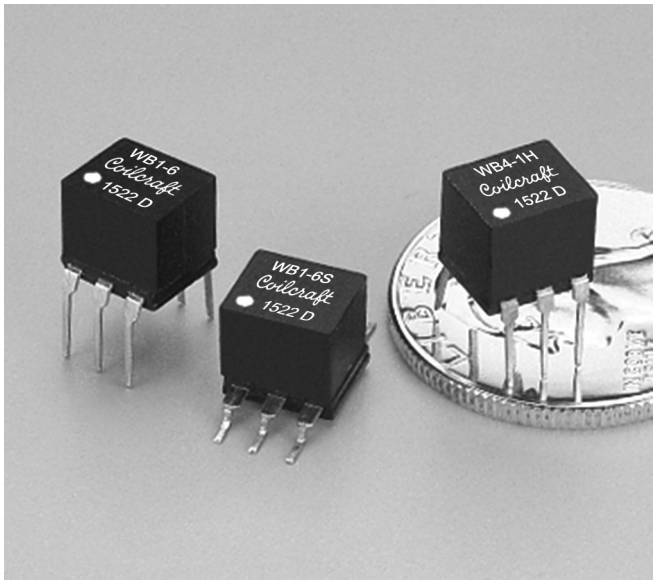
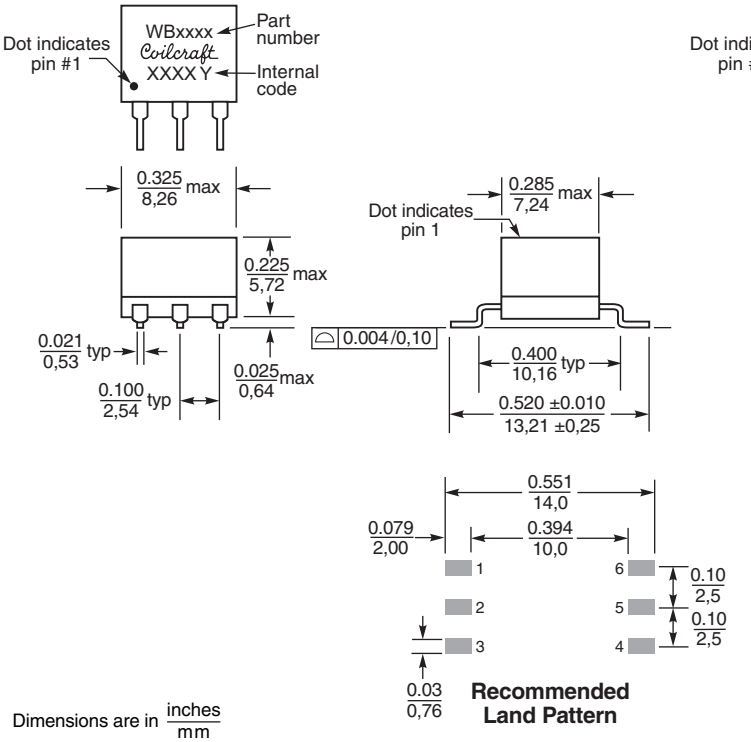
# Wideband Transformers




- Surface mount and through hole versions
- 500 Vrms, 1 minute interwinding isolation (hipot), 1/4 Watt RF input power
- 250 mA max current rating.
- For a smaller package size, see our WBC Series

