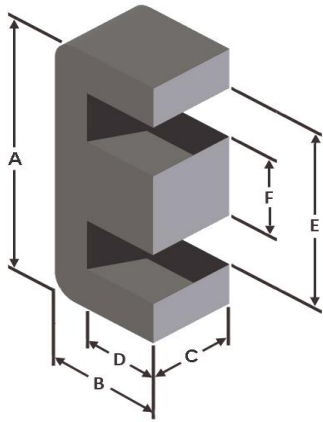


12.7 mm/0.500 in. E-Core



Typical Part Number: **E MS - 013 06 04 - 090**

Geometry \rightarrow E
 Material Type \rightarrow MS
 "A" Dimension in XXXmm \rightarrow 013
 "B" Dimension in XXmm \rightarrow 06
 "C" Dimension in XXmm \rightarrow 04
 Reference Permeability \rightarrow 090
 Standard Industrial Size: DIN 13/4

Physical Dimensions

| | | |
|----------|----------------|------------------|
| A | 12.7 ± 0.25 mm | 0.500 ± 0.010 in |
| B | 6.4 ± 0.10 mm | 0.252 ± 0.004 in |
| C | 3.56 ± 0.15 mm | 0.140 ± 0.006 in |
| D | 4.42 mm (min.) | 0.174 in (min.) |
| E | 8.89 mm (min.) | 0.350 in (min.) |
| F | 3.56 ± 0.13 mm | 0.140 ± 0.005 in |

Magnetic Dimensions

| | | |
|------------|----------------------------------|-----------------------|
| Ae | Effective Magnetic Cross Section | 0.130 cm ² |
| Le | Effective Magnetic Path Length | 2.96 cm |
| Ve | Effective Core Volume | 0.385 cm ³ |
| WA | Minimum Effective Window Area | 0.230 cm ² |
| SA | Surface Area | 6.01 cm ² |
| MLT | Mean Length Per Turn | 2.49 cm |

Permeability

Part Numbers

| Reference Permeability | A _L Value (nH/N ²) | MS Sendust | FluxSan™ Silicon Iron |
|---------------------------------|---|-----------------|-----------------------|
| 14μ | 13 | EMS-0130604-014 | EFS-0130604-014 |
| 26μ | 20 | EMS-0130604-026 | EFS-0130604-026 |
| 40μ | 28 | EMS-0130604-040 | EFS-0130604-040 |
| 60μ | 39 | EMS-0130604-060 | EFS-0130604-060 |
| 75μ | 47 | EMS-0130604-075 | |
| 90μ | 55 | EMS-0130604-090 | |
| Approximate Unit Weight: | | 1.1 g/half | 1.3 g/half |

Test Conditions

| | |
|--------------------------------|----------------|
| Winding | N=100, #28 AWG |
| Frequency | 10 kHz |
| Voltage | 0.058 V |
| A_L Tolerance | ±8% |

Coating/Packaging Information

| | |
|--------------------------|------------------|
| Coating Type | None |
| Voltage Breakdown | N/A |
| Limit | N/A |
| Package Quantity | 1,500 Halves/Box |

Winding Table

| Wire Size | AWG | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 |
|--------------|--------|--------|--------|--------|---------|---------|-------|-------|-------|-------|-------|-------|
| | mm | 0.800 | 0.630 | 0.500 | 0.400 | 0.315 | 0.250 | 0.200 | 0.160 | 0.125 | 0.100 | 0.080 |
| Full Winding | Turns | 17 | 26 | 41 | 63 | 98 | 151 | 234 | 363 | 561 | 869 | 1,345 |
| | Rdc(Ω) | 14.1 m | 34.3 m | 85.9 m | 209.9 m | 519.4 m | 1.3 | 3.1 | 7.7 | 19.0 | 46.9 | 115.3 |