**Coilmaster Electronics Co., Ltd.**
3F No.211, Huan Bei Rd. Chung Li City, Taoyuan 320, Taiwan
Tel : +886-3-422-8279 Fax : +886-3-452-5688
E-mail :info@coilmaster.com.tw
Web Site : www.coilmaster.com.tw

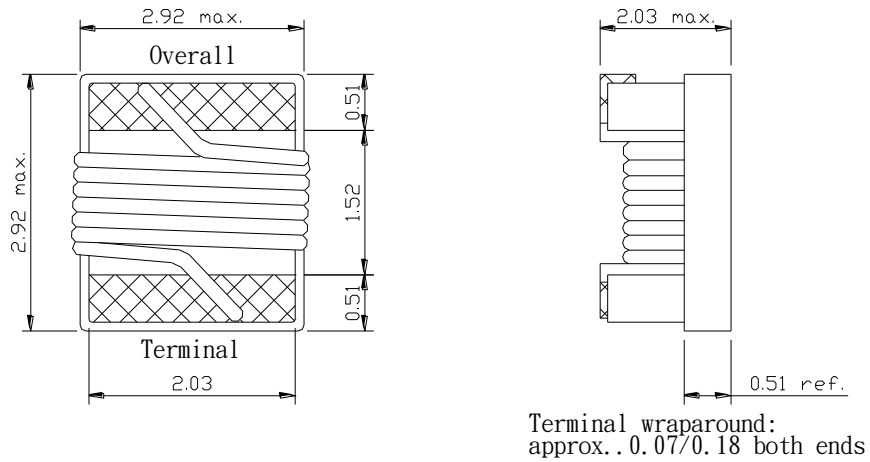
# MS2520 SERIES ~ Wire Wound Ceramic Chip Inductors

## PART NUMBERING SYSTEM

| MS | 2520 | — | 47NJ | — | LF |
|---|---|---|---|---|---|
| TYPE | DIMENSIONS | | INDUCTANCE | | LEAD FREE |

## SHAPES AND DIMENSIONS

UNIT : mm




## FEATURES

- Inductance values from **3.3 nH to 8200 nH** (tolerances as low as 1%)
- **Exceptionally high Q** compared to non-wirewound inductors, especially at high frequencies
- Ceramic construction for **highest possible self resonance** (as high as 6000 MHz)
- **Excellent current carrying** capacity for their size
- **RoHS-compliant** 260°C compatible.

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## SPECIFICATION TABLE

| PART NUMBER | INDUCTANCE (nH) | TOLERANCE | Q. MIN. | SRF (MHz) MIN. | DCR (Ω) (max) | IDC (mA) (max) |
|---|---|---|---|---|---|---|
| **MS2520-3N3□-LF** | 3.3@100MHz | B,S | 50@1000MHz | 6000 | 0.06 | 600 |
| **MS2520-6N8□-LF** | 6.8@100MHz | K,J,G | 50@1000MHz | 5500 | 0.06 | 600 |
| **MS2520-8N2□-LF** | 8.2@100MHz | K,J,G | 50@1000MHz | 5500 | 0.06 | 600 |
| **MS2520-10N□-LF** | 10@100MHz | K,J,G | 50@1000MHz | 4300 | 0.08 | 600 |
| **MS2520-12N□-LF** | 12@100MHz | K,J,G | 60@500MHz | 3600 | 0.08 | 600 |
| **MS2520-15N□-LF** | 15@100MHz | K,J,G | 60@500MHz | 2700 | 0.08 | 600 |
| **MS2520-18N□-LF** | 18@100MHz | K,J,G | 60@350MHz | 2700 | 0.10 | 600 |
| **MS2520-22N□-LF** | 22@100MHz | K,J,G | 60@350MHz | 2500 | 0.10 | 600 |
| **MS2520-27N□-LF** | 27@100MHz | K,J,G | 60@350MHz | 1800 | 0.10 | 600 |
| **MS2520-33N□-LF** | 33@100MHz | K,J,G | 60@350MHz | 1700 | 0.10 | 600 |
| **MS2520-39N□-LF** | 39@100MHz | K,J,G | 60@350MHz | 1500 | 0.10 | 600 |
| **MS2520-47N□-LF** | 47@100MHz | K,J,G | 60@350MHz | 1500 | 0.10 | 600 |
| **MS2520-56N□-LF** | 56@100MHz | K,J,G | 60@350MHz | 1350 | 0.12 | 600 |
| **MS2520-68N□-LF** | 68@100MHz | K,J,G | 60@350MHz | 1300 | 0.15 | 600 |
| **MS2520-82N□-LF** | 82@100MHz | K,J,G | 60@350MHz | 1100 | 0.18 | 600 |
| **MS2520-R10□-LF** | 100@100MHz | K,J,G | 60@100MHz | 1100 | 0.18 | 500 |
| **MS2520-R12□-LF** | 120@25MHz | K,J,G | 50@100MHz | 950 | 0.20 | 500 |
| **MS2520-R15□-LF** | 150@25MHz | K,J,G | 50@100MHz | 880 | 0.22 | 500 |
| **MS2520-R18□-LF** | 180@25MHz | K,J,G | 50@100MHz | 800 | 0.33 | 500 |
| **MS2520-R22□-LF** | 220@25MHz | K,J,G | 45@100MHz | 730 | 0.45 | 500 |
| **MS2520-R27□-LF** | 270@25MHz | K,J,G | 45@100MHz | 650 | 0.75 | 500 |
| **MS2520-R33□-LF** | 330@25MHz | K,J,G | 45@100MHz | 570 | 0.90 | 500 |