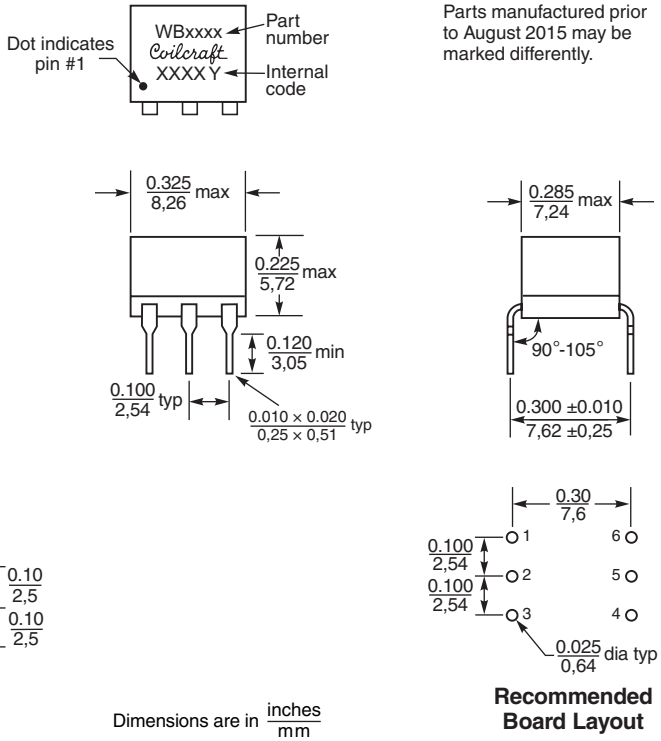
**Core material** Ferrite
**Terminations** RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.
**Weight** 0.38 – 0.40 g
**Ambient temperature** –40°C to +85°C
**Storage temperature** Component: –40°C to +85°C. Tape and reel or tube packaging: –40°C to +80°C
**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)
**Failures in Time (FIT) / Mean Time Between Failures (MTBF)** 60 per billion hours / 16,666,667 hours, calculated per Telcordia SR-332
**Packaging** (SM version): 500 per 13″ reel; Plastic tape: 24 mm wide, 0.42 mm thick, 20 mm pocket spacing, 6.6 mm pocket depth; (TH version): 70 per tube
**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.

## Dimensions – surface mount parts




Dimensions are in inches / mm

## Dimensions – through hole parts




Parts manufactured prior to August 2015 may be marked differently.

Dimensions are in inches / mm

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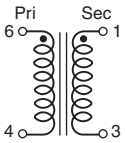
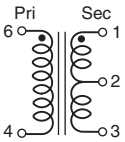
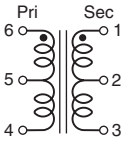
# Wideband Transformers

| Schematic | Part number SM[1] | Part number TH | Impedance ratio[2] pri:sec | Bandwidth (MHz) | Insertion loss max (dB) | Pri (pins 4–6) L min[3] (µH) | Pri (pins 4–6) DCR max[4] (mOhm) | Sec (pins 1–3) L min[3] (µH) | Sec (pins 1–3) DCR max[4] (mOhm) | DC imbalance[5] max (mA) |
|---|---|---|---|---|---|---|---|---|---|---|
|  | WB1-1SL_ | WB1-1L | 1:1 | 0.150–500 | 0.70 | 27 | 75 | 27 | 75 | — |
| | WB1-6SL_ | WB1-6L | 1:1 | 0.100–350 | 0.50 | 25 | 100 | 25 | 100 | — |
| | WB1.18-3SL_ | WB1.18-3L | 1:1.18 | 0.040–300 | 0.50 | 90 | 300 | 108 | 330 | — |
| | WB1.5-6SL_ | WB1.5-6L | 1:1.5 | 0.050–325 | 0.26 | 56 | 120 | 84 | 150 | — |
| | WB2-1-2WSL_ | WB2-1-2WL | 1:2 | 0.080–700 | 1.00 | 38 | 100 | 75 | 150 | — |
