## ■ 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:-40℃ ~ +125℃.

## ■ 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

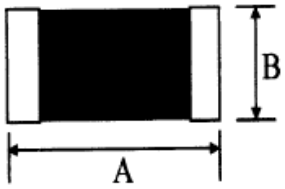
(3)： Material Code

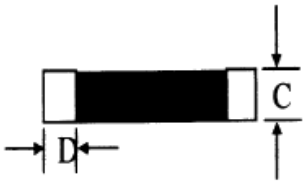
(4)： Impedance

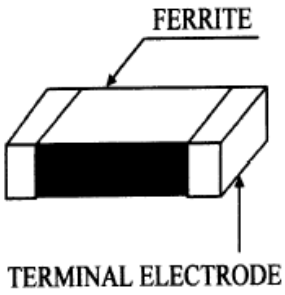
(5)： Rated Current

## ■ Shapes and Dimensions (Unit：mm)






| TYPE | A | B | C | D |
|---|---|---|---|---|
| YI403023 | 4.06±0.20 | 3.05±0.20 | 2.28±0.2 | 0.70±0.25 |

## ■ Electrical Requirements

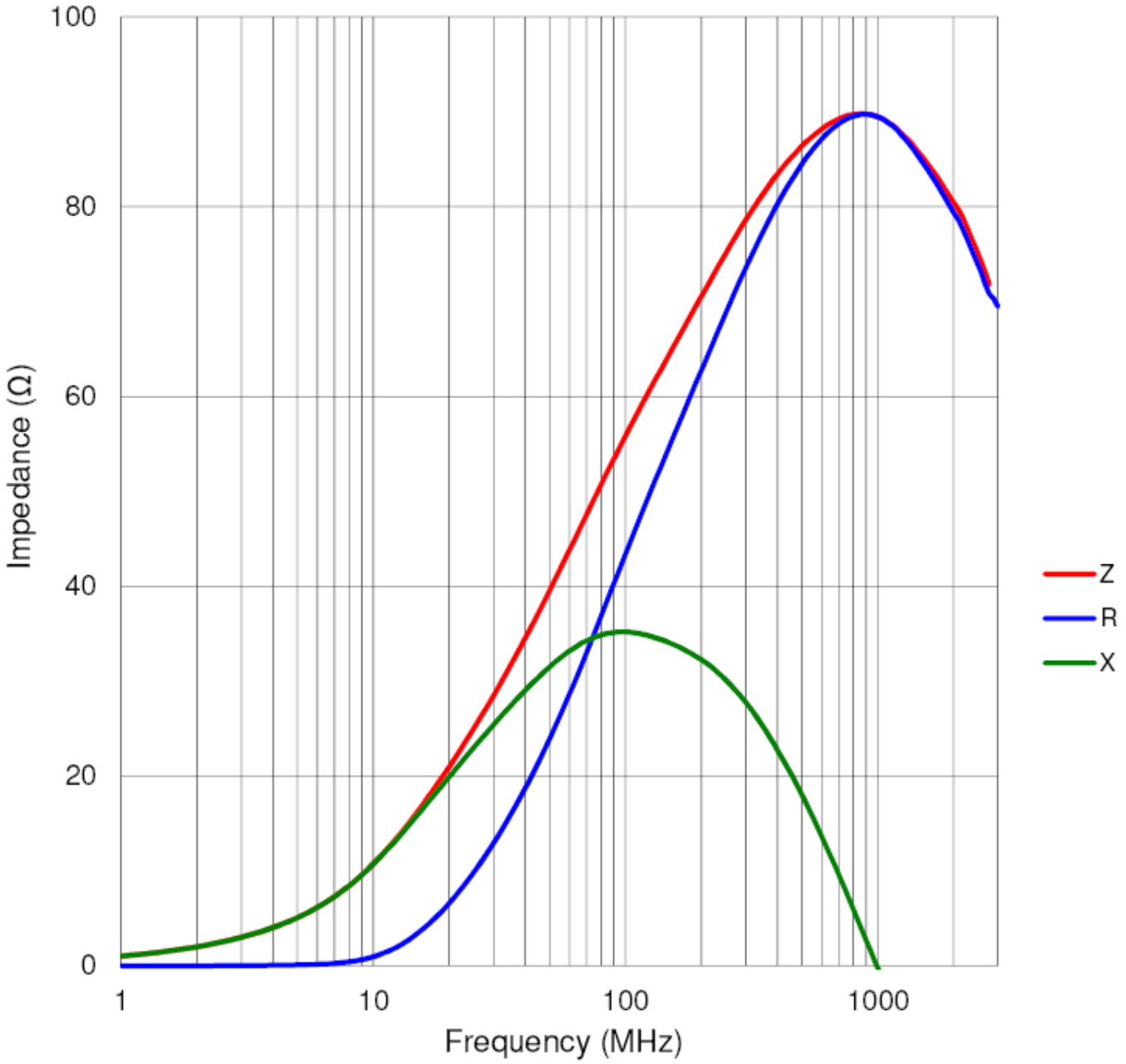
| Part Number | Impedance(Ω) | Test Freq. | DCR MAX. (Ω) | Idc MAX. (A) |
|---|---|---|---|---|
| YI403023U560-10R0T | 56±25% | 100 MHz | 0.004 | 10.0 |

