## ■ Features

- High density packaging with a pitch of 2.54mm(0.1 inch) max. is possible. This series requires less space and has greater EMI suppression effects.
- Different types with the same shape are available**.**
- Excellent in physical properties,such as terminal strength,flexure strength, soldering resistance and soderability.
- Applicable to both flow and reflow soldering.
- High impedance cover wide frequency ranges.
- YI series can be used in high current circuits due to its low DC resistance.
- Operating temperature:-55℃ ~ +125℃ (Including self-temperature).

## ■ Applications

- Computers and peripheral devices,personal computers,VCR and cameras.
- Noise suppression in digital equipments,car stereo,car engines controllers and OA electronic instruments.
- Communication equipment.

## ■ Product Identification

YI □□□□□□ □ □□□ - □□□□

(1) (2) (3) (4) (5)

(1)： Type

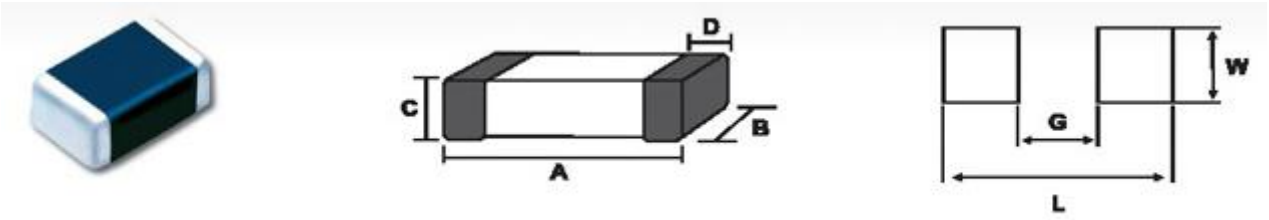
(2)： Dimensions

(3)： Material Code

(4)： Impedance

(5)： Rated Current

## Shapes and Dimensions (Unit：mm)




| TYPE | A | B | C | D | L | W | G |
|---|---|---|---|---|---|---|---|
| YI451616 | 4.5±0.2 | 1.6±0.2 | 1.6±0.2 | 0.5±0.3 | 5.80 | 1.80 | 2.00 |

## Electrical Requirements

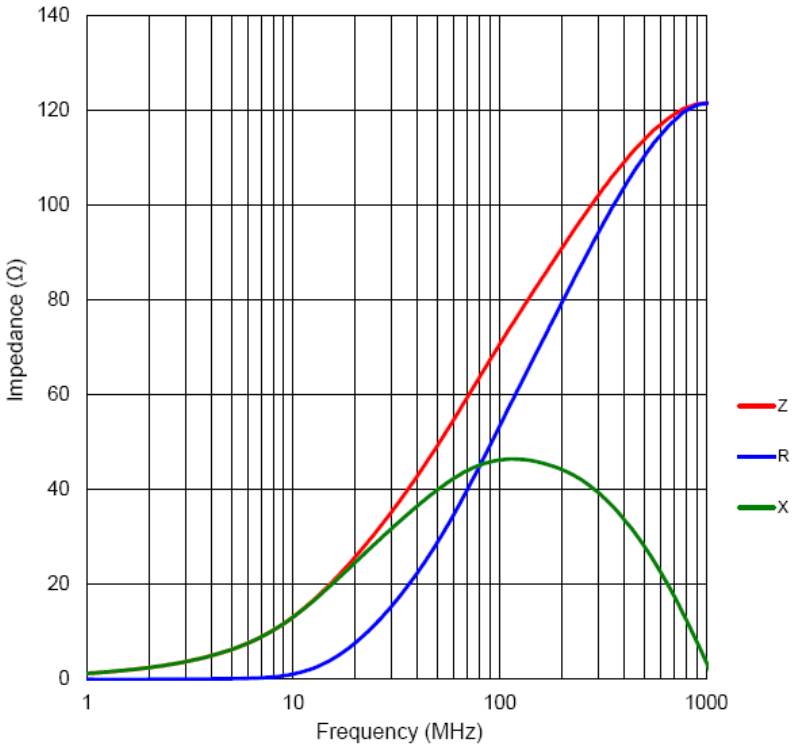
| Part Number | Impedance(Ω) ±25% | Test Freq. (MHz) | DCR MAX. (mΩ) | Rating Current MAX (A) |
|---|---|---|---|---|
| YI451616U750-8R0T | 75 | 100 | 10 | 8.0 |