| | WB2.5-6SL_ | WB2.5-6L | 1:2.5 | 0.080–225 | 0.26 | 30 | 100 | 75 | 130 | — |
| | WB4-6SL_ | WB4-6L | 1:4 | 0.100–125 | 0.50 | 25 | 100 | 100 | 200 | — |
| | WB9-1SL_ | WB9-1L | 1:9 | 0.125–125 | 0.57 | 25 | 100 | 225 | 250 | — |
| | WB16-1SL_ | WB16-1L | 1:16 | 0.050–100 | 0.60 | 56 | 75 | 896 | 330 | — |
| | WB36-1SL_ | WB36-1L | 1:36 | 0.100–45 | 0.50 | 25 | 50 | 900 | 180 | — |
|  | WB1-1TSL_ | WB1-1TL | 1:1 | 0.100–375 | 0.51 | 25 | 100 | 25 | 100 | 30 |
| | WB1-6TSL_ | WB1-6TL | 1:1 | 0.050–200 | 0.20 | 70 | 150 | 70 | 150 | 18 |
| | WB2-1TSL_ | WB2-1TL | 1:2 | 0.070–400 | 1.00 | 38 | 100 | 75 | 150 | 29 |
| | WB2.5-6TSL_ | WB2.5-6TL | 1:2.5 | 0.050–125 | 0.28 | 56 | 120 | 140 | 200 | 13 |
| | WB3-1TSL_ | WB3-1TL | 1:3 | 0.040–500 | 0.40 | 96 | 110 | 270 | 200 | 4.0 |
| | WB4-1HSL_ | WB4-1HL | 1:4 | 0.100–500 | 0.50 | 25 | 120 | 100 | 160 | 15 |
| | WB4-6TSL_ | WB4-6TL | 1:4 | 0.050–200 | 0.50 | 43 | 120 | 172 | 160 | 5.0 |
| | WB5-1TSL_ | WB5-1TL | 1:5 | 0.050–400 | 0.30 | 48 | 220 | 240 | 500 | 13 |
| | WB8-1TSL_ | WB8-1TL | 1:8 | 0.150–400 | 0.76 | 18 | 100 | 144 | 270 | 17 |
| | WB13-1TSL_ | WB13-1TL | 1:13 | 0.150–125 | 0.72 | 17 | 90 | 221 | 200 | 10 |
| | WB16-6TSL_ | WB16-6TL | 1:16 | 0.050–100 | 0.60 | 56 | 75 | 896 | 330 | 25 |
|  | WBT1-6SL_ | WBT1-6L | 1:1 | 0.040–200 | 0.25 | 70 | 150 | 70 | 150 | 19 |
| | WBT1.5-1SL_ | WBT1.5-1L | 1:1.5 | 0.040–350 | 0.30 | 48 | 150 | 70 | 180 | 19 |
| | WBT2.5-6SL_ | WBT2.5-6L | 1:2.5 | 0.050–100 | 0.26 | 70 | 150 | 175 | 200 | 11 |
| | WBT4-1SL_ | WBT4-1L | 1:3 | 0.040–150 | 0.26 | 45 | 120 | 135 | 160 | 13 |
| | WBT4-1ASL_ | WBT4-1AL | 1:4 | 0.040–350 | 0.40 | 96 | 110 | 384 | 220 | 3.5 |
| | WBT16-1SL_ | WBT16-1L | 1:16 | 0.100–100 | 0.50 | 25 | 100 | 400 | 300 | 7.5 |
| | WBT25-1SL_ | WBT25-1L | 1:25 | 0.100–65 | 0.50 | 25 | 100 | 625 | 350 | 6.0 |

