

# High Current Feedthru Capacitors



## W2H/W3H Series

### GENERAL DESCRIPTION

High current feedthru capacitors are designed as a broad-band EMI filter that is specially designed to have high current handling capability. These SMT feedthru filters offer an optimized frequency response with high attenuation across a wide RF spectrum due to optimized parallel and series inductances. These W2H/W3H feedthru filters can actually replace discrete L/C filter networks.

### FEATURES

- Low parallel inductance provides significant noise reduction in circuits with operating frequencies up to 5GHz
- Broad frequency response with high attenuation
- High rated current – up to 2A for 0805 and up to 5A for 0612
- Small size – 0805 and 0612 case size
- Reeling in accordance with EIA-481

### MECHANICAL CHARACTERISTICS

- Available in EIA 0805 and 0612 cases
- Plated Tin over Nickel Barrier
- Packaged in Tape & Reel

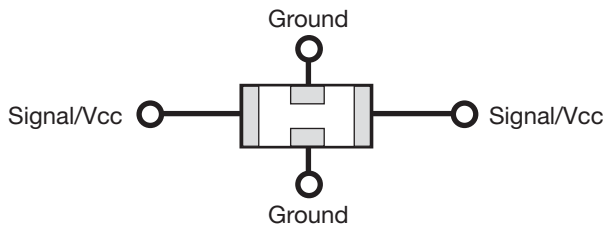
### TYPICAL APPLICATIONS

- High current power (Vcc) lines
- PA decoupling
- DC:DC converters
- Regulators
- Power supervisory circuits

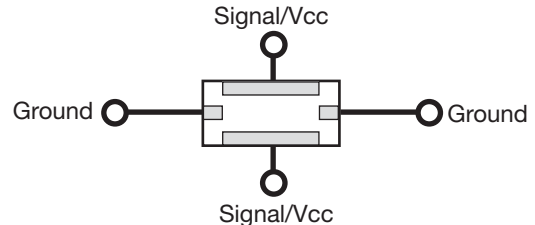
### HOW TO ORDER

| W2H1                                                                                   | 5                                                                                  | C                                                                                  | 473                                                                                | 8                                                                                  | A                                                                                    | T                                                                                    | 1A                                                                                   |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|      |  |  |  |  |  |  |  |
| <b>Size &amp; Style</b><br>W2H1=0805<br>W3H1=0612<br>W=Plated Ni & Sb<br>L=Plated SnPb | <b>Voltage</b><br>3=25v<br>5=50v<br>1=100v                                         | <b>Dielectric</b><br>A=NP0<br>C=X7R                                                | <b>Capacitance Code</b>                                                            | <b>Capacitance Tolerance</b><br>8=+50/-20%<br>M=±20%                               | <b>Failure Rate</b><br>A=Not Applicable                                              | <b>Terminations</b><br>T=Plated Ni & Sn<br>B=Plated SnPb                             | <b>Packaging</b><br>1A=7" Reel 4000 pcs<br>3A=13" Reel 4000 pcs                      |

### PINOUT CONFIGURATION



W2H1 – 0805 Style



W3H1 – 0612 Style



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### ELECTRICAL PARAMETERS

|                       |                         |
|-----------------------|-------------------------|
| Insulation Resistance | 1000 M $\Omega$ Minimum |
| DC Resistance         | <0.150 $\Omega$         |
| Operating Temperature | -55C to +125C           |

