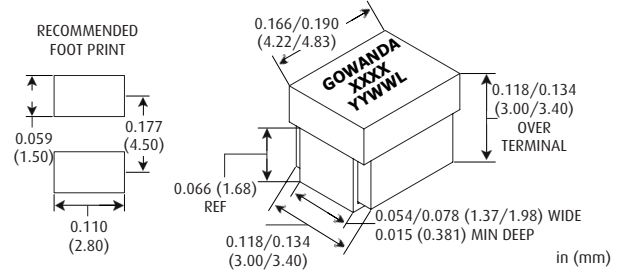


**MLRF1812 SERIES**

MIL-PRF-83446/39 Qualified Molded Unshielded Inductor

Military Specifications:  
M83446/39



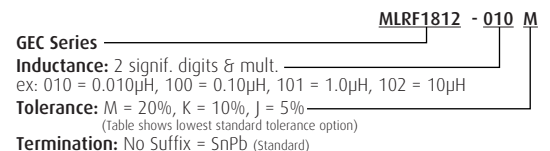
| PART NUMBER                                | MIL DASH NO. | L μH  | Q MIN | TEST FREQ MHz | SRF MHz MIN <sup>1</sup> | DCR Ω MAX | CURRENT RATING mA DC |
|--|--------------|-------|-------|---------------|--------------------------|-----------|----------------------|
| <b>MIL-PRF-83446/39 PHENOLIC CORE</b>      |              |       |       |               |                          |           |                      |
| MLRF1812-010M                              | 01F          | 0.010 | 40    | 50            | 1000                     | 0.10      | 1230                 |
| MLRF1812-012M                              | 02F          | 0.012 | 40    | 50            | 1000                     | 0.10      | 1230                 |
| MLRF1812-015M                              | 03F          | 0.015 | 40    | 50            | 1000                     | 0.10      | 1230                 |
| MLRF1812-018M                              | 04F          | 0.018 | 40    | 50            | 1000                     | 0.10      | 1230                 |
| MLRF1812-022M                              | 05F          | 0.022 | 40    | 50            | 1000                     | 0.10      | 1230                 |
| MLRF1812-027M                              | 06F          | 0.027 | 40    | 50            | 1000                     | 0.15      | 1000                 |
| MLRF1812-033M                              | 07F          | 0.033 | 40    | 50            | 1000                     | 0.15      | 1000                 |
| MLRF1812-039M                              | 08F          | 0.039 | 30    | 50            | 1000                     | 0.20      | 870                  |
| MLRF1812-047M                              | 09F          | 0.047 | 30    | 50            | 1000                     | 0.20      | 870                  |
| MLRF1812-056M                              | 10F          | 0.056 | 30    | 50            | 850                      | 0.25      | 770                  |
| MLRF1812-068M                              | 11F          | 0.068 | 25    | 50            | 750                      | 0.25      | 770                  |
| MLRF1812-082M                              | 12F          | 0.082 | 25    | 50            | 750                      | 0.25      | 700                  |
| <b>MIL-PRF-83446/39 POWDERED IRON CORE</b> |              |       |       |               |                          |           |                      |
| MLRF1812-100K                              | 13F          | 0.100 | 30    | 25            | 650                      | 0.30      | 818                  |
| MLRF1812-120K                              | 14F          | 0.120 | 30    | 25            | 600                      | 0.30      | 818                  |
| MLRF1812-150K                              | 15F          | 0.150 | 30    | 25            | 500                      | 0.30      | 818                  |
| MLRF1812-180K                              | 16F          | 0.180 | 30    | 25            | 400                      | 0.35      | 757                  |
| MLRF1812-220K                              | 17F          | 0.220 | 30    | 25            | 350                      | 0.40      | 708                  |
| MLRF1812-270K                              | 18F          | 0.270 | 30    | 25            | 300                      | 0.45      | 668                  |
| MLRF1812-330K                              | 19F          | 0.330 | 30    | 25            | 250                      | 0.55      | 604                  |
| MLRF1812-390K                              | 20F          | 0.390 | 30    | 25            | 220                      | 0.70      | 535                  |
| MLRF1812-470K                              | 21F          | 0.470 | 30    | 25            | 190                      | 0.80      | 501                  |
| MLRF1812-560K                              | 22F          | 0.560 | 30    | 25            | 170                      | 1.20      | 409                  |
| MLRF1812-680K                              | 23F          | 0.680 | 30    | 25            | 150                      | 1.40      | 379                  |
| MLRF1812-820K                              | 24F          | 0.820 | 30    | 25            | 140                      | 1.60      | 354                  |
| <b>MIL-PRF-83446/39 FERRITE CORE</b>       |              |       |       |               |                          |           |                      |
| MLRF1812-101J                              | 25F          | 1.0   | 50    | 7.9           | 100                      | 0.50      | 634                  |
| MLRF1812-121J                              | 26F          | 1.2   | 50    | 7.9           | 80                       | 0.55      | 604                  |
| MLRF1812-151J                              | 27F          | 1.5   | 50    | 7.9           | 70                       | 0.60      | 578                  |
| MLRF1812-181J                              | 28F          | 1.8   | 50    | 7.9           | 60                       | 0.65      | 556                  |
| MLRF1812-221J                              | 29F          | 2.2   | 50    | 7.9           | 55                       | 0.70      | 535                  |
| MLRF1812-271J                              | 30F          | 2.7   | 50    | 7.9           | 50                       | 0.75      | 517                  |
