

High Current Inductor / MPSZ Type

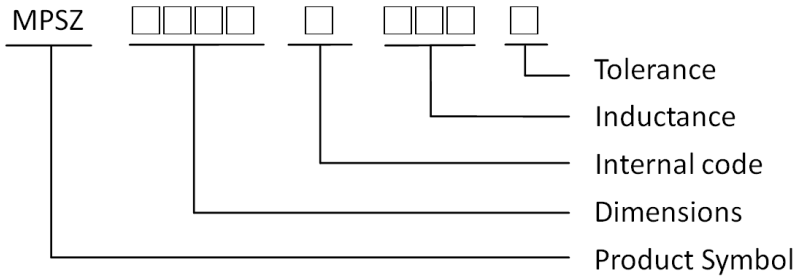
Features:

1. Shielded construction.
2. Frequency range up to 1.0 MHz.
3. Lowest DCR / μH , in this package size.

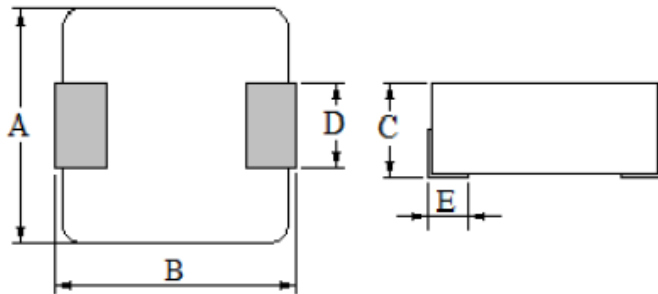
Applications:

1. Handles high transient current spikes without saturation.
2. Ultra low buzz noise, due to composite constructio

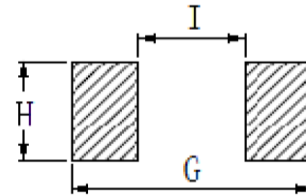
Product Identification



Shape and Dimension



Recommended PCB Pattern

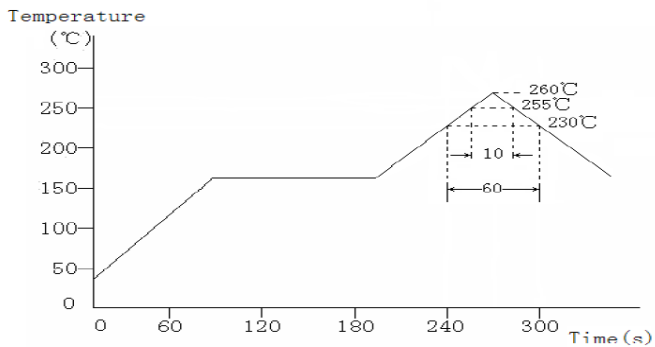


Dimensions(mm)

| Type | A | B | C | D | E | G | H | I |
|------------------|-------------------|-------------------|----------------|-------------------|-------------------|------------------|-----------------|-----------------|
| MPSZ0420T | 4.06 ± 0.3 | 4.45 ± 0.4 | 2.0 ± 0.2 | 2.0 Max | 1.1 ± 0.3 | 4.75 Ref | 2.50 Ref | 1.75 Ref |
| MPSZ0520H | 5.18 ± 0.3 | 5.45 ± 0.4 | 2.0 Max | 2.3 ± 0.2 | 1.2 ± 0.3 | 7.00 Ref | 2.50 Ref | 3.00 Ref |
| MPSZ0530H | 5.18 ± 0.3 | 5.45 ± 0.4 | 3.0 Max | 2.30 ± 0.2 | 1.2 ± 0.3 | 7.00 Ref | 2.50 Ref | 3.00 Ref |
| MPSZ0612H | 6.60 ± 0.2 | 7.40 Max | 1.2 Max | 3.00 ± 0.2 | 1.60 ± 0.3 | 7.50 Ref | 3.50 Ref | 2.50 Ref |
| MPSZ0620H | 6.60 ± 0.2 | 7.40 Max | 2.0 Max | 3.00 ± 0.2 | 1.60 ± 0.3 | 7.50 Ref | 3.50 Ref | 2.50 Ref |
| MPSZ0624S | 6.60 ± 0.2 | 7.40 Max | 2.4 Max | 3.00 ± 0.2 | 1.60 ± 0.3 | 7.50 Ref | 3.50 Ref | 2.50 Ref |
| MPSZ0630H | 6.60 ± 0.2 | 7.40 Max | 3.0 Max | 3.00 ± 0.2 | 1.60 ± 0.3 | 7.50 Ref | 3.50 Ref | 2.50 Ref |
| MPSZ0640S | 6.60 ± 0.2 | 7.40 Max | 4.0 Max | 3.00 ± 0.2 | 1.60 ± 0.3 | 7.50 Ref | 3.50 Ref | 2.50 Ref |
| MPSZ0650S | 6.60 ± 0.2 | 7.40 Max | 5.0 Max | 3.00 ± 0.3 | 1.60 ± 0.3 | 7.50 Ref | 3.50 Ref | 2.50 Ref |
| MPSZ1040S | 10.3 ± 0.2 | 10.5 ± 1.0 | 4.0 Max | 3.00 ± 0.3 | 2.00 ± 0.5 | 14.20 Ref | 3.80 Ref | 5.00 Ref |
| MPSZ1045S | 10.3 ± 0.2 | 10.5 ± 1.0 | 4.5 Max | 3.00 ± 0.3 | 2.00 ± 0.5 | 14.20 Ref | 3.80 Ref | 5.00 Ref |
| MPSZ1050S | 10.3 ± 0.2 | 10.5 ± 1.0 | 5.0 Max | 3.00 ± 0.3 | 2.00 ± 0.5 | 14.20 Ref | 3.80 Ref | 5.00 Ref |
| MPSZ1240S | 12.8 ± 0.5 | 13.2 ± 1.0 | 4.0 Max | 3.80 ± 0.3 | 2.50 ± 0.5 | 13.60 Ref | 6.00 Ref | 7.20 Ref |
| MPSZ1250S | 12.8 ± 0.5 | 13.2 ± 1.0 | 5.0 Max | 3.80 ± 0.3 | 2.50 ± 0.5 | 13.60 Ref | 6.00 Ref | 7.20 Ref |
| MPSZ1260S | 12.8 ± 0.5 | 13.2 ± 1.0 | 6.0 Max | 3.80 ± 0.3 | 2.50 ± 0.5 | 13.60 Ref | 6.00 Ref | 7.20 Ref |
| MPSZ1265S | 12.8 ± 0.5 | 13.2 ± 1.0 | 6.5 Max | 3.80 ± 0.3 | 2.50 ± 0.5 | 13.60 Ref | 6.00 Ref | 7.20 Ref |
| MPSZ1770H | 17.15 ± 0.5 | 17.5 ± 1.0 | 7.0 Max | 11.94 ± 0.3 | 2.50 ± 0.5 | 18.40 Ref | 13.0 Ref | 4.60 Ref |