TEST INSTRUMENTS：

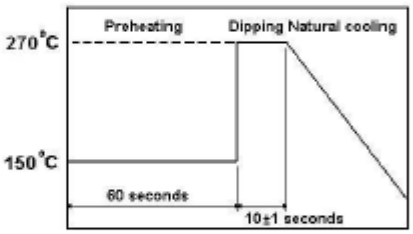
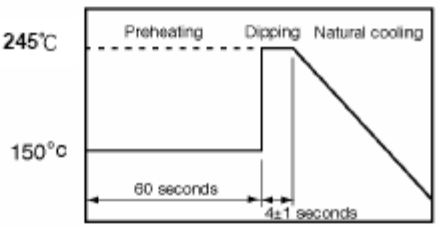
HP 4338A MILLIOHMMETER

HP 4291B RF IMPEDANCE/MATERIAL ANALYZER

## Impedance VS. Frequency characteristic



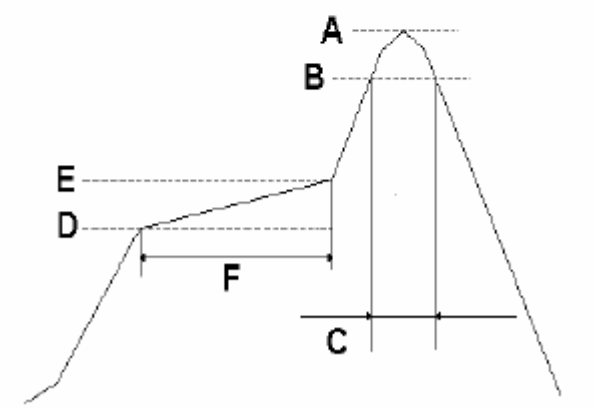
## Reliability test

| Item | Performance | Test condition |
|---|---|---|
| Operating temperature range | -55 °C to + 125 °C | |
| Storage temperature and umidity ranges | 40 °C MAX., 70% RH MAX. | |
| Soldering heat resistance | The chip shall not be cracks.<br>More than 75% of terminal electrode shall be covered with solder. | Preheat: 150 °C, 60 seconds<br>Solder temperature : 270 ± 5 °C<br>Flux: Rosin<br>Dip time: 10 ± 1 seconds<br> |
| Solderability | More than 90% of the terminal electrode shall be covered with new solder. | Preheat: 150 °C, 60 seconds<br>Solder temperature: 245 ± 5 °C<br>Flux: Rosin<br>Dip time: 4 ± 1 seconds<br> |

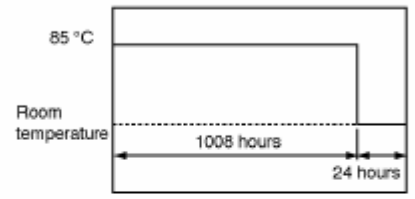
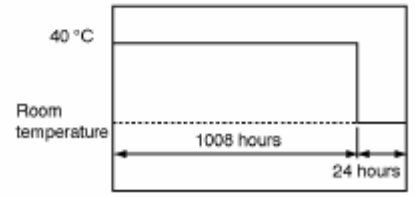
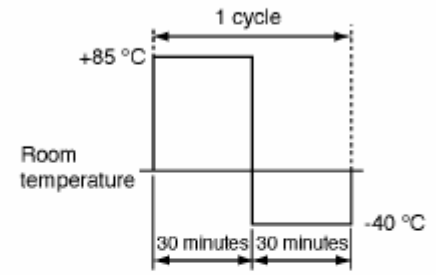
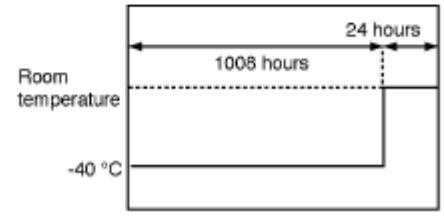
### Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE) Lead-Free

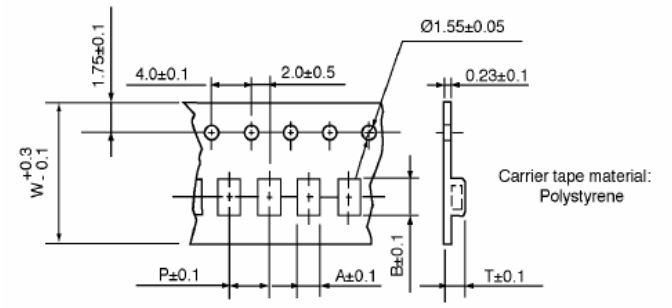
| | |
|---|---|
| A | 260 ± 5℃ |
| B | 230 ± 5℃ |
| C | 30 ±10 sec |
| D | 150℃ |
| E | 180℃ |
| F | 90 ± 30sec |