TEST EQUIPMENT:HP-4286A IMPEDANCE ANALYZER

INDUTANCE TOLERANCE：B=±0.15nH, S=±0.3nH, G=±2%, J=±5%, K=±10%

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## SPECIFICATION TABLE

| PART NUMBER | INDUCTANCE (nH) | TOLERANCE | Q. MIN. | SRF (MHz) MIN. | DCR (Ω) (max) | IDC (mA) (max) |
|---|---|---|---|---|---|---|
| **MS2520-R39□-LF** | 390@25MHz | K,J,G | 45@100MHz | 530 | 1.20 | 470 |
| **MS2520-R47□-LF** | 470@25MHz | K,J,G | 45@100MHz | 480 | 1.30 | 470 |
| **MS2520-R56□-LF** | 560@25MHz | K,J,G | 45@100MHz | 430 | 1.45 | 400 |
| **MS2520-R62□-LF** | 620@25MHz | K,J,G | 45@100MHz | 380 | 2.45 | 300 |
| **MS2520-R68□-LF** | 680@25MHz | K,J,G | 45@100MHz | 380 | 2.45 | 400 |
| **MS2520-R75□-LF** | 750@25MHz | K,J,G | 45@100MHz | 360 | 2.60 | 360 |
| **MS2520-R82□-LF** | 820@25MHz | K,J,G | 45@100MHz | 350 | 2.75 | 380 |
| **MS2520-R91□-LF** | 910@25MHz | K,J,G | 45@100MHz | 330 | 3.25 | 380 |
| **MS2520-1R0□-LF** | 1000@25MHz | K,J,G | 35@50MHz | 290 | 1.75 | 370 |
| **MS2520-1R2□-LF** | 1200@7.9MHz | K,J,G | 35@50MHz | 250 | 2.0 | 310 |
| **MS2520-1R5□-LF** | 1500@7.9MHz | K,J,G | 28@50MHz | 200 | 2.3 | 330 |
| **MS2520-1R8□-LF** | 1800@7.9MHz | K,J,G | 28@50MHz | 160 | 2.6 | 300 |
| **MS2520-2R2□-LF** | 2200@7.9MHz | K,J,G | 28@50MHz | 160 | 2.8 | 280 |
| **MS2520-2R7□-LF** | 2700@7.9MHz | K,J,G | 22@25MHz | 140 | 3.2 | 290 |
| **MS2520-3R3□-LF** | 3300@7.9MHz | K,J,G | 22@25MHz | 110 | 3.4 | 290 |
| **MS2520-3R9□-LF** | 3900@7.9MHz | K,J,G | 20@25MHz | 100 | 3.6 | 260 |
| **MS2520-4R7□-LF** | 4700@7.9MHz | K,J,G | 20@25MHz | 90 | 4.0 | 260 |
| **MS2520-5R6□-LF** | 5600@7.9MHz | K,J | 16@7.9MHz | 20 | 4.0 | 240 |
| **MS2520-6R8□-LF** | 6800@7.9MHz | K,J | 18@7.9MHz | 40 | 4.9 | 200 |
| **MS2520-8R2□-LF** | 8200@7.9MHz | K,J | 18@7.9MHz | 25 | 6.0 | 170 |