| MLRF1812-331J                              | 31F          | 3.3   | 50    | 7.9           | 45                       | 0.80      | 501                  |
| MLRF1812-391J                              | 32F          | 3.9   | 50    | 7.9           | 40                       | 0.90      | 472                  |
| MLRF1812-471J                              | 33F          | 4.7   | 50    | 7.9           | 35                       | 1.0       | 448                  |
| MLRF1812-561J                              | 34F          | 5.6   | 50    | 7.9           | 33                       | 1.1       | 427                  |
| MLRF1812-681J                              | 35F          | 6.8   | 50    | 7.9           | 27                       | 1.2       | 409                  |
| MLRF1812-821J                              | 36F          | 8.2   | 50    | 7.9           | 25                       | 1.4       | 375                  |
| MLRF1812-102J                              | 37F          | 10    | 50    | 7.9           | 20                       | 1.6       | 354                  |
| MLRF1812-122J                              | 38F          | 12    | 50    | 2.5           | 18                       | 2.0       | 317                  |
| MLRF1812-152J                              | 39F          | 15    | 50    | 2.5           | 17                       | 2.5       | 283                  |
| MLRF1812-182J                              | 40F          | 18    | 50    | 2.5           | 15                       | 2.8       | 268                  |
| MLRF1812-222J                              | 41F          | 22    | 50    | 2.5           | 13                       | 3.2       | 250                  |
| MLRF1812-272J                              | 42F          | 27    | 50    | 2.5           | 12                       | 3.6       | 236                  |
| MLRF1812-332J                              | 43F          | 33    | 50    | 2.5           | 11                       | 4.0       | 224                  |
| MLRF1812-392J                              | 44F          | 39    | 50    | 2.5           | 11                       | 4.5       | 211                  |
| MLRF1812-472J                              | 45F          | 47    | 50    | 2.5           | 10                       | 5.0       | 200                  |
| MLRF1812-562J                              | 46F          | 56    | 50    | 2.5           | 9.0                      | 5.5       | 191                  |
| MLRF1812-682J                              | 47F          | 68    | 50    | 2.5           | 9.0                      | 6.0       | 183                  |
| MLRF1812-822J                              | 48F          | 82    | 50    | 2.5           | 8.0                      | 7.0       | 169                  |
| MLRF1812-103J                              | 49F          | 100   | 40    | 2.5           | 8.0                      | 8.0       | 158                  |
| MLRF1812-123J                              | 50F          | 120   | 40    | 0.79          | 6.0                      | 8.0       | 158                  |
| MLRF1812-153J                              | 51F          | 150   | 40    | 0.79          | 5.0                      | 9.0       | 149                  |
| MLRF1812-183J                              | 52F          | 180   | 40    | 0.79          | 5.0                      | 9.5       | 145                  |
| MLRF1812-223J                              | 53F          | 220   | 40    | 0.79          | 4.0                      | 10        | 142                  |
| MLRF1812-273J                              | 54F          | 270   | 40    | 0.79          | 4.0                      | 12        | 129                  |
| MLRF1812-333J                              | 55F          | 330   | 40    | 0.79          | 3.5                      | 14        | 120                  |
| MLRF1812-393J                              | 56F          | 390   | 40    | 0.79          | 3.0                      | 20        | 100                  |
| MLRF1812-473J                              | 57F          | 470   | 40    | 0.79          | 3.0                      | 26        | 88                   |
| MLRF1812-563J                              | 58F          | 560   | 30    | 0.79          | 3.0                      | 30        | 82                   |
| MLRF1812-683J                              | 59F          | 680   | 30    | 0.79          | 3.0                      | 30        | 82                   |
| MLRF1812-823J                              | 60F          | 820   | 30    | 0.79          | 2.5                      | 45        | 67                   |
| MLRF1812-104J                              | 61F          | 1000  | 30    | 0.79          | 2.5                      | 60        | 55                   |

<sup>1</sup> SRF values above 250 MHz are calculated and are for reference only

**NOTES**

- **Operating Temperature Range:** -55°C to +125°C
- **Current Rating** is based on a 35°C temperature rise at an ambient temperature of 90°C
- **DWV** 200 Vrms @ Sea Level  
80 Vrms @ 70,000 Feet
- **Maximum Power Dissipation** at 90°C Ambient:  
210 mW for Phenolic  
278 mW for Powdered Iron & Ferrite
- **Weight Max:** 0.301 grams
- **Marking:** GOWANDA; XXXX (dash number); YYWWL (see diagram above)
- Materials are fungus-inert to meet method 508 of MIL-STD-810H

**PART NUMBER DERIVATION**



**EXAMPLE OF ORDERING BY MILITARY PART NUMBER:**  
MLRF1812-010M → M83446/39-01F

**TAPE AND REEL SPECS**

|                      |        |
|----------------------|--------|
| Pieces/reel maximum: | 2200   |
| Pitch between parts: | 8 mm   |
| Tape width:          | 12 mm  |
| Reel diameter:       | 13 in. |