High Current Inductor / MPSZ Type

4. Reflow Soldering Heat Endurance

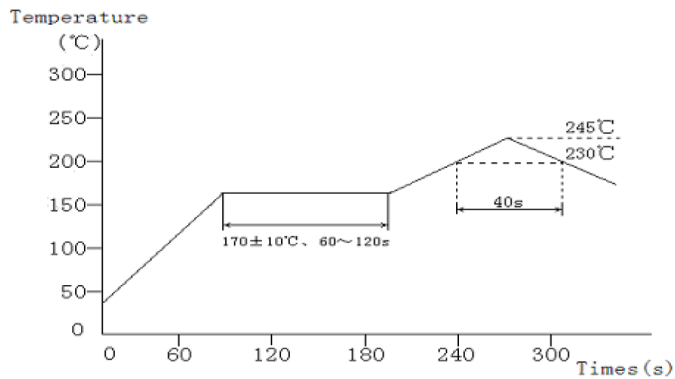


No mechanical and electrical defects are found after testing based on the above profile and keeping under the conditions of room temperature and humidity for 2 hours.

Twice reflow test is acceptable with the test interval remaining 1 hour under the normal conditions.

The reflow test profile may vary with the testing instruments.

4. Recommended Reflow Conditions



The recommended reflow profile is based on the testing instruments used. Solder ability will depend on the testing equipments, reflow conditions, testing method, etc. So it is necessary to make a confirmation of them when the reflow conditions are set up.

However halogen lamp shall be used, side heat will be beyond range of resistance heat, so we can't recommend it.

High Current Inductor / MPSZ Type

Electrical Characteristics MPSZ0420S Type

| Part No. | Inductance (μ H) | Tolerance (\pm %) | I _{rms} (Amp) Typ. | I _{sat} (Amp) Typ. | DCR (m Ω) | | Test Frequency (Hz / V) |
|----------------|--------------------------|-------------------------|--------------------------------|--------------------------------|-------------------|------|------------------------------|
| | | | | | Typ. | Max. | |
| MPSZ0420T-R10□ | 0.10 | 20% | 12 | 22 | 3.5 | 4 | 100K / 0.1 |
| MPSZ0420T-R22□ | 0.22 | 20% | 9 | 12.5 | 6.6 | 8 | 100K / 0.1 |
| MPSZ0420T-R36□ | 0.36 | 20% | 7 | 11 | 11 | 16 | 100K / 0.1 |
| MPSZ0420T-R47□ | 0.47 | 20% | 6.5 | 10 | 16.5 | 25 | 100K / 0.1 |
| MPSZ0420T-R56□ | 0.56 | 20% | 6.5 | 9 | 18 | 27 | 100K / 0.1 |
| MPSZ0420T-R68□ | 0.68 | 20% | 6 | 8 | 22 | 29 | 100K / 0.1 |
| MPSZ0420T-1R0□ | 1 | 20% | 5 | 7 | 30 | 37 | 100K / 0.1 |
| MPSZ0420T-1R2□ | 1.2 | 20% | 4.5 | 7 | 32 | 39 | 100K / 0.1 |
| MPSZ0420T-1R5□ | 1.5 | 20% | 4 | 6.5 | 40 | 48 | 100K / 0.1 |
| MPSZ0420T-2R2□ | 2.2 | 20% | 3 | 5 | 56 | 70 | 100K / 0.1 |
| MPSZ0420T-3R3□ | 3.3 | 20% | 2.5 | 4.5 | 74 | 87 | 100K / 0.1 |
| MPSZ0420T-4R7□ | 4.7 | 20% | 2.2 | 4 | 106 | 120 | 100K / 0.1 |
| MPSZ0420T-5R6□ | 5.6 | 20% | 2 | 3.5 | 146 | 170 | 100K / 0.1 |
| MPSZ0420T-6R8□ | 6.8 | 20% | 1.5 | 2.5 | 170 | 200 | 100K / 0.1 |
| MPSZ0420T-8R2□ | 8.2 | 20% | 1.2 | 2.2 | 240 | 260 | 100K / 0.1 |
| MPSZ0420T-100□ | 10 | 20% | 1 | 2 | 260 | 280 | 100K / 0.1 |

Electrical Characteristics MPSZ0520H Type

| Part No. | Inductance (μ H) | Tolerance (\pm %) | I _{rms} (Amp) Typ. | I _{sat} (Amp) Typ. | DCR (m Ω) | | Test Frequency (Hz / V) |
|----------------|--------------------------|-------------------------|--------------------------------|--------------------------------|-------------------|------|------------------------------|
| | | | | | Typ. | Max. | |
| MPSZ0520H-R10□ | 0.10 | 20% | 13 | 25 | 2.1 | 2.7 | 100K / 0.1 |
| MPSZ0520H-R22□ | 0.22 | 20% | 9 | 18 | 3.9 | 4.5 | 100K / 0.1 |
| MPSZ0520H-R33□ | 0.33 | 20% | 7 | 13 | 7.9 | 9.2 | 100K / 0.1 |
| MPSZ0520H-R47□ | 0.47 | 20% | 6 | 12 | 8.4 | 9.6 | 100K / 0.1 |
| MPSZ0520H-R68□ | 0.68 | 20% | 5 | 10 | 11 | 14 | 100K / 0.1 |
| MPSZ0520H-1R0□ | 1 | 20% | 4.5 | 9 | 16.8 | 18.1 | 100K / 0.1 |
| MPSZ0520H-2R2□ | 2.2 | 20% | 4 | 8 | 26.7 | 30.6 | 100K / 0.1 |
| MPSZ0520H-3R3□ | 3.3 | 20% | 3.5 | 5.5 | 62.5 | 75 | 100K / 0.1 |
| MPSZ0520H-4R7□ | 4.7 | 20% | 3 | 5 | 74 | 82 | 100K / 0.1 |
| MPSZ0520H-5R6□ | 5.6 | 20% | 2.5 | 5 | 84 | 92 | 100K / 0.1 |
| MPSZ0520H-6R8□ | 6.8 | 20% | 2.2 | 4.5 | 114 | 134 | 100K / 0.1 |
| MPSZ0520H-100□ | 10 | 20% | 2 | 4 | 200 | 220 | 100K / 0.1 |

