

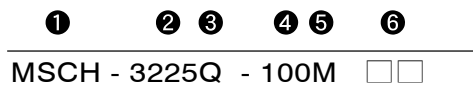
■ FEATURES

This miniature chip inductors wound on a special ferrite core.  
High Q value at high frequencies and low DC resistance.  
Wide inductance range.  
Excellent solder heat resistance. Both flow and reflow soldering methods be employed.

■ APPLICATIONS

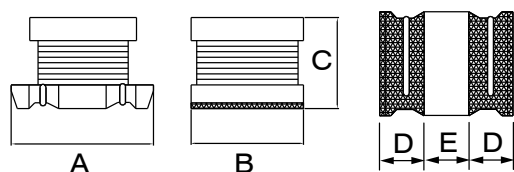
Pagers, Cordless phones.  
High Freq. Communication Products.  
GPS (Global Position System).  
ADSL

■ PRODUCT IDENTIFICATION



- ① Product Code
- ② Dimensions Code
- ③ High Q
- ④ Inductance Code
- ⑤ Tolerance Code
- ⑥ Pattern Code

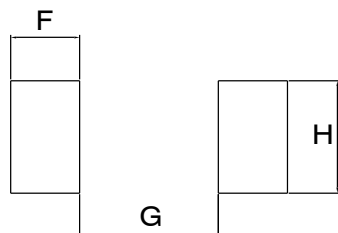
■ PRODUCT SERIES



NOTES: DIMENSION IN mm

| PART NO.   | A       | B       | C        | D   | E   |
|------------|---------|---------|----------|-----|-----|
| MSCH-3225Q | 3.2±0.3 | 2.5±0.2 | 2.0±0.30 | 1.0 | 1.2 |
| MSCH-4532Q | 4.5±0.3 | 3.2±0.2 | 2.6±0.30 | 1.5 | 1.5 |

■ LAND PATTERN



NOTES: DIMENSION IN mm

| PART NO.   | F   | G   | H   |
|------------|-----|-----|-----|
| MSCH-3225Q | 1.5 | 1.0 | 2.8 |
| MSCH-4532Q | 2.0 | 1.2 | 3.5 |