TEST EQUIPMENT:HP-4286A IMPEDANCE ANALYZER

INDUTANCE TOLERANCE：B=±0.15nH, S=±0.3nH, G=±2%, J=±5%, K=±10%

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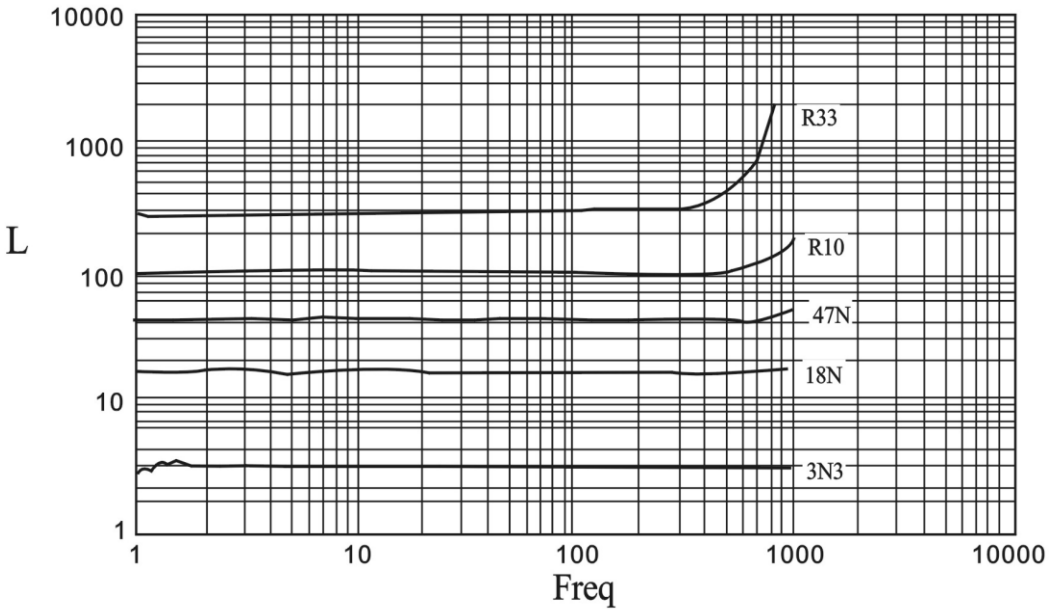
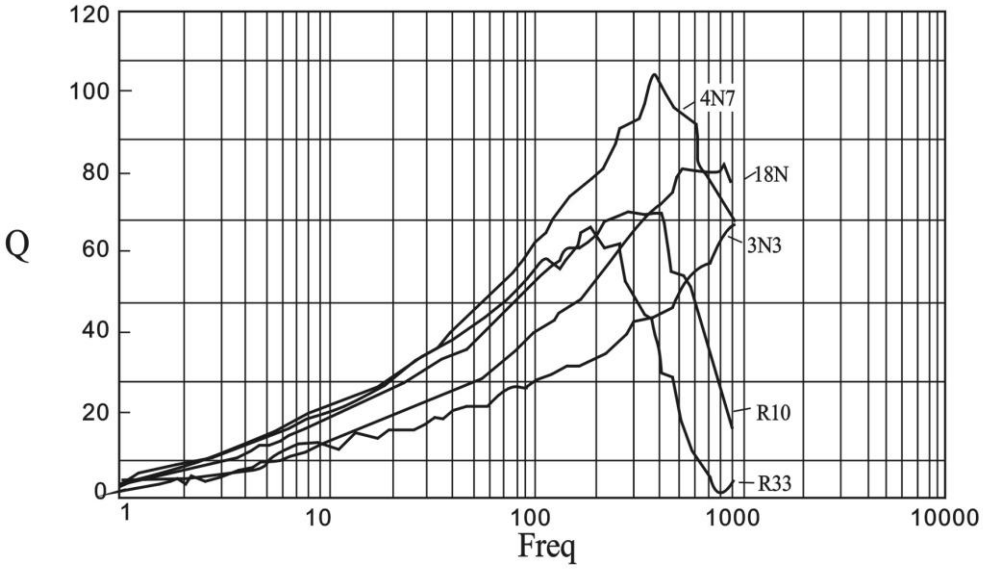
## TYPICAL ELECTRICAL CHARACTERISTICS