High Current Inductor / MPSZ Type

Electrical Characteristics MPSZ0530H Type

| Part No. | Inductance (μ H) | Tolerance (\pm %) | I _{rms} (Amp) Typ. | I _{sat} (Amp) Typ. | DCR (m Ω) | | Test Frequency (Hz / V) |
|----------------|--------------------------|-------------------------|--------------------------------|--------------------------------|-------------------|------|------------------------------|
| | | | | | Typ. | Max. | |
| MPSZ0530H-R68□ | 0.68 | 20% | 7 | 14 | 10 | 12 | 100K / 0.1 |
| MPSZ0530H-1R0□ | 1 | 20% | 6 | 12 | 13 | 14 | 100K / 0.1 |
| MPSZ0530H-1R2□ | 1.2 | 20% | 6.5 | 11 | 15 | 16 | 100K / 0.1 |
| MPSZ0530H-1R5□ | 1.5 | 20% | 5.5 | 10 | 20 | 25 | 100K / 0.1 |
| MPSZ0530H-2R2□ | 2.2 | 20% | 5 | 9 | 25 | 32 | 100K / 0.1 |
| MPSZ0530H-3R3□ | 3.3 | 20% | 4 | 7 | 33 | 38 | 100K / 0.1 |
| MPSZ0530H-4R7□ | 4.7 | 20% | 3 | 6 | 50 | 60 | 100K / 0.1 |
| MPSZ0530H-6R8□ | 6.8 | 20% | 2.5 | 4 | 85 | 100 | 100K / 0.1 |
| MPSZ0530H-100□ | 10 | 20% | 1.5 | 3 | 115 | 140 | 100K / 0.1 |

Electrical Characteristics MPSZ0612H Type

| Part No. | Inductance (μ H) | Tolerance (\pm %) | I _{rms} (Amp) Typ. | I _{sat} (Amp) Typ. | DCR (m Ω) | | Test Frequency (Hz / V) |
|----------------|--------------------------|-------------------------|--------------------------------|--------------------------------|-------------------|------|------------------------------|
| | | | | | Typ. | Max. | |
| MPSZ0612H-R56□ | 0.56 | 20% | 6 | 11 | 13.5 | 16 | 100K / 0.1 |
| MPSZ0612H-R68□ | 0.68 | 20% | 5.5 | 10 | 14.7 | 17 | 100K / 0.1 |
| MPSZ0612H-R82□ | 0.82 | 20% | 5 | 9 | 19.1 | 22 | 100K / 0.1 |
| MPSZ0612H-1R0□ | 1 | 20% | 4 | 7 | 22.3 | 26 | 100K / 0.1 |
| MPSZ0612H-2R2□ | 2.2 | 20% | 3.5 | 5 | 64 | 67 | 100K / 0.1 |
| MPSZ0612H-3R3□ | 3.3 | 20% | 3 | 4 | 80 | 92 | 100K / 0.1 |
| MPSZ0612H-4R7□ | 4.7 | 20% | 2 | 3.5 | 120 | 130 | 100K / 0.1 |
| MPSZ0612H-100□ | 10 | 20% | 1.5 | 2.5 | 250 | 290 | 100K / 0.1 |

Electrical Characteristics MPSZ0620H Type

| Part No. | Inductance (μ H) | Tolerance (\pm %) | I _{rms} (Amp) Typ. | I _{sat} (Amp) Typ. | DCR (m Ω) | | Test Frequency (Hz / V) |
|----------------|--------------------------|-------------------------|--------------------------------|--------------------------------|-------------------|------|------------------------------|
| | | | | | Typ. | Max. | |
| MPSZ0620H-R10□ | 0.1 | 20% | 16 | 30 | 2.7 | 3.5 | 100K / 0.1 |
| MPSZ0620H-R33□ | 0.33 | 20% | 13 | 24 | 4.3 | 5.2 | 100K / 0.1 |
| MPSZ0620H-R47□ | 0.47 | 20% | 10 | 18 | 7.3 | 8.4 | 100K / 0.1 |
| MPSZ0620H-R68□ | 0.68 | 20% | 8 | 16 | 10.8 | 12.5 | 100K / 0.1 |
| MPSZ0620H-1R0□ | 1 | 20% | 6 | 10 | 19.4 | 22 | 100K / 0.1 |
| MPSZ0620H-1R5□ | 1.5 | 20% | 5 | 10 | 24 | 30 | 100K / 0.1 |
| MPSZ0620H-2R2□ | 2.2 | 20% | 4 | 8 | 44 | 48 | 100K / 0.1 |
| MPSZ0620H-3R3□ | 3.3 | 20% | 3.5 | 7.5 | 66 | 74 | 100K / 0.1 |
| MPSZ0620H-4R7□ | 4.7 | 20% | 2.5 | 4 | 87 | 105 | 100K / 0.1 |
| MPSZ0620H-6R8□ | 6.8 | 20% | 1.8 | 3 | 120 | 130 | 100K / 0.1 |
| MPSZ0620H-100□ | 10 | 20% | 1.2 | 2.5 | 135 | 150 | 100K / 0.1 |