TEST INSTRUMENTS：

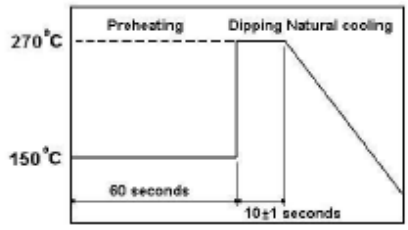
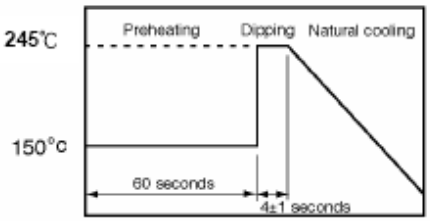
HP 4338A MILLIOHMMETER

HP 4291B RF IMPEDANCE/MATERIAL ANALYZER

## ■ Impedance VS. Frequency characteristic



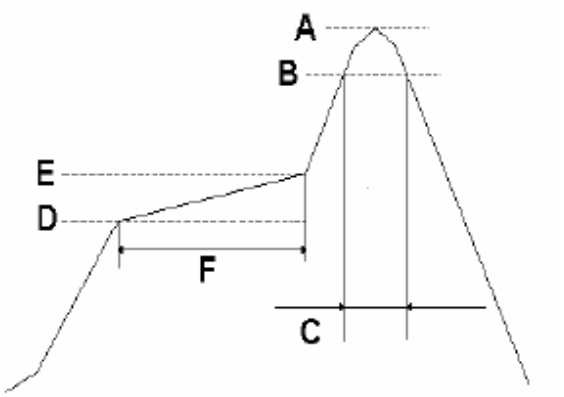
## ■ Reliability test

| 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> |

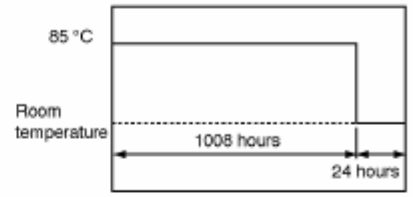
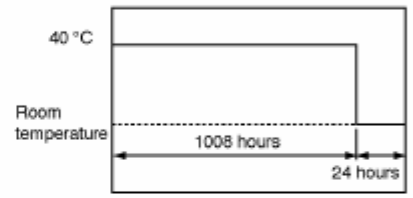
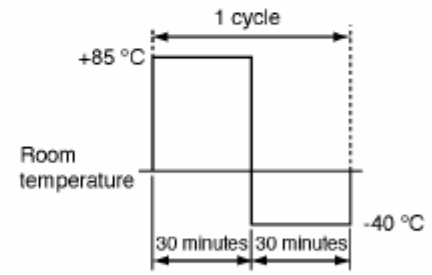
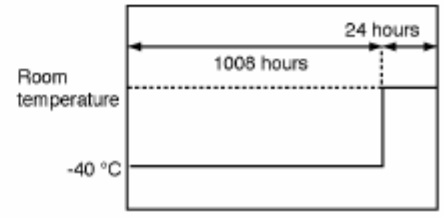
Recommended Soldering Conditions

