 0402     | .039±.004<br>[1.00±.10]  | .020±.002<br>[0.5±.05]  | .020±.002<br>[0.5±.05]  | .010±.004<br>[0.25±.10] |
| 0603     | .063±.006<br>[1.6±.15]   | .031±.006<br>[0.8±.15]  | .031±.006<br>[0.8±.15]  | .010±.004<br>[0.25±.10] |
| 0805     | .078±.007<br>[2.0±.2]    | .049±.007<br>[1.25±.2]  | .033±.007*<br>[0.85±.2] | .019±.007<br>[0.5±.2]   |

\* Thickness of .049±.007 is optional by factory unless requested otherwise.

### P/N DESIGNATION:

**MHI0402 - 220 - K T**

RCD Type \_\_\_\_\_

Induc. Code: 2 signif. figures and multiplier  
e.g. R60=0.6nH, 1R0=1nH, 100=10nH, 101=100nH

Tolerance: M=20%, K=10%, J=5%,  
S=±0.3nH

Packaging: B=Bulk, T=Tape & Reel