High Current Inductor / MPSZ Type

. Electrical Characteristics MPSZ0624S Type

| Part No. | Inductance (μ H) | Tolerance (\pm %) | I _{rms} (Amp) Typ. | I _{sat} (Amp) Typ. | DCR (m Ω) | | Test Frequency (Hz / V) |
|----------------|--------------------------|-------------------------|--------------------------------|--------------------------------|-------------------|------|------------------------------|
| | | | | | Typ. | Max. | |
| MPSZ0624S-R47□ | 0.47 | 20% | 10 | 19 | 5.7 | 6.5 | 100K / 0.1 |
| MPSZ0624S-R68□ | 0.68 | 20% | 9 | 18 | 7.9 | 9.4 | 100K / 0.1 |
| MPSZ0624S-R82□ | 0.82 | 20% | 8 | 16 | 9.6 | 11.8 | 100K / 0.1 |
| MPSZ0624S-1R0□ | 1 | 20% | 7.5 | 15 | 12.5 | 14.2 | 100K / 0.1 |
| MPSZ0624S-1R5□ | 1.5 | 20% | 6.5 | 13 | 17.4 | 21.2 | 100K / 0.1 |
| MPSZ0624S-2R2□ | 2.2 | 20% | 6 | 12 | 28 | 34 | 100K / 0.1 |
| MPSZ0624S-3R3□ | 3.3 | 20% | 4.5 | 9 | 45 | 51 | 100K / 0.1 |
| MPSZ0624S-4R7□ | 4.7 | 20% | 4 | 7.5 | 57 | 63 | 100K / 0.1 |
| MPSZ0624S-5R6□ | 5.6 | 20% | 3.5 | 5 | 42 | 45 | 100K / 0.1 |
| MPSZ0624S-6R8□ | 6.8 | 20% | 3 | 6 | 83 | 95 | 100K / 0.1 |
| MPSZ0624S-8R2□ | 8.2 | 20% | 2.5 | 5 | 94 | 106 | 100K / 0.1 |
| MPSZ0624S-100□ | 10 | 20% | 2 | 4 | 108 | 130 | 100K / 0.1 |

. Electrical Characteristics MPSZ0630H Type

| Part No. | Inductance (μ H) | Tolerance (\pm %) | I _{rms} (Amp) Typ. | I _{sat} (Amp) Typ. | DCR (m Ω) | | Test Frequency (Hz / V) |
|----------------|--------------------------|-------------------------|--------------------------------|--------------------------------|-------------------|------|------------------------------|
| | | | | | Typ. | Max. | |
| MPSZ0630H-R10□ | 0.1 | 20% | 22 | 40 | 1.4 | 1.8 | 100K / 0.1 |
| MPSZ0630H-R20□ | 0.2 | 20% | 18 | 34 | 2.4 | 3 | 100K / 0.1 |
| MPSZ0630H-R33□ | 0.33 | 20% | 14 | 28 | 3 | 3.5 | 100K / 0.1 |
| MPSZ0630H-R47□ | 0.47 | 20% | 11 | 20 | 3.6 | 4.1 | 100K / 0.1 |
| MPSZ0630H-R68□ | 0.68 | 20% | 9 | 17 | 4.6 | 5.3 | 100K / 0.1 |
| MPSZ0630H-R82□ | 0.82 | 20% | 8 | 16 | 5.4 | 6 | 100K / 0.1 |
| MPSZ0630H-1R0□ | 1 | 20% | 7.5 | 15 | 8.1 | 9.2 | 100K / 0.1 |
| MPSZ0630H-1R5□ | 1.5 | 20% | 7 | 14 | 10.5 | 12 | 100K / 0.1 |
| MPSZ0630H-2R2□ | 2.2 | 20% | 6 | 12 | 13.5 | 15 | 100K / 0.1 |
| MPSZ0630H-3R3□ | 3.3 | 20% | 5 | 10 | 18 | 22 | 100K / 0.1 |
| MPSZ0630H-4R7□ | 4.7 | 20% | 4.5 | 9 | 28 | 38 | 100K / 0.1 |
| MPSZ0630H-5R6□ | 5.6 | 20% | 4 | 8 | 39 | 46 | 100K / 0.1 |
| MPSZ0630H-6R8□ | 6.8 | 20% | 3.5 | 7 | 44 | 50 | 100K / 0.1 |
| MPSZ0630H-8R2□ | 8.2 | 20% | 3 | 6 | 54 | 60 | 100K / 0.1 |
| MPSZ0630H-100□ | 10 | 20% | 3 | 5.5 | 65 | 75 | 100K / 0.1 |
| MPSZ0630H-150□ | 15 | 20% | 2 | 4 | 90 | 105 | 100K / 0.1 |
| MPSZ0630H-220□ | 22 | 20% | 1.5 | 3 | 125 | 135 | 100K / 0.1 |

High Current Inductor / MPSZ Type

1. Electrical Characteristics MPSZ0640S Type

| Part No. | Inductance (μ H) | Tolerance (\pm %) | I _{rms} (Amp) Typ. | I _{sat} (Amp) Typ. | DCR (m Ω) | | Test Frequency (Hz / V) |
|----------------|--------------------------|-------------------------|--------------------------------|--------------------------------|-------------------|------|------------------------------|
| | | | | | Typ. | Max. | |
| MPSZ0640S-R47□ | 0.47 | 20% | 12 | 22 | 3.2 | 4 | 100K / 0.1 |
| MPSZ0640S-R68□ | 0.68 | 20% | 10 | 20 | 4.4 | 5.3 | 100K / 0.1 |
| MPSZ0640S-R82□ | 0.82 | 20% | 9 | 18 | 5.9 | 7 | 100K / 0.1 |
| MPSZ0640S-1R0□ | 1 | 20% | 8 | 16 | 6.4 | 7.2 | 100K / 0.1 |
| MPSZ0640S-1R5□ | 1.5 | 20% | 7 | 14 | 8.1 | 9.7 | 100K / 0.1 |
| MPSZ0640S-2R2□ | 2.2 | 20% | 6 | 12 | 13 | 17 | 100K / 0.1 |
| MPSZ0640S-3R3□ | 3.3 | 20% | 5.5 | 11 | 21.4 | 25 | 100K / 0.1 |
| MPSZ0640S-4R7□ | 4.7 | 20% | 5 | 9 | 27.5 | 35 | 100K / 0.1 |
| MPSZ0640S-6R8□ | 6.8 | 20% | 4 | 8 | 36 | 45 | 100K / 0.1 |
| MPSZ0640S-8R2□ | 8.2 | 20% | 3.5 | 7 | 44 | 50 | 100K / 0.1 |
| MPSZ0640S-100□ | 10 | 20% | 3 | 6 | 56 | 65 | 100K / 0.1 |
| MPSZ0640S-150□ | 15 | 20% | 2.5 | 5 | 58 | 80 | 100K / 0.1 |
| MPSZ0640S-220□ | 22 | 20% | 2.5 | 4 | 80 | 92 | 100K / 0.1 |