### INDUCTANCE vs. FREQUENCY CHARACTERISTICS




### Q vs. FREQUENCY CHARACTERISTICS



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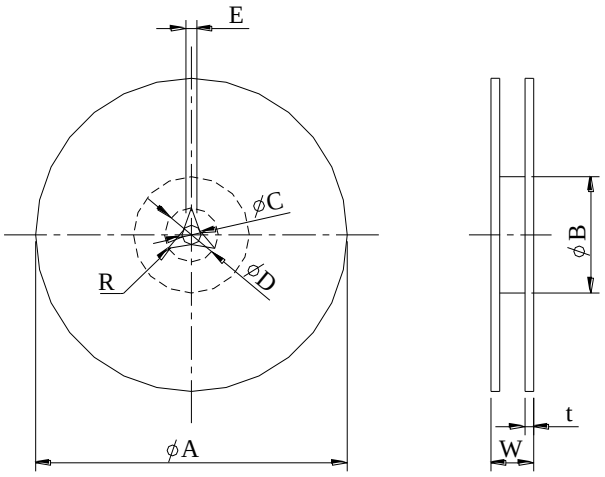
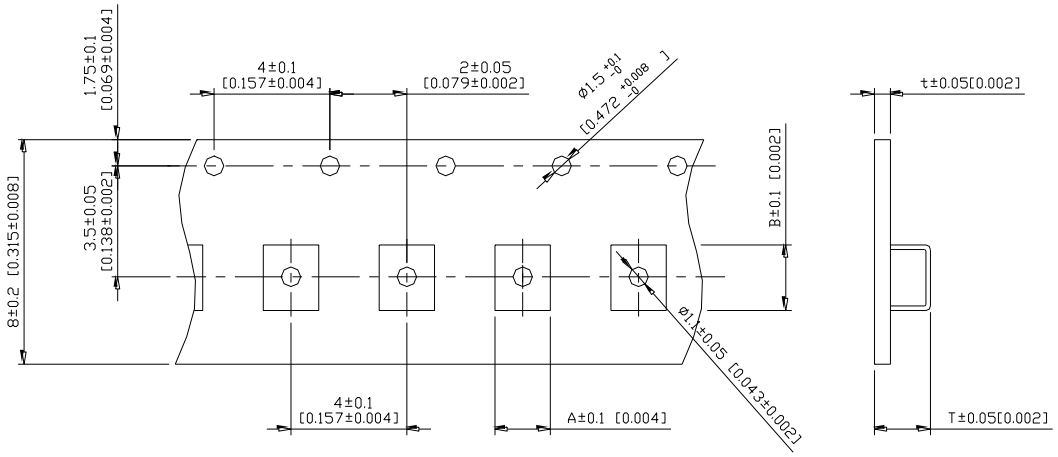
# MS2520 SERIES ~ Wire Wound Ceramic Chip Inductors

## PACKAGING SPECIFICATION




| | A | B | C | D | E | W8 | W12 | t | R |
|---|---|---|---|---|---|---|---|---|---|
| T(ψ178mm) Reel | ψ178±2 | ψ60±1 | ψ13±0.8 | ψ21±0.8 | 2 | 10±1.5 | 14.5±1.5 | 1.27±0.2 | 1 |




| TYPE | A | B | T | t | T(ψ178mm) | T(ψ330mm) |
|---|---|---|---|---|---|---|
| MS2520 | 1.90 | 3.50 | 1.40 | 0.2 | 2000 pcs/reel | - |