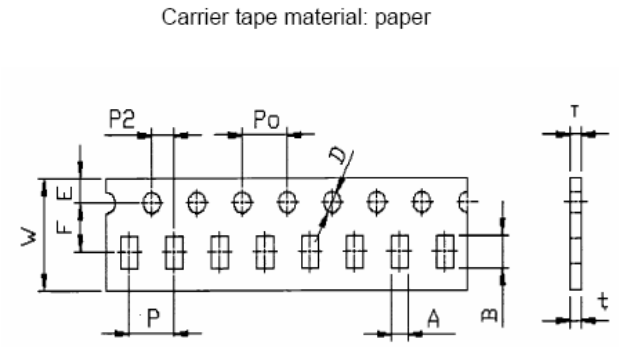


## Reliability test

| Item | Performance | Test condition |
|---|---|---|
| High temperature resistance | Appearance: Ferrite shall not be damaged.<br>Impedance: Within±20% of the initial value. | Temperature: 85±2℃<br>Testing time: 1008±12 hours<br>Measurement: After placing for 24 hours min.<br> |
| Humidity resistance | Appearance: Ferrite shall not be damaged.<br>Impedance: Within±20% of the initial value | Humidity: 90 to 95% RH<br>Temperature: 40±2℃<br>Testing time: 1008±12 hours<br>Measurement: After placing for 24 hours min.<br> |
| Thermal Shock | Appearance: Cracking, chipping or any other defects harmful to the characteristics shall not be allowed. Impedance: Within±20% of the initial value | Temperature: -40℃, +85℃, kept stabilized for 30 minutes each<br>Cycle: 100 cycles<br>Measurement: After placing for 24 hours min.<br> |
| Low temperature storage life test | Appearance: Cracking, chipping or any other defects harmful to the characteristics shall not be allowed. Impedance: Within±20% of the initial value. | Temperature: -40±2℃<br>Testing time: 1008±12 hours Measurement: After placing for 24 hours min.<br> |

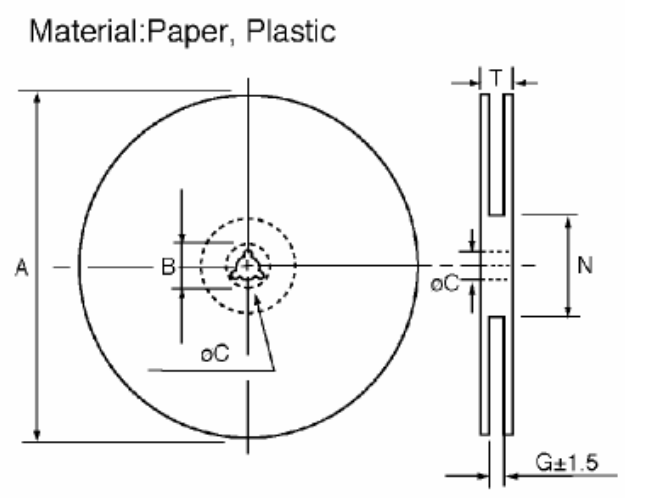
## ■ Taping Dimensions(Unit:mm)




| Material:Paper | | | | | | |
|---|---|---|---|---|---|---|
| TYPE | A | B | W | P | T | CHIPS/REEL |
| 100505 | 0.62 | 1.12 | 8 | 2 | 0.60 | 10000 |
| 160808 | 1.10 | 1.90 | 8 | 4 | 0.95 | 4000 |
| 201209 | 1.50 | 2.30 | 8 | 4 | 0.95 | 4000 |
| **Material:Polystyrene** | | | | | | |
| TYPE | A | B | W | P | T | CHIPS/REEL |
| 160808 | 1.01 | 1.80 | 8 | 4 | 1.02 | 4000 |
| 201209 | 1.42 | 2.25 | 8 | 4 | 1.04 | 4000 |
| 201212 | 1.50 | 2.35 | 8 | 4 | 1.45 | 3000 |
| 321611 | 1.88 | 3.50 | 8 | 4 | 1.27 | 3000 |
| 322513 | 2.77 | 3.42 | 8 | 4 | 1.55 | 2000 |
| 451616 | 1.93 | 4.95 | 12 | 4 | 1.93 | 2000 |
| 453215 | 3.66 | 4.95 | 12 | 8 | 1.85 | 1000 |
| YA3216M4 | 1.88 | 3.50 | 8 | 4 | 1.40 | 3000 |

## ■ Reel Dimensions(Unit:mm)




| TYPE | 8mm | 12mm |
|---|---|---|
| A | 178±2 | 178±2 |
| B | 21.0±0.8 | 21.0±0.8 |
| C | 13.0±0.8 | 13.0±0.8 |
| G | 10.0 | 14.0 |
| N | 75 | 75 |
| T | 12.5 | 16.5 |

## ■ Direction of rolling