2. Electrical Characteristics MPSZ0650S Type

| Part No. | Inductance (μ H) | Tolerance (\pm %) | I _{rms} (Amp) Typ. | I _{sat} (Amp) Typ. | DCR (m Ω) | | Test Frequency (Hz / V) |
|----------------|--------------------------|-------------------------|--------------------------------|--------------------------------|-------------------|------|------------------------------|
| | | | | | Typ. | Max. | |
| MPSZ0650S-R47□ | 0.47 | 20% | 13 | 24 | 3.1 | 3.5 | 100K / 0.1 |
| MPSZ0650S-R56□ | 0.56 | 20% | 12 | 22 | 3.9 | 4.6 | 100K / 0.1 |
| MPSZ0650S-R68□ | 0.68 | 20% | 10 | 18 | 5.1 | 6 | 100K / 0.1 |
| MPSZ0650S-R82□ | 0.82 | 20% | 9 | 17 | 6 | 6.8 | 100K / 0.1 |
| MPSZ0650S-1R0□ | 1 | 20% | 8 | 16 | 6.4 | 7.2 | 100K / 0.1 |
| MPSZ0650S-1R5□ | 1.5 | 20% | 7.5 | 15 | 7.1 | 8 | 100K / 0.1 |
| MPSZ0650S-2R2□ | 2.2 | 20% | 7 | 14 | 10.5 | 13 | 100K / 0.1 |
| MPSZ0650S-3R3□ | 3.3 | 20% | 6 | 12 | 14.5 | 16 | 100K / 0.1 |
| MPSZ0650S-4R7□ | 4.7 | 20% | 5 | 10 | 17.8 | 20 | 100K / 0.1 |
| MPSZ0650S-6R8□ | 6.8 | 20% | 4 | 8 | 24.7 | 30 | 100K / 0.1 |
| MPSZ0650S-8R2□ | 8.2 | 20% | 4 | 7.5 | 35 | 41 | 100K / 0.1 |
| MPSZ0650S-100□ | 10 | 20% | 3.5 | 6.5 | 39 | 45 | 100K / 0.1 |
| MPSZ0650S-150□ | 15 | 20% | 3 | 5 | 49 | 55 | 100K / 0.1 |
| MPSZ0650S-220□ | 22 | 20% | 2.5 | 4.5 | 78 | 85 | 100K / 0.1 |
| MPSZ0650S-330□ | 33 | 20% | 2 | 4 | 150 | 180 | 100K / 0.1 |
| MPSZ0650S-470□ | 47 | 20% | 1.7 | 3 | 200 | 230 | 100K / 0.1 |

High Current Inductor / MPSZ Type

Electrical Characteristics MPSZ1040S Type

| Part No. | Inductance (uH) | Tolerance (±%) | Irms (Amp) Typ. | Isat (Amp) Typ. | DCR (mΩ) | | Test Frequency (Hz / V) |
|----------------|-----------------|----------------|-----------------|-----------------|----------|------|-------------------------|
| | | | | | Typ. | Max. | |
| MPSZ1040S-R22□ | 0.22 | 20% | 30 | 60 | 1.3 | 1.5 | 100K / 0.1 |
| MPSZ1040S-R36□ | 0.36 | 20% | 25 | 50 | 1.4 | 1.7 | 100K / 0.1 |
| MPSZ1040S-R47□ | 0.47 | 20% | 20 | 40 | 1.7 | 2.2 | 100K / 0.1 |
| MPSZ1040S-R56□ | 0.56 | 20% | 18 | 35 | 2 | 2.4 | 100K / 0.1 |
| MPSZ1040S-R68□ | 0.68 | 20% | 15 | 30 | 2.5 | 3 | 100K / 0.1 |
| MPSZ1040S-R82□ | 0.82 | 20% | 14 | 26 | 3.1 | 3.5 | 100K / 0.1 |
| MPSZ1040S-1R0□ | 1 | 20% | 13 | 25 | 3.4 | 4 | 100K / 0.1 |
| MPSZ1040S-1R5□ | 1.5 | 20% | 12 | 24 | 4.7 | 5.4 | 100K / 0.1 |
| MPSZ1040S-2R2□ | 2.2 | 20% | 10 | 20 | 7.6 | 9 | 100K / 0.1 |
| MPSZ1040S-3R3□ | 3.3 | 20% | 9 | 16 | 10.8 | 12 | 100K / 0.1 |
| MPSZ1040S-4R7□ | 4.7 | 20% | 7 | 13 | 15.5 | 18 | 100K / 0.1 |
| MPSZ1040S-5R6□ | 5.6 | 20% | 6 | 12 | 21 | 25 | 100K / 0.1 |
| MPSZ1040S-6R8□ | 6.8 | 20% | 6 | 11 | 23 | 27 | 100K / 0.1 |
| MPSZ1040S-8R2□ | 8.2 | 20% | 5 | 10 | 30 | 34 | 100K / 0.1 |
| MPSZ1040S-100□ | 10 | 20% | 5 | 10 | 34 | 38 | 100K / 0.1 |

