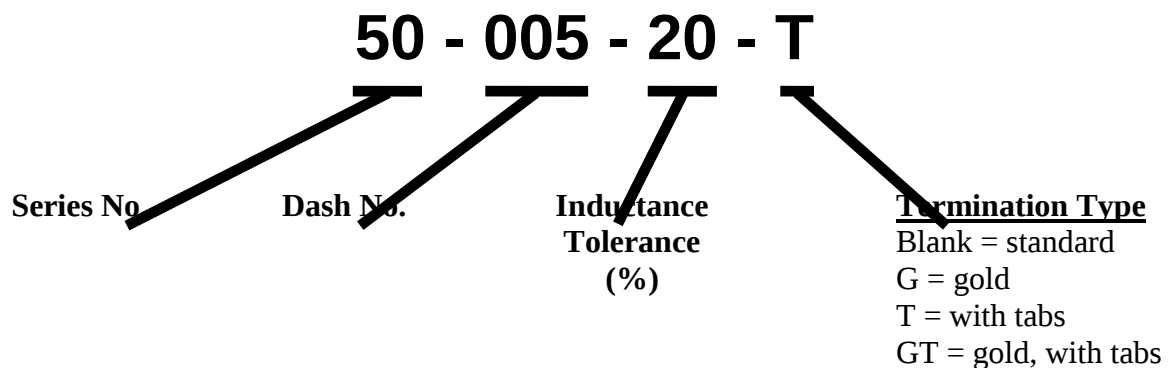




Manufactured to meet the environmental requirements of MIL-T-27, these power inductors cover an inductance range of 1.0 to 1000  $\mu$ H. Standard inductance tolerances are listed, other tolerances are available. The standard termination finish is tin-lead solder, plated over hard copper, and a gold plated finish is also available. Two termination options are provided, with tabs and without, to allow different mounting methods. Each unit has two windings that are connected in series or parallel, by the user, to yield the listed characteristics.

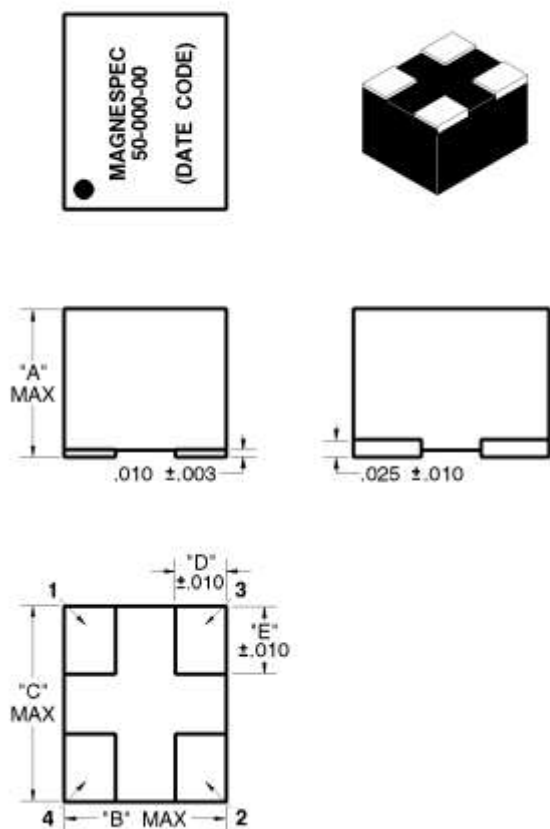
**Key characteristics:**

- Low profile, transfer molded, surface mount package
- Four sizes; leaded and leadless configurations
- Ideal for automatic insertion
- Weight of 0.5 to 5 grams
- Meets MIL-T-27, Grade 5, Class S
- Operating temperature range: -55°C to 130°C
- Maximum temperature rise (@90°C): 30°C