### CAPACITOR VALUES

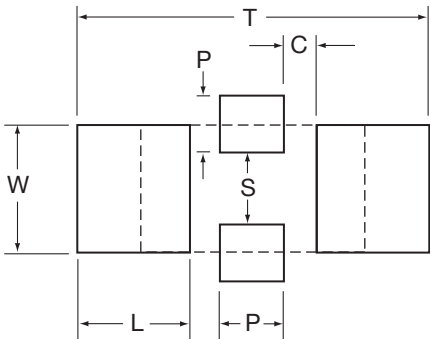
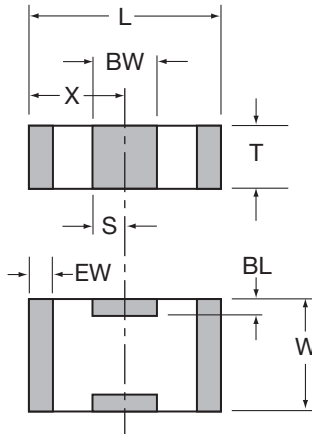
| Part Number    | Size | Dielectric | Capacitance | Tolerance  | Voltage | Current  |
|----------------|------|------------|-------------|------------|---------|----------|
| W2H13C 104 8AT | 0805 | X7R        | 100,000pF   | +50%, -20% | 25V     | 2A       |
| W2H15C 473 8AT | 0805 | X7R        | 47,000pF    | +50%, -20% | 50V     | 2A       |
| W2H15C 223 8AT | 0805 | X7R        | 22,000pF    | +50%, -20% | 50V     | 1A       |
| W2H15C 103 8AT | 0805 | X7R        | 10,000pF    | +50%, -20% | 50V     | 1A       |
| W2H15C 102 8AT | 0805 | X7R        | 1,000pF     | +50%, -20% | 50V     | 1A       |
| W2H11A 471 8AT | 0805 | NP0        | 470pF       | +50%, -20% | 100V    | 0.5A     |
| W2H11A 221 8AT | 0805 | NP0        | 220pF       | +50%, -20% | 100V    | 0.5A     |
| W2H11A 101 8AT | 0805 | NP0        | 100pF       | +50%, -20% | 100V    | 0.5A     |
| W2H11A 470 8AT | 0805 | NP0        | 47pF        | +50%, -20% | 100V    | 0.5A     |
| W2H11A 220 8AT | 0805 | NP0        | 22pF        | +50%, -20% | 100V    | 0.5A     |
| W3H13C 104 8AT | 0612 | X7R        | 100,000pF   | +50%, -20% | 25V     | up to 5A |
| W3H15C 473 8AT | 0612 | X7R        | 47,000pF    | +50%, -20% | 50V     | up to 5A |
| W3H15C 223 8AT | 0612 | X7R        | 22,000pF    | +50%, -20% | 50V     | up to 4A |
| W3H15C 103 8AT | 0612 | X7R        | 10,000pF    | +50%, -20% | 50V     | up to 3A |
| W3H11A 471 8AT | 0612 | NP0        | 470pF       | +50%, -20% | 100V    | up to 4A |
| W3H11A 221 8AT | 0612 | NP0        | 220pF       | +50%, -20% | 100V    | up to 4A |
| W3H11A 101 8AT | 0612 | NP0        | 100pF       | +50%, -20% | 100V    | up to 4A |
| W3H11A 470 8AT | 0612 | NP0        | 47pF        | +50%, -20% | 100V    | up to 3A |
| W3H11A 220 8AT | 0612 | NP0        | 22pF        | +50%, -20% | 100V    | up to 3A |

# High Current Feedthru Capacitors

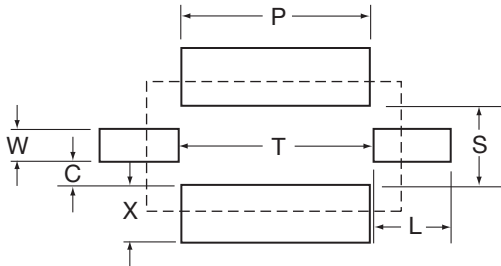
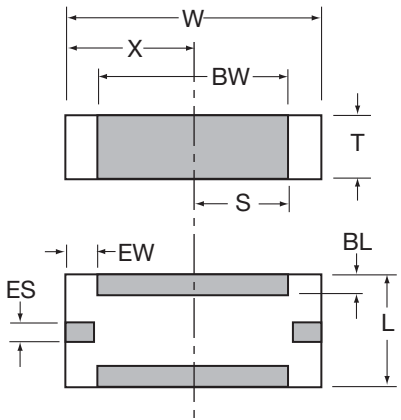