Electrical Characteristics MPSZ1045S Type

| Part No. | Inductance (uH) | Tolerance (±%) | Irms (Amp) Typ. | Isat (Amp) Typ. | DCR (mΩ) | | Test Frequency (Hz / V) |
|----------------|-----------------|----------------|-----------------|-----------------|----------|------|-------------------------|
| | | | | | Typ. | Max. | |
| MPSZ1045S-150□ | 15 | 20% | 4 | 8 | 52 | 60 | 100K / 0.1 |
| MPSZ1045S-220□ | 22 | 20% | 3 | 6 | 66 | 75 | 100K / 0.1 |
| MPSZ1045S-330□ | 33 | 20% | 2.5 | 5 | 81 | 92 | 100K / 0.1 |
| MPSZ1045S-470□ | 47 | 20% | 2 | 4 | 134 | 145 | 100K / 0.1 |

Electrical Characteristics MPSZ1050S Type

| Part No. | Inductance (uH) | Tolerance (±%) | Irms (Amp) Typ. | Isat (Amp) Typ. | DCR (mΩ) | | Test Frequency (Hz / V) |
|----------------|-----------------|----------------|-----------------|-----------------|----------|------|-------------------------|
| | | | | | Typ. | Max. | |
| MPSZ1050S-680□ | 68 | 20% | 1.5 | 3 | 171 | 190 | 100K / 0.1 |
| MPSZ1050S-101□ | 100 | 20% | 1 | 2 | 268 | 290 | 100K / 0.1 |

Electrical Characteristics MPSZ1240S Type

| Part No. | Inductance (uH) | Tolerance (±%) | Irms (Amp) Typ. | Isat (Amp) Typ. | DCR (mΩ) | | Test Frequency (Hz / V) |
|----------------|-----------------|----------------|-----------------|-----------------|----------|------|-------------------------|
| | | | | | Typ. | Max. | |
| MPSZ1240S-R22□ | 0.22 | 20% | 23 | 45 | 1.4 | 1.7 | 100K / 0.1 |
| MPSZ1240S-R33□ | 0.33 | 20% | 19 | 38 | 1.7 | 3.3 | 100K / 0.1 |
| MPSZ1240S-R47□ | 0.47 | 20% | 17 | 34 | 2 | 2.4 | 100K / 0.1 |
| MPSZ1240S-R56□ | 0.56 | 20% | 16 | 32 | 2.2 | 2.6 | 100K / 0.1 |
| MPSZ1240S-R68□ | 0.68 | 20% | 15 | 30 | 2.4 | 2.9 | 100K / 0.1 |
| MPSZ1240S-1R0□ | 1 | 20% | 14 | 27 | 2.7 | 3.2 | 100K / 0.1 |
| MPSZ1240S-1R5□ | 1.5 | 20% | 13 | 25 | 3.7 | 4.1 | 100K / 0.1 |
| MPSZ1240S-2R2□ | 2.2 | 20% | 11 | 22 | 5.6 | 6.7 | 100K / 0.1 |
| MPSZ1240S-3R3□ | 3.3 | 20% | 10 | 20 | 7.4 | 8.1 | 100K / 0.1 |
| MPSZ1240S-4R7□ | 4.7 | 20% | 9 | 18 | 11.2 | 13 | 100K / 0.1 |
| MPSZ1240S-5R6□ | 5.6 | 20% | 8 | 16 | 14.5 | 17.4 | 100K / 0.1 |
| MPSZ1240S-6R8□ | 6.8 | 20% | 7 | 14 | 18.6 | 22.2 | 100K / 0.1 |
| MPSZ1240S-100□ | 10 | 20% | 5 | 10 | 26 | 31 | 100K / 0.1 |
| MPSZ1240S-200□ | 20 | 20% | 4 | 7 | 42 | 50 | 100K / 0.1 |

High Current Inductor / MPSZ Type

Electrical Characteristics MPSZ1250S Type

| Part No. | Inductance (uH) | Tolerance (±%) | I _{rms} (Amp) Typ. | I _{sat} (Amp) Typ. | DCR (mΩ) | | Test Frequency (Hz / V) |
|----------------|-----------------|----------------|-----------------------------|-----------------------------|----------|------|-------------------------|
| | | | | | Typ. | Max. | |
| MPSZ1250S-R36□ | 0.36 | 20% | 30 | 55 | 1 | 1.2 | 100K / 0.1 |
| MPSZ1250S-R47□ | 0.47 | 20% | 28 | 50 | 1.2 | 1.4 | 100K / 0.1 |
| MPSZ1250S-R56□ | 0.56 | 20% | 25 | 45 | 1.3 | 1.6 | 100K / 0.1 |
| MPSZ1250S-R68□ | 0.68 | 20% | 22 | 40 | 1.7 | 2.1 | 100K / 0.1 |
| MPSZ1250S-R82□ | 0.82 | 20% | 18 | 35 | 1.9 | 2.3 | 100K / 0.1 |
| MPSZ1250S-1R0□ | 1 | 20% | 16 | 32 | 2.3 | 2.7 | 100K / 0.1 |
| MPSZ1250S-1R2□ | 1.2 | 20% | 16 | 30 | 2.6 | 3 | 100K / 0.1 |
| MPSZ1250S-1R5□ | 1.5 | 20% | 14 | 27 | 3.7 | 4.1 | 100K / 0.1 |
| MPSZ1250S-2R2□ | 2.2 | 20% | 13 | 25 | 4.9 | 5.5 | 100K / 0.1 |
| MPSZ1250S-3R3□ | 3.3 | 20% | 12 | 22 | 6.1 | 6.9 | 100K / 0.1 |
| MPSZ1250S-4R7□ | 4.7 | 20% | 10 | 18 | 7.5 | 9 | 100K / 0.1 |
| MPSZ1250S-5R6□ | 5.6 | 20% | 9 | 18 | 13.6 | 16 | 100K / 0.1 |
| MPSZ1250S-6R8□ | 6.8 | 20% | 8 | 15 | 15.7 | 18.5 | 100K / 0.1 |
| MPSZ1250S-8R2□ | 8.2 | 20% | 7 | 13 | 18.4 | 24 | 100K / 0.1 |
| MPSZ1250S-100□ | 10 | 20% | 7.5 | 12.5 | 20 | 25.5 | 100K / 0.1 |