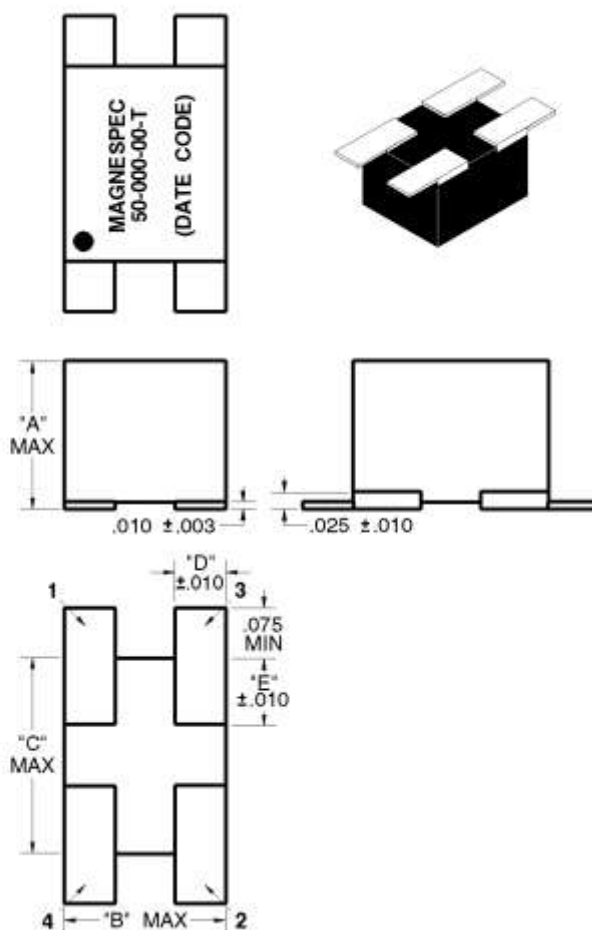
**Part Numbering System:**

**Outline and Dimensions:**

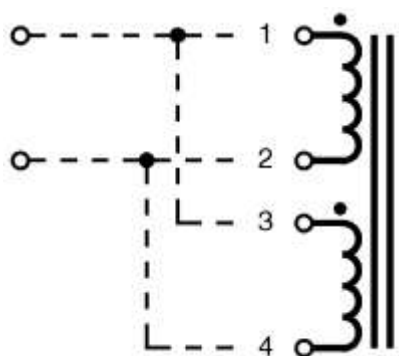
**WITHOUT TABS**



**WITH TABS**

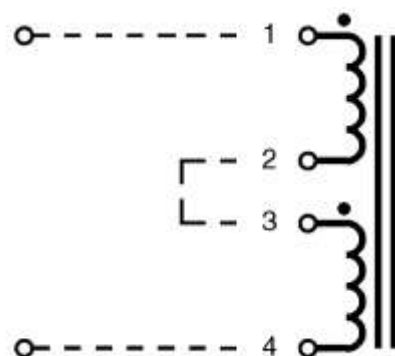


**Schematic:**



**PARALLEL  
CIRCUIT  
CONFIGURATION  
“P”**

The two windings are connected in parallel on the PCB to meet the specified performance.



**SERIES  
CIRCUIT  
CONFIGURATION  
“S”**

The two windings are connected in series on the PCB to meet the specified performance.

| Dash Number | Inductance (μH) | Tolerance (%) | Size | Circuit Configuration | DC Resistance (Milliohms)(Max) | DC Current (mA) (Max) | Magnespec Part Number |
|-------------|-----------------|---------------|------|-----------------------|--------------------------------|-----------------------|-----------------------|
| 1           | 1.0             | ±20           | 1    | P                     | 10                             | 3750                  | 50-001-20             |
| 2           | 1.0             | ±20           | 2    | P                     | 8                              | 6700                  | 50-002-20             |
| 3           | 1.0             | ±20           | 3    | P                     | 5                              | 9000                  | 50-003-20             |
| 4           | 1.0             | ±20           | 4    | P                     | 3                              | 11000                 | 50-004-20             |
| 5           | 2.2             | ±20           | 1    | P                     | 20                             | 2350                  | 50-005-20             |
| 6           | 2.2             | ±20           | 2    | P                     | 15                             | 4500                  | 50-006-20             |
| 7           | 2.2             | ±20           | 3    | P                     | 12                             | 5400                  | 50-007-20             |
| 8           | 2.2             | ±20           | 4    | P                     | 4                              | 7250                  | 50-008-20             |
| 9           | 3.3             | ±20           | 1    | P                     | 25                             | 1880                  | 50-009-20             |
| 10          | 3.3             | ±20           | 2    | P                     | 20                             | 3400                  | 50-010-20             |
| 11          | 3.3             | ±20           | 3    | P                     | 15                             | 4500                  | 50-011-20             |
| 12          | 3.3             | ±20           | 4    | P                     | 5                              | 6200                  | 50-012-20             |
| 13          | 4.0             | ±20           | 1    | S                     | 40                             | 1875                  | 50-013-20             |
| 14          | 4.0             | ±20           | 2    | S                     | 32                             | 3350                  | 50-014-20             |
| 15          | 4.0             | ±20           | 3    | S                     | 20                             | 4500                  | 50-015-20             |
| 16          | 4.0             | ±20           | 4    | S                     | 12                             | 5500                  | 50-016-20             |
| 17          | 5.0             | ±20           | 1    | P                     | 30                             | 1600                  | 50-017-20             |
| 18          | 5.0             | ±20           | 2    | P                     | 20                             | 2800                  | 50-018-20             |
| 19          | 5.0             | ±20           | 3    | P                     | 15                             | 3800                  | 50-019-20             |
| 20          | 5.0             | ±20           | 4    | P                     | 7                              | 5000                  | 50-020-20             |
| 21          | 8.0             | ±15           | 1    | P                     | 40                             | 1250                  | 50-021-15             |
| 22          | 8.0             | ±15           | 2    | P                     | 30                             | 2250                  | 50-022-15             |
| 23          | 8.0             | ±15           | 3    | P                     | 24                             | 3000                  | 50-023-15             |
| 24          | 8.0             | ±15           | 4    | P                     | 10                             | 4000                  | 50-024-15             |
| 25          | 8.8             | ±15           | 1    | S                     | 80                             | 1175                  | 50-025-15             |
| 26          | 8.8             | ±15           | 2    | S                     | 60                             | 2250                  | 50-026-15             |
| 27          | 8.8             | ±15           | 3    | S                     | 48                             | 2700                  | 50-027-15             |
| 28          | 8.8             | ±15           | 4    | S                     | 16                             | 3625                  | 50-028-15             |
| 29          | 12.0            | ±15           | 1    | P                     | 70                             | 1000                  | 50-029-15             |
| 30          | 12.0            | ±15           | 2    | P                     | 45                             | 1800                  | 50-030-15             |
| 31          | 12.0            | ±15           | 3    | P                     | 35                             | 2450                  | 50-031-15             |
| 32          | 12.0            | ±15           | 4    | P                     | 15                             | 3000                  | 50-032-15             |

