

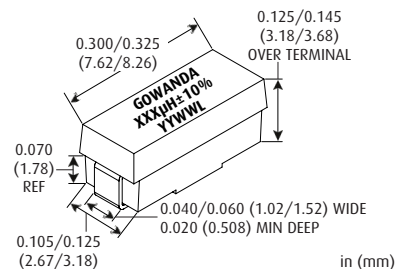
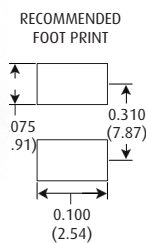
## MLRF3013 SERIES



### MIL-PRF-83446 Qualified Molded Unshielded Inductor

**Military Specifications:**

M83446/31, M83446/32, M83446/33



| PART NUMBER                                | MIL DASH NO. | L µH | Q MIN | TEST FREQ MHz | SRF MHz MIN | DCR Ω MAX | CURRENT RATING mA DC |
|--------------------------------------------|--------------|------|-------|---------------|-------------|-----------|----------------------|
| <b>MIL-PRF-83446/31 PHENOLIC CORE</b>      |              |      |       |               |             |           |                      |
| MLRF3013-100K                              | 01F          | 0.10 | 40    | 25            | 680         | 0.08      | 1380                 |
| MLRF3013-120K                              | 02F          | 0.12 | 40    | 25            | 640         | 0.09      | 1300                 |
| MLRF3013-150K                              | 03F          | 0.15 | 38    | 25            | 600         | 0.10      | 1230                 |
| MLRF3013-180K                              | 04F          | 0.18 | 35    | 25            | 550         | 0.12      | 1120                 |
| MLRF3013-220K                              | 05F          | 0.22 | 33    | 25            | 510         | 0.14      | 1040                 |
| MLRF3013-270K                              | 06F          | 0.27 | 33    | 25            | 430         | 0.16      | 975                  |
| MLRF3013-330K                              | 07F          | 0.33 | 30    | 25            | 410         | 0.22      | 830                  |
| MLRF3013-390K                              | 08F          | 0.39 | 30    | 25            | 365         | 0.30      | 710                  |
| MLRF3013-470K                              | 09F          | 0.47 | 30    | 25            | 330         | 0.35      | 660                  |
| MLRF3013-560K                              | 10F          | 0.56 | 30    | 25            | 300         | 0.50      | 550                  |
| MLRF3013-680K                              | 11F          | 0.68 | 28    | 25            | 275         | 0.60      | 500                  |
| MLRF3013-820K                              | 12F          | 0.82 | 28    | 25            | 250         | 0.85      | 420                  |
| MLRF3013-101K                              | 13F          | 1.0  | 25    | 25            | 230         | 1.0       | 390                  |
| <b>MIL-PRF-83446/32 POWDERED IRON CORE</b> |              |      |       |               |             |           |                      |
| MLRF3013-121K                              | 01F          | 1.2  | 25    | 7.9           | 150         | 0.18      | 620                  |
| MLRF3013-151K                              | 02F          | 1.5  | 28    | 7.9           | 140         | 0.22      | 560                  |
| MLRF3013-181K                              | 03F          | 1.8  | 30    | 7.9           | 125         | 0.30      | 480                  |
| MLRF3013-221K                              | 04F          | 2.2  | 30    | 7.9           | 115         | 0.40      | 415                  |
| MLRF3013-271K                              | 05F          | 2.7  | 37    | 7.9           | 100         | 0.55      | 355                  |
| MLRF3013-331K                              | 06F          | 3.3  | 45    | 7.9           | 90          | 0.85      | 285                  |
| MLRF3013-391K                              | 07F          | 3.9  | 45    | 7.9           | 80          | 1.0       | 263                  |
| MLRF3013-471K                              | 08F          | 4.7  | 45    | 7.9           | 75          | 1.2       | 239                  |
| MLRF3013-561K                              | 09F          | 5.6  | 50    | 7.9           | 65          | 1.8       | 195                  |
| MLRF3013-681K                              | 10F          | 6.8  | 50    | 7.9           | 60          | 2.0       | 185                  |
| MLRF3013-821K                              | 11F          | 8.2  | 55    | 7.9           | 55          | 2.7       | 160                  |
| MLRF3013-102K                              | 12F          | 10   | 55    | 7.9           | 50          | 3.3       | 144                  |
| MLRF3013-122K                              | 13F          | 12   | 45    | 2.5           | 40          | 2.7       | 160                  |
| MLRF3013-152K                              | 14F          | 15   | 45    | 2.5           | 35          | 2.8       | 157                  |
| MLRF3013-182K                              | 15F          | 18   | 45    | 2.5           | 30          | 3.1       | 149                  |
| MLRF3013-222K                              | 16F          | 22   | 45    | 2.5           | 25          | 3.3       | 144                  |
| MLRF3013-272K                              | 17F          | 27   | 45    | 2.5           | 20          | 3.5       | 140                  |
| <b>MIL-PRF-83446/33 FERRITE CORE</b>       |              |      |       |               |             |           |                      |
| MLRF3013-332K                              | 01F          | 33   | 35    | 2.5           | 24          | 3.4       | 130                  |
| MLRF3013-392K                              | 02F          | 39   | 35    | 2.5           | 22          | 3.6       | 125                  |
| MLRF3013-472K                              | 03F          | 47   | 35    | 2.5           | 20          | 4.5       | 110                  |
| MLRF3013-562K                              | 04F          | 56   | 35    | 2.5           | 18          | 5.7       | 100                  |
| MLRF3013-682K                              | 05F          | 68   | 35    | 2.5           | 15          | 6.7       | 92                   |
| MLRF3013-822K                              | 06F          | 82   | 35    | 2.5           | 14          | 7.3       | 88                   |
| MLRF3013-103K                              | 07F          | 100  | 35    | 2.5           | 13          | 8.0       | 84                   |
| MLRF3013-123K                              | 08F          | 120  | 30    | 0.79          | 12          | 13        | 66                   |
| MLRF3013-153K                              | 09F          | 150  | 30    | 0.79          | 11          | 15        | 61                   |
| MLRF3013-183K                              | 10F          | 180  | 30    | 0.79          | 10          | 17        | 57                   |
| MLRF3013-223K                              | 11F          | 220  | 30    | 0.79          | 9.0         | 21        | 52                   |
| MLRF3013-273K                              | 12F          | 270  | 30    | 0.79          | 8.0         | 25        | 47                   |
| MLRF3013-333K                              | 13F          | 330  | 30    | 0.79          | 7.0         | 28        | 45                   |
| MLRF3013-393K                              | 14F          | 390  | 30    | 0.79          | 6.5         | 35        | 40                   |
| MLRF3013-473K                              | 15F          | 470  | 30    | 0.79          | 6.0         | 42        | 36                   |
| MLRF3013-563K                              | 16F          | 560  | 30    | 0.79          | 5.0         | 46        | 35                   |
| MLRF3013-683K                              | 17F          | 680  | 30    | 0.79          | 4.2         | 60        | 30                   |
| MLRF3013-823K                              | 18F          | 820  | 30    | 0.79          | 3.8         | 65        | 29                   |
| MLRF3013-104K                              | 19F          | 1000 | 30    | 0.79          | 3.4         | 72        | 28                   |