(REFLOW TEMPERATURE PROFILE) Lead-Free

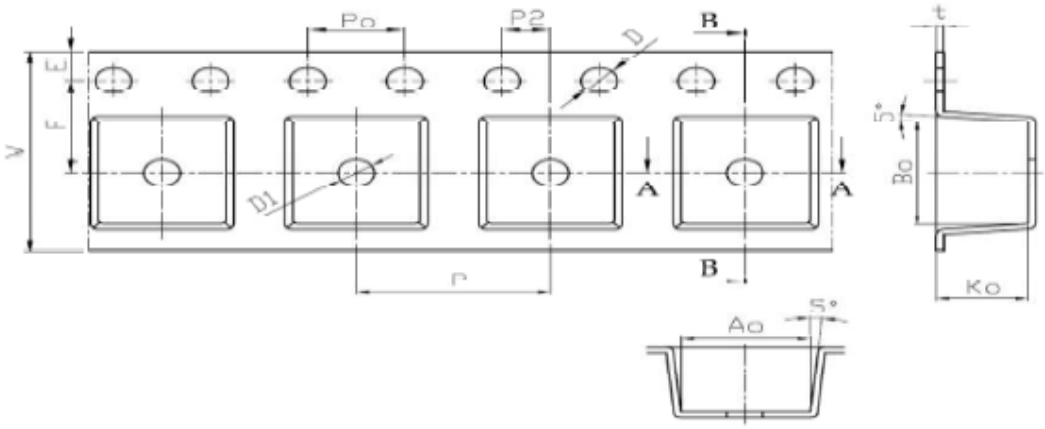
| | |
|---|---|
| A | 260 ± 5℃ |
| B | 230 ± 5℃ |
| C | 30 ±10 sec |
| D | 150℃ |
| E | 180℃ |
| F | 90 ± 30sec |



## ■ Reliability test

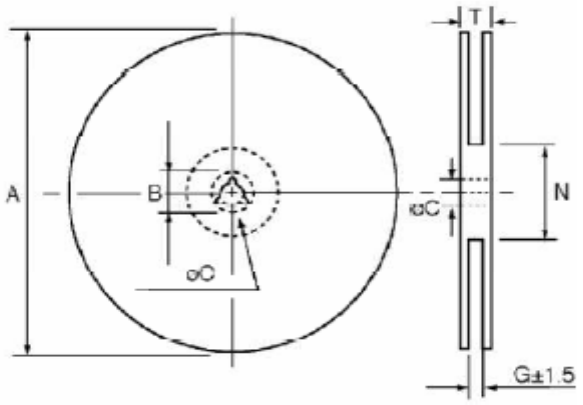
| Item | Performance | Test condition |
|---|---|---|
| High temperature resistance | Appearance: Ferrite shall not be damaged.<br>Impedance: Within±20% of the initial value. | Temperature: 85±2℃<br>Testing time: 1008±12 hours<br>Measurement: After placing for 24 hours min.<br> |
| Humidity resistance | 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)