Electrical Characteristics MPSZ1260S Type

| Part No. | Inductance (uH) | Tolerance (±%) | I _{rms} (Amp) Typ. | I _{sat} (Amp) Typ. | DCR (mΩ) | | Test Frequency (Hz / V) |
|----------------|-----------------|----------------|-----------------------------|-----------------------------|----------|------|-------------------------|
| | | | | | Typ. | Max. | |
| MPSZ1260S-4R7□ | 4.7 | 20% | 12 | 25 | 8.4 | 9.5 | 100K / 0.1 |
| MPSZ1260S-5R6□ | 5.6 | 20% | 11 | 20 | 9.1 | 10 | 100K / 0.1 |
| MPSZ1260S-6R8□ | 6.8 | 20% | 9 | 18 | 10.1 | 11 | 100K / 0.1 |
| MPSZ1260S-8R2□ | 8.2 | 20% | 8.5 | 16 | 10.6 | 12 | 100K / 0.1 |

Electrical Characteristics MPSZ1265S Type

| Part No. | Inductance (uH) | Tolerance (±%) | I _{rms} (Amp) Typ. | I _{sat} (Amp) Typ. | DCR (mΩ) | | Test Frequency (Hz / V) |
|-----------------------|-----------------|----------------|-----------------------------|-----------------------------|-------------|------------|-------------------------|
| | | | | | Typ. | Max. | |
| MPSZ1265S-100□ | 10 | 20% | 8 | 14 | 12 | 15 | 100K / 0.1 |
| MPSZ1265S-150□ | 15 | 20% | 7.5 | 13 | 19 | 24 | 100K / 0.1 |
| MPSZ1265S-220□ | 22 | 20% | 6 | 11 | 27 | 35 | 100K / 0.1 |
| MPSZ1265S-330□ | 33 | 20% | 5 | 10 | 42 | 49 | 100K / 0.1 |
| MPSZ1265S-470□ | 47 | 20% | 4 | 7 | 50 | 62 | 100K / 0.1 |
| MPSZ1265S-680□ | 68 | 20% | 3 | 5.5 | 95.5 | 115 | 100K / 0.1 |
| MPSZ1265S-820□ | 82 | 20% | 2.5 | 4.5 | 101 | 90 | 100K / 0.1 |
| MPSZ1265S-101□ | 100 | 20% | 2 | 3.5 | 110 | 125 | 100K / 0.1 |

High Current Inductor / MPSZ Type

4. Electrical Characteristics MPSZ1770H Type

| Part No. | Inductance (μ H) | Tolerance (\pm %) | Irms (Amp) Typ. | Isat (Amp) Typ. | DCR ($m\Omega$) | | Test Frequency (Hz / V) |
|----------------|--------------------------|-------------------------|--------------------|--------------------|-------------------|------|------------------------------|
| | | | | | Typ. | Max. | |
| MPSZ1770H-1R5□ | 1.5 | 20% | 23 | 45 | 1.45 | 1.85 | 100K / 0.1 |
| MPSZ1770H-2R2□ | 2.2 | 20% | 20 | 40 | 2.5 | 3.2 | 100K / 0.1 |
| MPSZ1770H-4R7□ | 4.7 | 20% | 15 | 30 | 3.4 | 4.12 | 100K / 0.1 |
| MPSZ1770H-6R8□ | 6.8 | 20% | 13 | 26 | 5.8 | 6.55 | 100K / 0.1 |
| MPSZ1770H-8R2□ | 8.2 | 20% | 12 | 24 | 8.1 | 9.5 | 100K / 0.1 |
| MPSZ1770H-100□ | 10 | 20% | 11 | 22 | 9.8 | 11 | 100K / 0.1 |
| MPSZ1770H-150□ | 15 | 20% | 10 | 20 | 14.5 | 15.5 | 100K / 0.1 |
| MPSZ1770H-220□ | 22 | 20% | 7 | 14 | 20.5 | 28 | 100K / 0.1 |
| MPSZ1770H-330□ | 33 | 20% | 6 | 12 | 34 | 45 | 100K / 0.1 |
| MPSZ1770H-470□ | 47 | 20% | 5 | 10 | 41 | 55 | 100K / 0.1 |
| MPSZ1770H-680□ | 68 | 20% | 5 | 9 | 69 | 80 | 100K / 0.1 |
| MPSZ1770H-820□ | 82 | 20% | 4.5 | 8 | 89 | 96 | 100K / 0.1 |
| MPSZ1770H-101□ | 100 | 20% | 4 | 7 | 104 | 115 | 100K / 0.1 |

NOTE:

1. All test data is referenced to 25°C ambient.
2. Irms: DC current(A) that will cause an approximate ΔT of 40°C .
3. Isat: DC current(A) that will cause L_o to drop approximate 30%.
4. Operating temperature range is 35°C to 125°C .
5. The Part temperature (ambient + ΔT) should not exceed 125°C under worst case operating conditions.
6. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all effect the part temperature. Part temperature should be verified in the end application.
7. □ Tolerance : J= \pm 5 % , K= \pm 10% , M= \pm 20%, N= \pm 30%

High Current Inductor / MPSZ Type

4. Reliability and Test Conditions(可靠性測試條件)

1. Mechanical Reliability

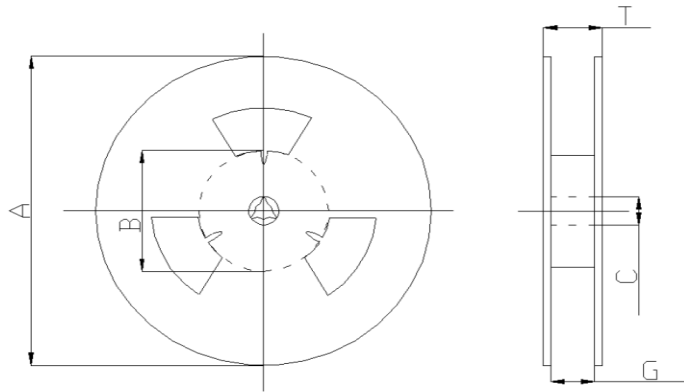
| Item | Conditions | Specification |
|---------------|---|--|
| Solderability | Solder heat proof: Preheating: 180 ±10°C 90 seconds Soldering: 255 ±5°C for 3 ±1 sec | The surface of terminal/pin tested shall be covered with new solder by 95% |
| Shock | Drop down with 981m/s ² (100G) shock Attitude upon a rubber block method shock testing machine, 3 tests | Inductance change within ± 5% Without mechanical damage. |
| Vibration | Vibration frequency: 10Hz to 55Hz to 10Hz 60, seconds cycle Vibration time: 2 hours | Inductance change within ± 5% Without mechanical damage. |