SMD Power Inductors

# MSCH-Q SERIES

Wound Ferrit Chip Inductors

CUTTING-EDGE TECHNOLOGIES OF EMI/EMC SOLUTIONS

## ■ PRODUCT SPECIFICATIONS

| Part No. | Inductance<br>( $\mu$ H) | Test Freq. |       | Quality Factor |       |            |       | DC Resistance |       | Self Resonant Freq. |       | Rated Current |       |
|----------|--------------------------|------------|-------|----------------|-------|------------|-------|---------------|-------|---------------------|-------|---------------|-------|
|          |                          | MHz        |       | Min.           |       | Test Freq. |       | (Max.)        |       | (MHz) Min.          |       | mA(Max.)      |       |
|          |                          | 3225Q      | 4532Q | 3225Q          | 4532Q | 3225Q      | 4532Q | 3225Q         | 4532Q | 3225Q               | 4532Q | 3225Q         | 4532Q |
| 1R0      | 1.0                      | 1          | 1     | 20             | 20    | 1          | 1     | 0.5           | 0.20  | 100                 | 120   | 445           | 500   |
| 1R2      | 1.2                      | 1          | 1     | 20             | 20    | 1          | 1     | 0.6           | 0.20  | 100                 | 100   | 425           | 500   |
| 1R5      | 1.5                      | 1          | 1     | 20             | 20    | 1          | 1     | 0.6           | 0.30  | 75                  | 85    | 400           | 500   |
| 1R8      | 1.8                      | 1          | 1     | 20             | 20    | 1          | 1     | 0.7           | 0.30  | 60                  | 75    | 390           | 500   |
| 2R2      | 2.2                      | 1          | 1     | 20             | 20    | 1          | 1     | 0.8           | 0.30  | 50                  | 62    | 370           | 500   |
| 2R7      | 2.7                      | 1          | 1     | 20             | 20    | 1          | 1     | 0.9           | 0.32  | 43                  | 53    | 320           | 500   |
| 3R3      | 3.3                      | 1          | 1     | 20             | 20    | 1          | 1     | 1.0           | 0.35  | 38                  | 47    | 300           | 500   |
| 3R9      | 3.9                      | 1          | 1     | 20             | 20    | 1          | 1     | 1.1           | 0.38  | 35                  | 41    | 290           | 500   |
| 4R7      | 4.7                      | 1          | 1     | 20             | 30    | 1          | 1     | 1.2           | 0.40  | 31                  | 38    | 270           | 500   |
| 5R6      | 5.6                      | 1          | 1     | 20             | 30    | 1          | 1     | 1.3           | 0.47  | 28                  | 33    | 250           | 500   |
| 6R8      | 6.8                      | 1          | 1     | 20             | 30    | 1          | 1     | 1.5           | 0.50  | 25                  | 31    | 240           | 450   |
| 8R2      | 8.2                      | 1          | 1     | 20             | 30    | 1          | 1     | 1.6           | 0.56  | 23                  | 27    | 225           | 450   |
| 100      | 10                       | 1          | 1     | 35             | 35    | 1          | 1     | 1.8           | 0.56  | 20                  | 23    | 190           | 400   |
| 120      | 12                       | 1          | 1     | 35             | 35    | 1          | 1     | 2.0           | 0.62  | 18                  | 21    | 180           | 380   |
| 150      | 15                       | 1          | 1     | 35             | 35    | 1          | 1     | 2.2           | 0.73  | 16                  | 19    | 170           | 360   |
| 180      | 18                       | 1          | 1     | 35             | 35    | 1          | 1     | 2.5           | 0.82  | 15                  | 17    | 165           | 340   |
| 220      | 22                       | 1          | 1     | 35             | 35    | 1          | 1     | 2.8           | 0.94  | 14                  | 15    | 150           | 320   |
| 270      | 27                       | 1          | 1     | 40             | 35    | 1          | 1     | 3.1           | 1.10  | 13                  | 14    | 125           | 300   |
| 330      | 33                       | 1          | 1     | 40             | 35    | 1          | 1     | 3.5           | 1.20  | 12                  | 12    | 115           | 270   |
| 390      | 39                       | 1          | 1     | 40             | 35    | 1          | 1     | 3.9           | 1.40  | 11                  | 11    | 110           | 240   |
| 470      | 47                       | 1          | 1     | 40             | 35    | 1          | 1     | 4.3           | 1.50  | 11                  | 10    | 100           | 220   |
| 560      | 56                       | 1          | 1     | 40             | 35    | 1          | 1     | 4.9           | 1.70  | 10                  | 9.3   | 85            | 200   |
| 680      | 68                       | 1          | 1     | 40             | 35    | 1          | 1     | 5.5           | 1.90  | 9                   | 8.4   | 80            | 180   |
| 820      | 82                       | 1          | 1     | 40             | 35    | 1          | 1     | 6.2           | 2.20  | 8.5                 | 7.5   | 70            | 170   |
| 101      | 100                      | 1          | 1     | 40             | 40    | 0.796      | 0.796 | 7.0           | 2.50  | 8                   | 6.8   | 68            | 160   |
| 121      | 120                      | 1          | 1     | 40             | 40    | 0.796      | 0.796 | 8.0           | 3.00  | 7.5                 | 6.2   | 67            | 150   |
| 151      | 150                      | 1          | 1     | 40             | 40    | 0.796      | 0.796 | 9.3           | 3.70  | 7                   | 5.5   | 66            | 130   |
| 181      | 180                      | 1          | 1     | 40             | 40    | 0.796      | 0.796 | 10.2          | 4.50  | 6                   | 5.0   | 65            | 120   |
| 221      | 220                      | 1          | 1     | 40             | 40    | 0.796      | 0.796 | 11.8          | 5.40  | 5.5                 | 4.5   | 65            | 110   |
| 271      | 270                      | 1          | 1     | 40             | 40    | 0.796      | 0.796 | 12.5          | 6.80  | 5                   | 4.0   | 65            | 100   |
| 331      | 330                      | 1          | 1     | 40             | 40    | 0.796      | 0.796 | 13.0          | 8.20  | 5                   | 3.6   | 65            | 95    |
| 391      | 390                      | 1          | 1     | 50             | 40    | 0.796      | 0.796 | 22.0          | 9.70  | 5                   | 3.3   | 50            | 90    |
| 471      | 470                      | 1KHz       | 1KHz  | 50             | 40    | 0.796      | 0.796 | 25.0          | 11.8  | 5                   | 3.0   | 45            | 80    |
| 561      | 560                      | 1KHz       | 1KHz  | 50             | 40    | 0.796      | 0.796 | 28.0          | 14.5  | 5                   | 2.7   | 40            | 70    |
| 681      | 680                      |            | 1KHz  |                | 40    |            | 0.796 |               | 17.0  |                     | 2.5   |               | 65    |
| 821      | 820                      |            | 1KHz  |                | 40    |            | 0.796 |               | 20.5  |                     | 2.2   |               | 60    |
| 102      | 1000                     |            | 1KHz  |                | 40    |            | 0.252 |               | 25.0  |                     | 2.0   |               | 50    |
| 122      | 1200                     |            | 1KHz  |                | 40    |            | 0.252 |               | 30.0  |                     | 1.8   |               | 45    |
| 152      | 1500                     |            | 1KHz  |                | 40    |            | 0.252 |               | 37.0  |                     | 1.6   |               | 40    |
| 182      | 1800                     |            | 1KHz  |                | 40    |            | 0.252 |               | 45.0  |                     | 1.5   |               | 35    |
| 222      | 2200                     |            | 1KHz  |                | 40    |            | 0.252 |               | 50.0  |                     | 1.3   |               | 30    |

1.TOLERANCE OF INDUCTANCE 1.0~8.2  $\mu$  H  $\pm$ 20%(M),10~2200  $\mu$  H  $\pm$ 10%(K)

2.The max. permissible DC current is the DC current applied which causes 10% reduction of its initial inductance value, or the coil temperature to rise by 40°C, whichever is lower.

MAG.LAYERS