



## MS2012LD SERIES ~

## SMT Power Inductors ~Low DCR



### PART NUMBERING SYSTEM

|           |               |   |             |   |           |
|-----------|---------------|---|-------------|---|-----------|
| <u>MS</u> | <u>2012LD</u> | — | <u>1R0M</u> | — | <u>LF</u> |
| TYPE      | DIMENSIONS    |   | INDUCTANCE  |   | LEAD FREE |

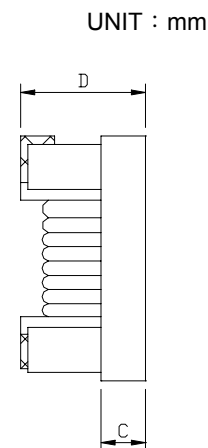
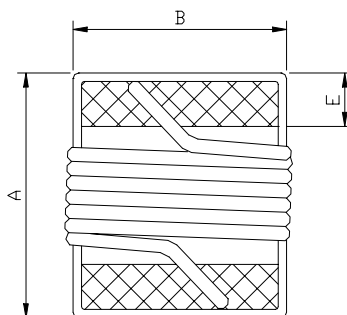
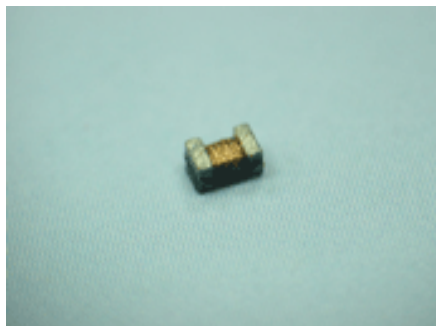
### FEATURES :

1. Low profile 1.40mm max. ( 1.30mm typ. )
2. MS2012LC products conforms to the standards that are slated to be introduced under the RoHS Directive.
3. Applications for Audio-visual equipment , cable modems , ADSL , mobile base stations .

### ENVIRONMENTAL DATA :

1. Operating temperature range : - 40°C to + 85°C including self-temperature rise
2. Storage temperature range : - 40°C to + 85°C

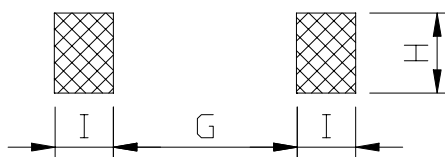
### SHAPES AND DIMENSIONS



**A=2.4 Max. B=1.6 Max. C=0.51 Ref. D=1.4 Max. E=0.44±0.1**

### RECOMMENDED PATTERNS

UNIT : mm



**G=0.76 H=1.78 I=1.02**



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#### SPECIFICATION TABLE

| PART NUMBER      | INDUCTANCE<br>(uH) | TOLERANCE | Q.<br>Typ. | SRF (MHz)<br>Typ. | DCR ( $\Omega$ )<br>(Typ.) | Isat(mA)<br>(max) | Irms(mA)<br>(max) |
|------------------|--------------------|-----------|------------|-------------------|----------------------------|-------------------|-------------------|
| MS2012LD-1R0□-LF | 1.0@7.96MHz        | K , M     | 14@7.96MHz | 208               | 0.13                       | 1100              | 1300              |
| MS2012LD-1R5□-LF | 1.5@7.96MHz        | K , M     | 14@7.96MHz | 159               | 0.17                       | 920               | 1260              |
| MS2012LD-1R8□-LF | 1.8@7.96MHz        | K , M     | 14@7.96MHz | 112               | 0.20                       | 860               | 1080              |
| MS2012LD-2R2□-LF | 2.2@7.96MHz        | K , M     | 13@7.96MHz | 87                | 0.22                       | 740               | 1040              |
| MS2012LD-2R7□-LF | 2.7@7.96MHz        | K , M     | 13@7.96MHz | 72                | 0.25                       | 680               | 1040              |
| MS2012LD-3R3□-LF | 3.3@7.96MHz        | K , M     | 12@7.96MHz | 70                | 0.28                       | 620               | 1020              |
| MS2012LD-3R9□-LF | 3.9@7.96MHz        | K , M     | 14@7.96MHz | 61                | 0.38                       | 580               | 960               |
| MS2012LD-4R7□-LF | 4.7@7.96MHz        | K , M     | 14@7.96MHz | 51                | 0.43                       | 520               | 840               |
| MS2012LD-5R6□-LF | 5.6@7.96MHz        | K , M     | 12@7.96MHz | 47                | 0.50                       | 480               | 800               |
| MS2012LD-6R8□-LF | 6.8@7.96MHz        | K , M     | 14@7.96MHz | 46                | 0.68                       | 420               | 700               |
| MS2012LD-8R2□-LF | 8.2@7.96MHz        | K , M     | 13@7.96MHz | 33                | 0.73                       | 400               | 680               |
| MS2012LD-100□-LF | 10@2.52MHz         | J,K,M     | 14@2.52MHz | 31                | 0.85                       | 360               | 560               |
| MS2012LD-120□-LF | 12@2.52MHz         | J,K,M     | 14@2.52MHz | 30                | 0.90                       | 340               | 460               |
| MS2012LD-150□-LF | 15@2.52MHz         | J,K,M     | 15@2.52MHz | 28                | 1.40                       | 300               | 380               |
| MS2012LD-180□-LF | 18@2.52MHz         | J,K,M     | 15@2.52MHz | 27                | 1.55                       | 280               | 360               |
| MS2012LD-220□-LF | 22@2.52MHz         | J,K,M     | 15@2.52MHz | 20                | 1.76                       | 240               | 340               |
| MS2012LD-270□-LF | 27@2.52MHz         | J,K,M     | 15@2.52MHz | 17                | 2.00                       | 220               | 300               |
| MS2012LD-330□-LF | 33@2.52MHz         | J,K,M     | 15@2.52MHz | 17                | 2.35                       | 200               | 300               |
| MS2012LD-470□-LF | 47@2.52MHz         | J,K,M     | 14@2.52MHz | 15                | 3.40                       | 160               | 280               |
| MS2012LD-680□-LF | 68@2.52MHz         | J,K,M     | 14@2.52MHz | 10                | 4.45                       | 140               | 240               |
| MS2012LD-101□-LF | 100@2.52MHz        | J,K,M     | 10@2.52MHz | 9                 | 7.50                       | 100               | 180               |