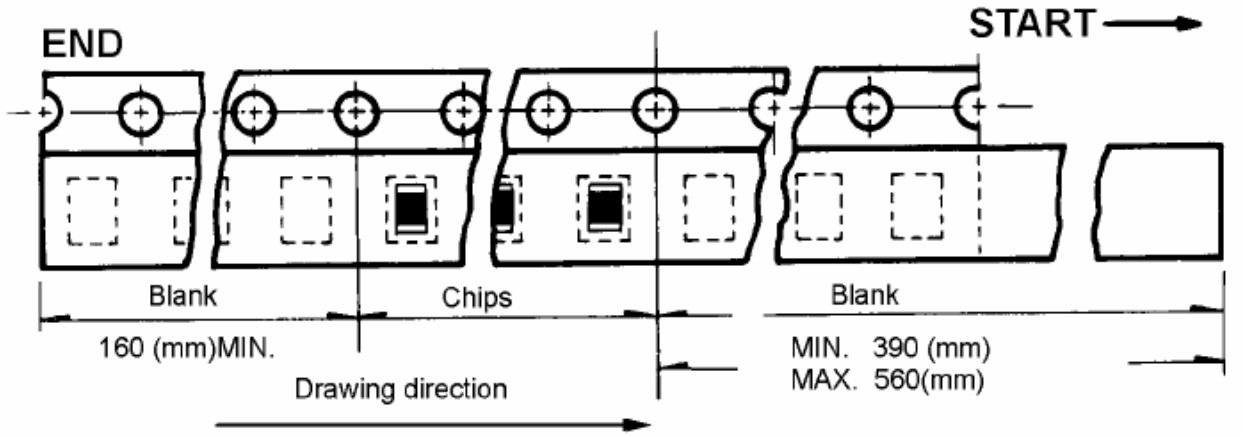

| Carrier tape material : Polystyrene ( Dimensions in m/m) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | W | P | E | F | D | D1 | P0 | P010 | P2 | A0 | B0 | K0 | t |
| 403023 | 12.00 ±0.10 | 8.00 ±0.10 | 1.75 ±0.10 | 5.50 ±0.05 | 1.50 +0.1/-0 | 1.50 ±0.10 | 4.00 ±0.10 | 40.0 ±0.20 | 2.00 ±0.05 | 3.30 ±0.10 | 4.40 ±0.10 | 2.50 ±0.10 | 0.26 ±0.05 |
| 453223 | 12.00 ±0.10 | 8.00 ±0.10 | 1.75 ±0.10 | 5.50 ±0.05 | 1.50 +0.1/-0 | 1.50 ±0.10 | 4.00 ±0.10 | 40.0 ±0.20 | 2.00 ±0.05 | 3.57 ±0.10 | 4.80 ±0.10 | 2.80 ±0.10 | 0.30 ±0.05 |
| 565015 | 12.00 ±0.10 | 8.00 ±0.10 | 1.75 ±0.10 | 5.50 ±0.05 | 1.50 +0.1/-0 | 1.50 ±0.10 | 4.00 ±0.10 | 40.0 ±0.20 | 2.00 ±0.05 | 5.25 ±0.10 | 6.05 ±0.10 | 1.80 ±0.10 | 0.30 ±0.05 |
| 565018 | 12.00 ±0.10 | 8.00 ±0.10 | 1.75 ±0.10 | 5.50 ±0.05 | 1.50 +0.1/-0 | 1.50 ±0.10 | 4.00 ±0.10 | 40.0 ±0.20 | 2.00 ±0.05 | 5.25 ±0.10 | 6.05 ±0.10 | 2.00 ±0.10 | 0.30 ±0.05 |
| 565020 | 12.00 ±0.30 | 8.00 ±0.10 | 1.75 ±0.10 | 5.50 ±0.10 | 1.50 +0.1/-0 | 1.50 ±0.10 | 4.00 ±0.10 | 40.0 ±0.20 | 2.00 ±0.10 | 5.35 ±0.10 | 5.95 ±0.10 | 2.20 ±0.10 | 0.26 ±0.05 |
| 565030 | 12.00 ±0.10 | 8.00 ±0.10 | 1.75 ±0.10 | 5.50 ±0.05 | 1.50 +0.1/-0 | 1.50 ±0.10 | 4.00 ±0.10 | 40.0 ±0.20 | 2.00 ±0.05 | 5.25 ±0.10 | 6.15 ±0.10 | 3.20 ±0.10 | 0.30 ±0.05 |
| 565032 | 12.00 ±0.10 | 8.00 ±0.10 | 1.75 ±0.10 | 5.50 ±0.05 | 1.50 +0.1/-0 | 1.50 ±0.10 | 4.00 ±0.10 | 40.0 ±0.20 | 2.00 ±0.05 | 5.25 ±0.10 | 6.15 ±0.10 | 3.40 ±0.10 | 0.26 ±0.05 |
| 565036 | 12.00 ±0.30 | 8.00 ±0.20 | 1.75 ±0.10 | 5.50 ±0.10 | 1.50 +0.1/-0 | 1.50 ±0.10 | 4.00 ±0.10 | 40.0 ±0.20 | 2.00 ±0.10 | 5.25 ±0.10 | 6.15 ±0.10 | 3.80 ±0.10 | 0.35 ±0.05 |
| 853023 | 16.00 ±0.30 | 8.00 ±0.10 | 1.75 ±0.10 | 7.50 ±0.10 | 1.50 +0.1/-0 | 1.50 ±0.10 | 4.00 ±0.10 | 40.0 ±0.20 | 2.00 ±0.10 | 3.30 ±0.10 | 8.70 ±0.10 | 2.50 ±0.10 | 0.30 ±0.05 |

## ■ Reel Dimensions(Unit:mm)




| TYPE | Dimensions in m/m | | | | | |
|---|---|---|---|---|---|---|
| | A | B | C | G | N | T |
| 13"×8m/m | 330 | 24.4 | 13.5 | 8.8 | 99 | 12.8 |
| 13"×12m/m | 330 | 24.4 | 13.5 | 12.7 | 99 | 16.7 |
| 13"×16m/m | 330 | 24.4 | 13.5 | 16.7 | 99 | 20.7 |

## ■ Direction of rolling




## ■ Packing Quantity

| SIZE (m/m) | 403023 | 453223 | 565015 | 565018 | 565020 | 565030 | 565032 | 565036 | 853023 |
|---|---|---|---|---|---|---|---|---|---|
| Quantity PCS/Reel | 2,500 | 2,500 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,500 |