2. Endurance Reliability

| | | |
|---------------------|---|--|
| Thermal Shock | -25°C, (mins) -> room temp. (mins)-> 125°C, (30 mins) -> room temp. (5 mins) 100 cycles | Inductance change within ± 5% Without mechanical damage. |
| Heat Resistance | Apply IDC current @ 85°C ambient Duration: 1000 hrs | Inductance change within ± 5% Without mechanical damage. |
| Humidity Resistance | Apply IDC current @ 60°C ambient Humidity: 90~95% Duration: 1000 hrs | Inductance change within ± 5% Without mechanical damage. |
| Low Temp Storing | Storing Temp. -35 ±2 °C for total 1,000 +4/-0 hours | Inductance change within ± 5% Without mechanical damage. |
| High Temp. Storing | Storing Temp. 125 ±2 °C for total 1,000 +4/-0 hours | Inductance change within ± 5% Without mechanical damage. |

High Current Inductor / MPSZ Type

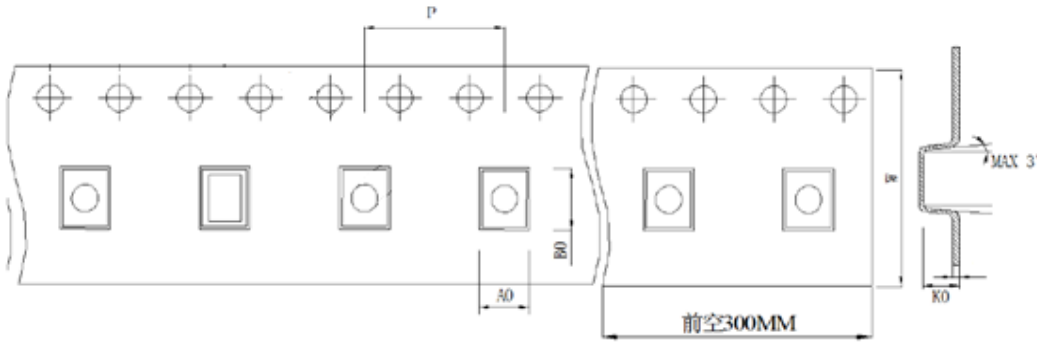
.Reel Dimension(m/m)



| TYPE | Dimensions in (mm) | | | | | Reel Packing Unit |
|-----------|--------------------|-----|----|----|----|-------------------|
| | A | B | C | G | T | PCS / REEL |
| MPSZ0420T | 330 | 100 | 13 | 12 | 16 | 4000 |
| MPSZ0520H | 330 | 100 | 13 | 16 | 20 | 3000 |
| MPSZ0530H | 330 | 100 | 13 | 16 | 20 | 2000 |
| MPSZ0612H | 330 | 100 | 13 | 16 | 20 | 3000 |
| MPSZ0620H | 330 | 100 | 13 | 16 | 20 | 2000 |
| MPSZ0624S | 330 | 100 | 13 | 16 | 20 | 2000 |
| MPSZ0630H | 330 | 100 | 13 | 16 | 20 | 1500 |
| MPSZ0640S | 330 | 100 | 13 | 16 | 20 | 1000 |
| MPSZ0650S | 330 | 100 | 13 | 16 | 20 | 1000 |
| MPSZ1040S | 330 | 100 | 13 | 24 | 28 | 1000 |
| MPSZ1045S | 330 | 100 | 13 | 24 | 28 | 800 |
| MPSZ1050S | 330 | 100 | 13 | 24 | 28 | 800 |
| MPSZ1240S | 330 | 100 | 13 | 24 | 28 | 500 |
| MPSZ1250S | 330 | 100 | 13 | 24 | 28 | 500 |
| MPSZ1260S | 330 | 100 | 13 | 24 | 28 | 500 |
| MPSZ1265S | 330 | 100 | 13 | 24 | 28 | 400 |
| MPSZ1770H | 330 | 100 | 13 | 32 | 36 | 300 |

High Current Inductor / MPSZ Type

1. Taping Dimension(m/m)



| TYPE | Dimensions in (mm) | | | | |
|-----------|--------------------|----|------|------|-----|
| | W | P | B0 | A0 | K0 |
| MPSZ0420T | 12 | 8 | 5 | 4.4 | 2.1 |
| MPSZ0520H | 16 | 12 | 6.2 | 5.8 | 2.1 |
| MPSZ0530H | 16 | 12 | 6.2 | 5.8 | 3.1 |
| MPSZ0612H | 16 | 12 | 8 | 7.2 | 1.3 |
| MPSZ0620H | 16 | 12 | 8 | 7.2 | 2.1 |
| MPSZ0624S | 16 | 12 | 8 | 7.2 | 2.5 |
| MPSZ0630H | 16 | 12 | 8 | 7.2 | 3.1 |
| MPSZ0640S | 16 | 12 | 8 | 7.2 | 4.1 |
| MPSZ0650S | 16 | 12 | 8 | 7.2 | 5.1 |
| MPSZ1040S | 24 | 16 | 10.8 | 7.2 | 4.1 |
| MPSZ1045S | 24 | 16 | 10.8 | 7.2 | 4.6 |
| MPSZ1050S | 24 | 16 | 10.8 | 7.2 | 5.1 |
| MPSZ1240S | 24 | 20 | 14.2 | 13.3 | 4.1 |
| MPSZ1250S | 24 | 20 | 14.2 | 13.3 | 5.1 |
| MPSZ1260S | 24 | 20 | 14.2 | 13.3 | 6.1 |
| MPSZ1265S | 24 | 20 | 14.2 | 13.3 | 6.6 |
| MPSZ1770H | 32 | 24 | 18 | 17.2 | 7.1 |