※ Inductance,Q and SRF are measured in HP-E4991A impedance analyzer with HP-16197A fixture.

※ Inductance Tolerance : J=5%, K=10%, M=20%.

※ RDC is measured in Chroma 16502 mill ohm meter.(or equivalent)

※ Irms For 15°C rise form 25°C ambient.



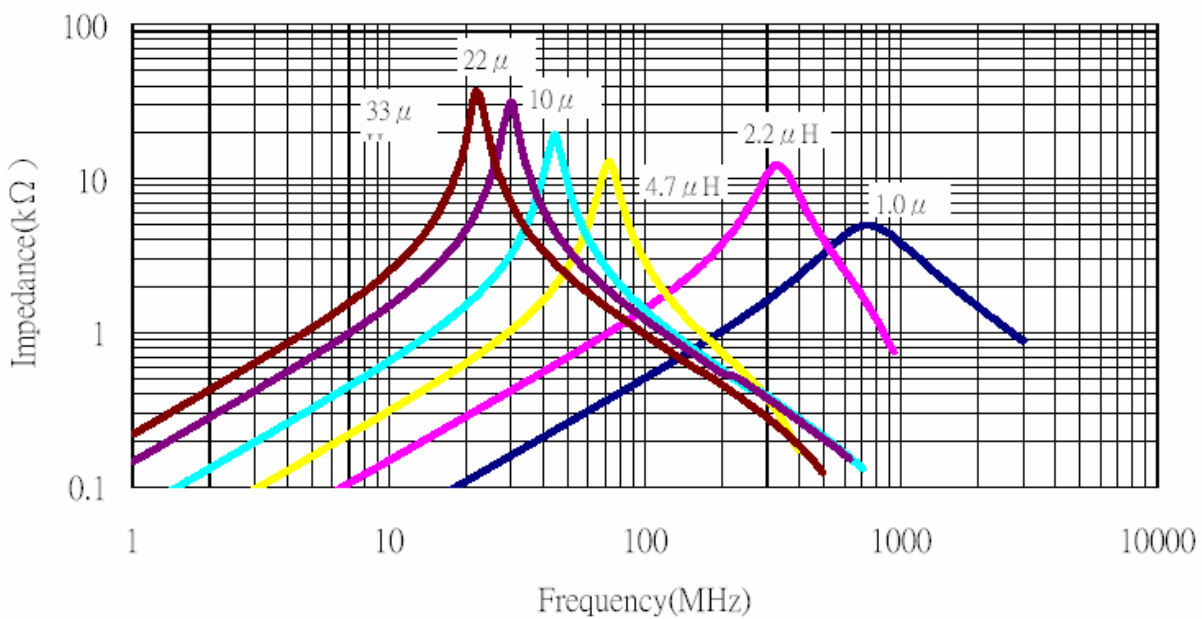
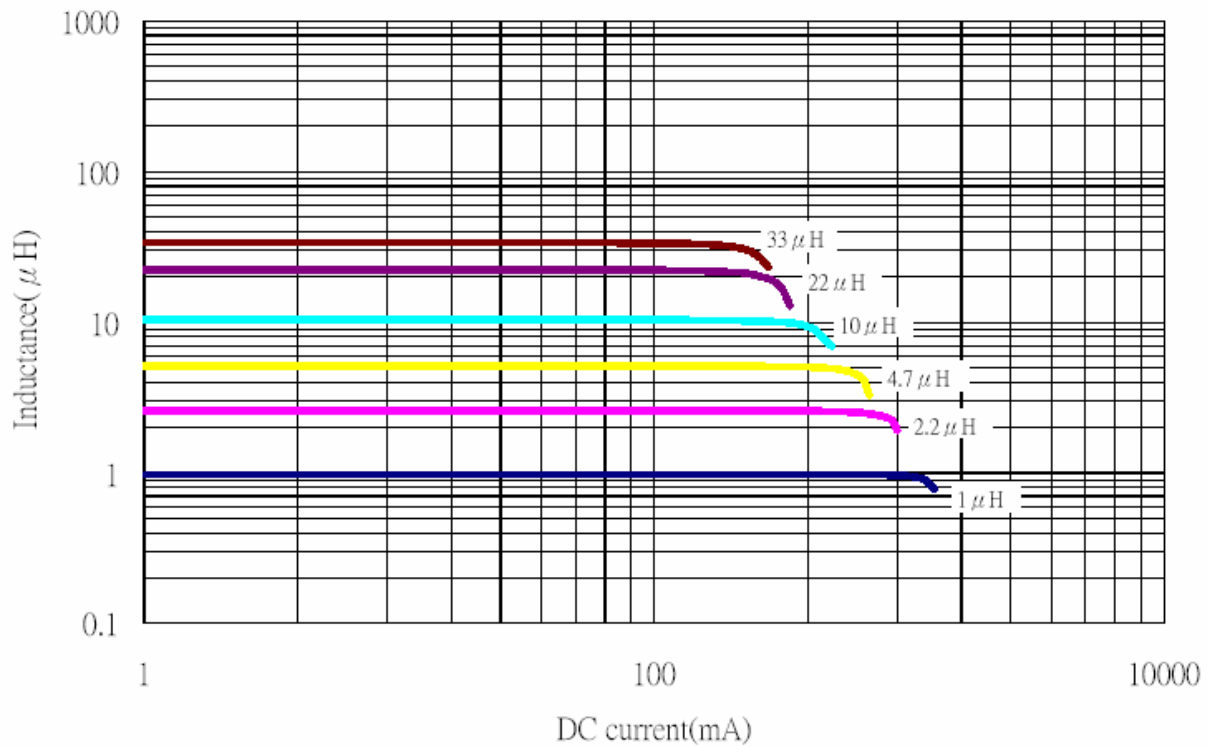
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### CURVE





