

0603 Series Resistor-Capacitor

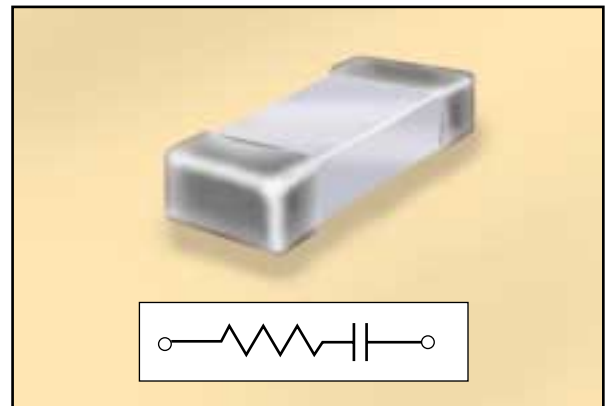
GENERAL DESCRIPTION

To meet the needs of today's high speed circuits and reduced power requirements, AVX has developed the IZI Chip. This impedance matching component, available in a standard 0603 package, breaks the barrier of component density by providing a truly integrated series resistor-capacitor design.

The IZI Chip enables a board designer to achieve maximum signal integrity by eliminating reflections and reducing DC power consumption.

FEATURES

- Low Profile
- Surface Mountable
- Volumetrically Efficient
- Several Standard Designs
- Custom Designs Available



APPLICATIONS

- AC Line Termination
- Impedance Matching
- Timing Circuits
- Low Power Snubber

HOW TO ORDER

| | | | | | | | | | | | | | |
|----------|------------------|------------|--------------------|-------------------------|--------------------------------|----------------|--------------------------------------|---------------|-------------------------------------|--------------------|--|-------------------------------------|--------------------------------------|
| Z | 1 | D | 1 | 3 | Y | 101 | M | 470 | K | A | T | 2 | A |
| IZI Chip | Size 1 = 0603 | D=Discrete | Number of Elements | Voltage Code 3 = 25V | Dielectric Y = 0±500 ppm/°C | Capacitor Code | Capacitor Tolerance Code M = ±20% | Resistor Code | Resistor Tolerance Code K = ±10% | A = Not Applicable | Termination Code T = Plated Ni and Solder | Pack Code 2 = 7" Reel Paper Tape | Special Code A = Standard Product |

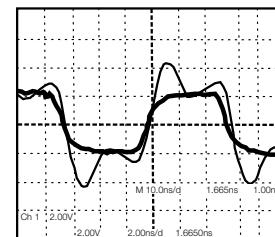
STANDARD PART VALUES

| | | Capacitance | | | | | | |
|------------|-------|-------------|------|------|------|-------|-------|-------|
| | | 10pF | 15pF | 22pF | 33pF | 47pF | 68pF | 100pF |
| Resistance | 10 Ω | | | | | | | |
| | 15 Ω | | | | | | | |
| | 22 Ω | | | | | | | |
| | 33 Ω | | | | | | | |
| | 47 Ω | | | | | | | Stock |
| | 51 Ω | | | | | | Stock | |
| | 68 Ω | | | | | | | |
| | 100 Ω | | | | | Stock | | |

PERFORMANCE CHARACTERISTICS

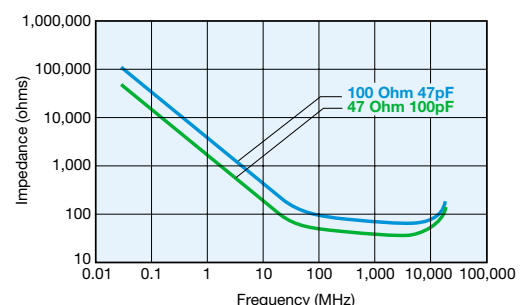
| | |
|---|---|
| Capacitance Performance Dielectric, TCC Capacitor Values Capacitor Tolerance WVDC DF (1kHz) | 0±500 ppm/°C 10, 15, 22, 33, 47, 68, 100 ±20% 25V 2.5% Max. |
| Resistor Performance Resistor Values Tolerance TCR | 10, 15, 22, 33, 47, 68, 100 ±10% ±250 ppm/°C |

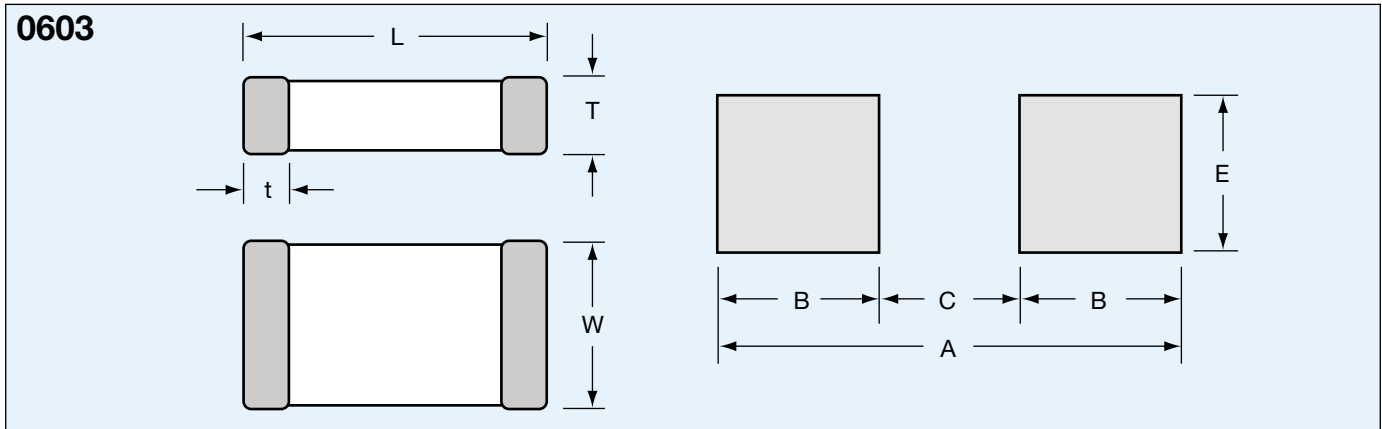
IZI CHIP TERMINATION OF AN 80 MHz TRANSMISSION LINE



Ringing in an 80 MHz clock pulse (light line) is eliminated when terminated with a 100pF/47 ohm IZI Chip (bold line)

IMPEDANCE CHARACTERISTICS





PART DIMENSIONS

| | L | W | T | t |
|-----------------|-------------|-------------|-------------|-------------|
| mm | 1.6±0.2 | .81±0.15 | .90 max. | 0.35±0.15 |
| (inches) | (.063±.006) | (.032±.006) | (.035 max.) | (.014±.006) |

PAD LAYOUT DIMENSIONS

| A | B | C | D | E |
|--------|--------|--------|--------|--------|
| 2.30 | 0.76 | 0.76 | 0.76 | 0.76 |
| (.090) | (.030) | (.030) | (.030) | (.030) |

ASSEMBLY NOTES

AVX recommends a minimum spacing of 0.020" between parts when placing them end to end on assembly boards. The purpose of this spacing is to facilitate post assembly

board cleaning and inaccuracies in pick and placement, due to machine placement tolerances.

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