| Dash Number | Inductance (μH) | Tolerance (%) | Size | Circuit Configuration | DC Resistance (Milliohms)(Max) | DC Current (mA) (Max) | Magnespec Part Number |
|-------------|-----------------|---------------|------|-----------------------|--------------------------------|-----------------------|-----------------------|
| 33          | 13.2            | ±15           | 1    | S                     | 100                            | 940                   | 50-033-15             |
| 34          | 13.2            | ±15           | 2    | S                     | 80                             | 1700                  | 50-034-15             |
| 35          | 13.2            | ±15           | 3    | S                     | 60                             | 2250                  | 50-035-15             |
| 36          | 13.2            | ±15           | 4    | S                     | 20                             | 3100                  | 50-036-15             |
| 37          | 18              | ±15           | 1    | P                     | 90                             | 820                   | 50-037-15             |
| 38          | 18              | ±15           | 2    | P                     | 70                             | 1400                  | 50-038-15             |
| 39          | 18              | ±15           | 3    | P                     | 50                             | 2100                  | 50-039-15             |
| 40          | 18              | ±15           | 4    | P                     | 20                             | 2500                  | 50-040-15             |
| 41          | 20              | ±15           | 1    | S                     | 120                            | 800                   | 50-041-15             |
| 42          | 20              | ±15           | 2    | S                     | 80                             | 1400                  | 50-042-15             |
| 43          | 20              | ±15           | 3    | S                     | 60                             | 1900                  | 50-043-15             |
| 44          | 20              | ±15           | 4    | S                     | 28                             | 2500                  | 50-044-15             |
| 45          | 25              | ±15           | 1    | P                     | 130                            | 700                   | 50-045-15             |
| 46          | 25              | ±15           | 2    | P                     | 100                            | 1250                  | 50-046-15             |
| 47          | 25              | ±15           | 3    | P                     | 80                             | 1700                  | 50-047-15             |
| 48          | 25              | ±15           | 4    | P                     | 30                             | 2200                  | 50-048-15             |
| 49          | 32              | ±15           | 1    | S                     | 160                            | 625                   | 50-049-15             |
| 50          | 32              | ±15           | 2    | S                     | 120                            | 1125                  | 50-050-15             |
| 51          | 32              | ±15           | 3    | S                     | 96                             | 1500                  | 50-051-15             |
| 52          | 32              | ±15           | 4    | S                     | 40                             | 2000                  | 50-052-15             |
| 53          | 48              | ±15           | 1    | S                     | 280                            | 500                   | 50-053-15             |
| 54          | 48              | ±15           | 2    | S                     | 180                            | 900                   | 50-054-15             |
| 55          | 48              | ±15           | 3    | S                     | 140                            | 1225                  | 50-055-15             |
| 56          | 48              | ±15           | 4    | S                     | 60                             | 1500                  | 50-056-15             |
| 57          | 62              | ±10           | 1    | P                     | 325                            | 450                   | 50-057-10             |
| 58          | 62              | ±10           | 2    | P                     | 240                            | 800                   | 50-058-10             |
| 59          | 62              | ±10           | 3    | P                     | 200                            | 1100                  | 50-059-10             |
| 60          | 62              | ±10           | 4    | P                     | 75                             | 1400                  | 50-060-10             |
| 61          | 72              | ±10           | 1    | S                     | 360                            | 410                   | 50-061-10             |
| 62          | 72              | ±10           | 2    | S                     | 280                            | 700                   | 50-062-10             |
| 63          | 72              | ±10           | 3    | S                     | 200                            | 1050                  | 50-063-10             |
| 64          | 72              | ±10           | 4    | S                     | 80                             | 1250                  | 50-064-10             |