## W2H/W3H Series

### PHYSICAL DIMENSIONS AND PAD LAYOUT



W2H1 - 0805 Style



W3H1 - 0612 Style

### PHYSICAL DIMENSIONS

|                     | L                              | W                              | T                         | BW                             | BL                                          | ES                             | EW                             | X                              | S                              |
|---------------------|--------------------------------|--------------------------------|---------------------------|--------------------------------|---------------------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| W2H1- 0805 MM (in.) | 2.01 ± 0.20<br>(0.079 ± 0.008) | 1.25 ± 0.20<br>(0.049 ± 0.008) | 1.14 Max.<br>(0.045 Max.) | 0.46 ± 0.10<br>(0.018 ± 0.004) | 0.18 ± 0.25 -0.08<br>(0.007 + 0.010 -0.003) | NA                             | 0.25 ± 0.13<br>(0.010 ± 0.005) | 1.02 ± 0.10<br>(0.040 ± 0.004) | 0.23 ± 0.05<br>(0.009 ± 0.002) |
| W3H1- 0612 MM (in.) | 1.60 ± 0.20<br>(0.063 ± 0.008) | 3.20 ± 0.20<br>(0.126 ± 0.008) | 1.22 Max.<br>(0.048 Max.) | 2.80 ± .127<br>(0.110 ± 0.005) | 0.18 ± 0.25 -0.08<br>(0.007 + 0.010 -0.003) | 0.41 ± 0.10<br>(0.016 ± 0.004) | 0.41 ± 0.10<br>(0.016 ± 0.004) | 1.60 ± 0.10<br>(0.063 ± 0.004) | 1.40 ± 0.07<br>(0.055 ± 0.003) |

### PAD DIMENSIONS

|                     | T               | P               | S               | W               | L               | C               | X               |
|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| W2H1- 0805 MM (in.) | 3.45<br>(0.136) | 0.51<br>(0.020) | 0.76<br>(0.030) | 1.27<br>(0.050) | 1.02<br>(0.040) | 0.46<br>(0.018) | NA              |
| W3H1- 0612 MM (in.) | 2.54<br>(0.100) | 3.05<br>(0.120) | 1.12<br>(0.044) | .460<br>(0.018) | .610<br>(0.024) | .330<br>(0.013) | .710<br>(0.028) |



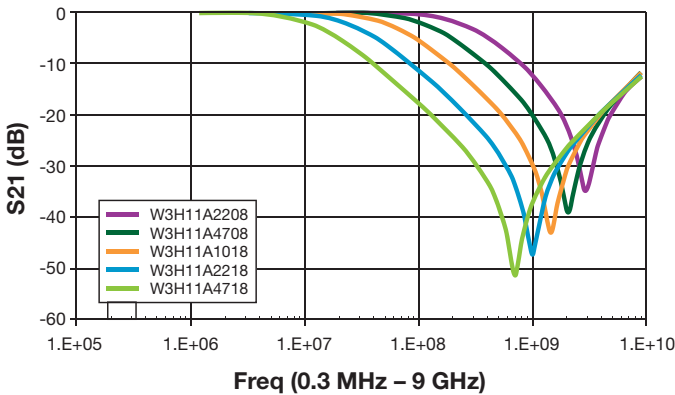
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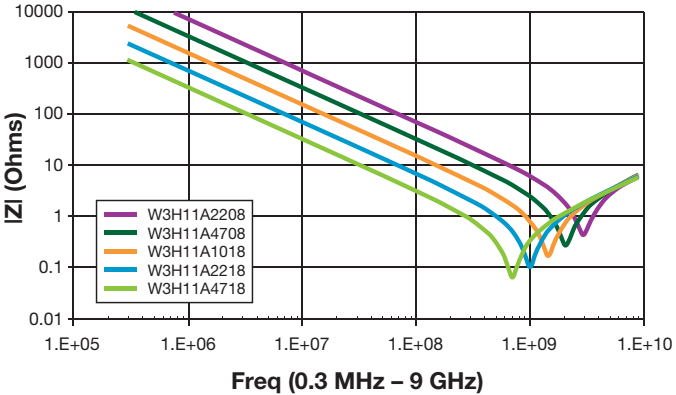
## W2H/W3H Series

### PERFORMANCE CHARACTERISTICS

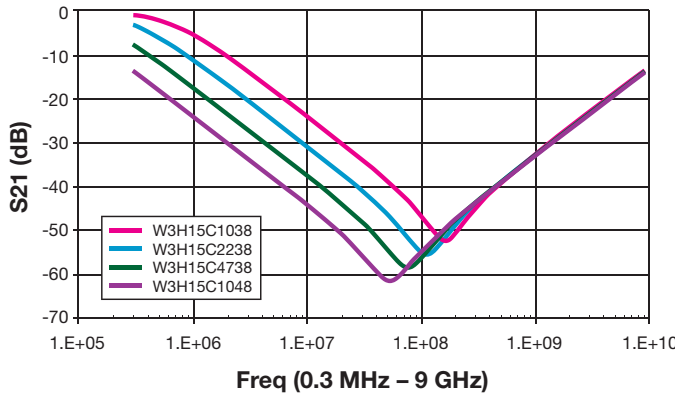
**S21 0612 – 100V**



**IMPEDANCE 0612 – 100V**



**S21 0612 – 50V / 25V**



**IMPEDANCE 0612 – 50V / 25V**