## NOTES

- **Operating Temperature Range:**  
-55°C to +125°C for M83446/31  
-55°C to +105°C for M83446/32 & M83446/33
- **Current Rating** at 90°C Ambient:  
35°C Rise for M83446/31  
15°C Rise for M83446/32 & M83446/33
- **DWV** 500 Vrms @ Sea Level  
200 Vrms @ 70,000 Feet
- **Maximum Power Dissipation** at 90°C Ambient:  
210 mW for M83446/31  
90 mW for M83446/32  
73 mW for M83446/33
- **Weight Max:** 0.301 grams
- **Marking:** GOWANDA; XXXµH±10%; YYWWL (see diagram above)
- Materials are fungus-inert to meet method 508 of MIL-STD-810H

## PART NUMBER DERIVATION

GEC Series **MLRF3013** - **100** **K**  
**Inductance:** 2 signif. digits & mult.  
 ex: 100 = 0.10µH, 101 = 1.0µH, 102 = 10µH, 103 = 100µH  
**Tolerance:** K = 10%  
 (Table shows lowest standard tolerance option)

**Termination:** No Suffix = SnPb (standard)

**EXAMPLE OF ORDERING BY MILITARY PART NUMBER:**  
 MLRF3013-100K → M83446/31-01F

## TAPE AND REEL SPECS

|                      |        |
|----------------------|--------|
| Pieces/reel maximum: | 3000   |
| Pitch between parts: | 8 mm   |
| Tape width:          | 16 mm  |
| Reel diameter:       | 13 in. |