| Dash Number | Inductance (μH) | Tolerance (%) | Size | Circuit Configuration | DC Resistance (Milliohms)(Max) | DC Current (mA) (Max) | Magnespec Part Number |
|-------------|-----------------|---------------|------|-----------------------|--------------------------------|-----------------------|-----------------------|
| 65          | 100             | ±10           | 1    | S                     | 520                            | 350                   | 50-065-10             |
| 66          | 100             | ±10           | 2    | S                     | 400                            | 625                   | 50-066-10             |
| 67          | 100             | ±10           | 3    | S                     | 320                            | 850                   | 50-067-10             |
| 68          | 100             | ±10           | 4    | S                     | 120                            | 1100                  | 50-068-10             |
| 69          | 125             | ±10           | 1    | P                     | 700                            | 320                   | 50-069-10             |
| 70          | 125             | ±10           | 2    | P                     | 425                            | 560                   | 50-070-10             |
| 71          | 125             | ±10           | 3    | P                     | 335                            | 780                   | 50-071-10             |
| 72          | 125             | ±10           | 4    | P                     | 160                            | 1000                  | 50-072-10             |
| 73          | 187             | ±10           | 1    | P                     | 1125                           | 260                   | 50-073-10             |
| 74          | 187             | ±10           | 2    | P                     | 650                            | 460                   | 50-074-10             |
| 75          | 187             | ±10           | 3    | P                     | 550                            | 620                   | 50-075-10             |
| 76          | 187             | ±10           | 4    | P                     | 250                            | 820                   | 50-076-10             |
| 77          | 250             | ±10           | 1    | P                     | 1660                           | 200                   | 50-077-10             |
| 78          | 250             | ±10           | 2    | P                     | 1200                           | 400                   | 50-078-10             |
| 79          | 250             | ±10           | 3    | P                     | 750                            | 600                   | 50-079-10             |
| 80          | 250             | ±10           | 4    | P                     | 360                            | 1000                  | 50-080-10             |
| 81          | 250             | ±10           | 1    | S                     | 1300                           | 225                   | 50-081-10             |
| 82          | 250             | ±10           | 2    | S                     | 960                            | 400                   | 50-082-10             |
| 83          | 250             | ±10           | 3    | S                     | 800                            | 550                   | 50-083-10             |
| 84          | 250             | ±10           | 4    | S                     | 300                            | 700                   | 50-084-10             |
| 85          | 500             | ±10           | 1    | S                     | 2800                           | 160                   | 50-085-10             |
| 86          | 500             | ±10           | 2    | S                     | 1700                           | 280                   | 50-086-10             |
| 87          | 500             | ±10           | 3    | S                     | 1340                           | 390                   | 50-087-10             |
| 88          | 500             | ±10           | 4    | S                     | 640                            | 500                   | 50-088-10             |
| 89          | 750             | ±10           | 1    | S                     | 4500                           | 130                   | 50-089-10             |
| 90          | 750             | ±10           | 2    | S                     | 2600                           | 230                   | 50-090-10             |
| 91          | 750             | ±10           | 3    | S                     | 2200                           | 310                   | 50-091-10             |
| 92          | 750             | ±10           | 4    | S                     | 1000                           | 410                   | 50-092-10             |
| 93          | 1000            | ±10           | 1    | S                     | 6650                           | 100                   | 50-093-10             |
| 94          | 1000            | ±10           | 2    | S                     | 4800                           | 200                   | 50-094-10             |
| 95          | 1000            | ±10           | 3    | S                     | 3000                           | 300                   | 50-095-10             |
| 96          | 1000            | ±10           | 4    | S                     | 1440                           | 500                   | 50-096-10             |