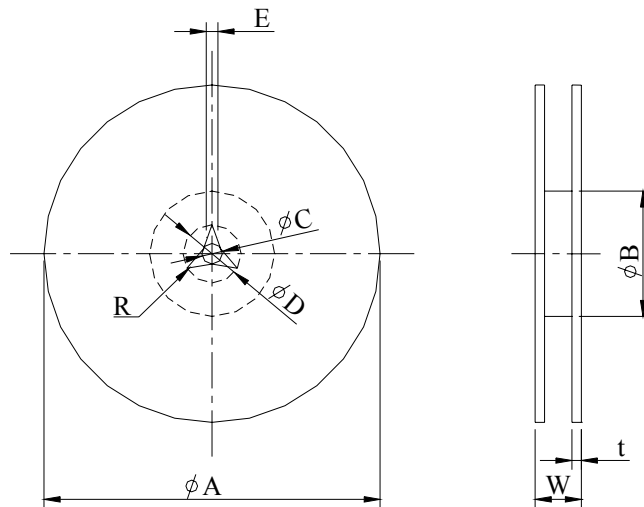
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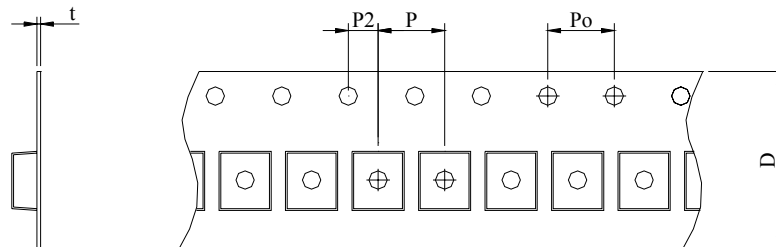


RoHS Compliant

### PACKAGING SPECIFICATION



|                                  | A          | B         | C         | D | E | W    | t | R |
|----------------------------------|------------|-----------|-----------|---|---|------|---|---|
| T( $\phi 180\text{mm}$ )<br>Reel | $\phi 180$ | $\phi 60$ | $\phi 13$ | — | — | 14.4 | — | — |



| TYPE     | Reel/pcs | P | Po | P2 | t | D |
|----------|----------|---|----|----|---|---|
| MS2012LD | 2000     | 4 | 4  | 2  | 1 | 8 |