1. When ordering, please specify **packaging** code:

   **WB25-1SLD**

   **Packaging:** **D** = 13″ machine-ready reel. EIA-481 embossed plastic tape (500 parts per full reel).
   **B** = Less than full reel. In tape, but not machine ready.
   To have a leader and trailer added ($25 charge), use code letter D instead.
2. Impedance ratio is for the full primary winding to the full secondary winding.
3. Inductance measured at 100 kHz, 0.1 V, 0 Adc on an Agilent/HP 4192 or equivalent.
4. DCR measured on a micro-ohmmeter.
5. DC imbalance is the maximum difference in current measured at pins 1 and 3 with the source at pin 2. Inductance drop is 15% at max imbalance.
6. Electrical specifications at 25°C. Measurements are referenced to 50 Ohms.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.

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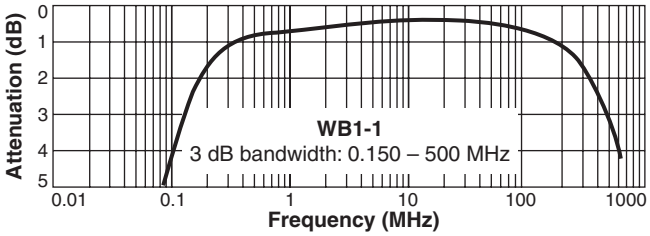
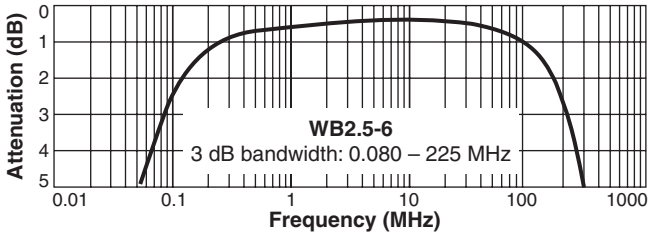
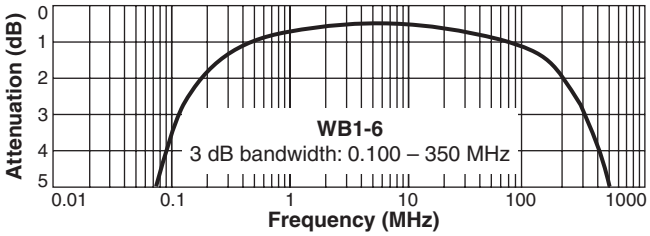
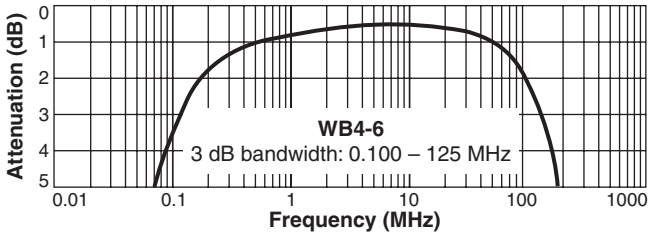
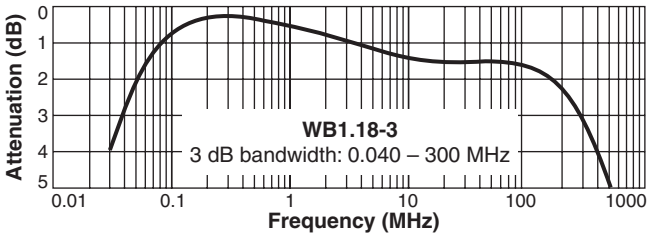
## Transformers with no center taps

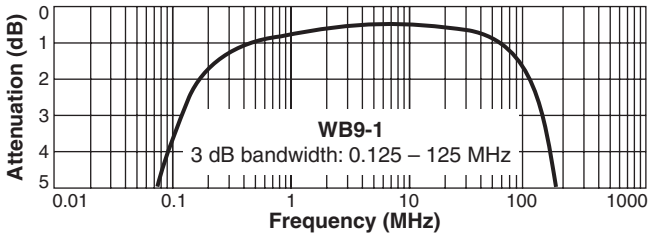


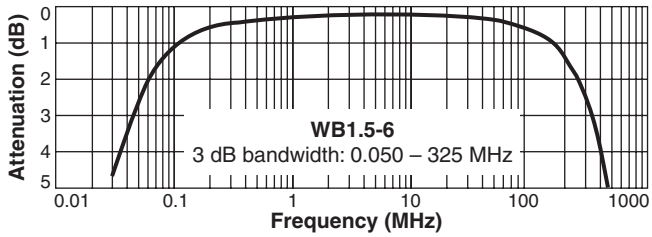



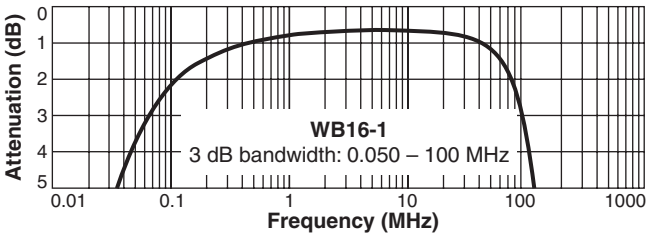



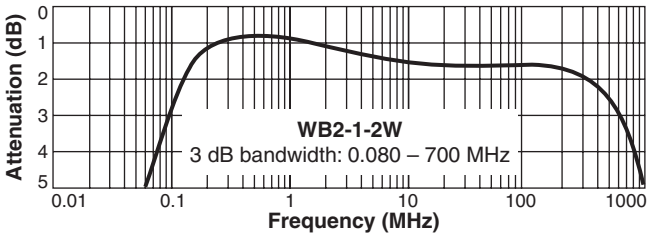



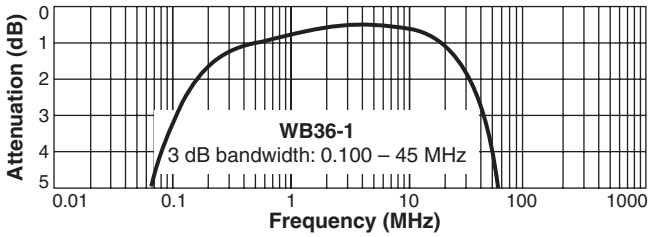




Attenuation measured on a network analyzer (re: 50 Ohms)

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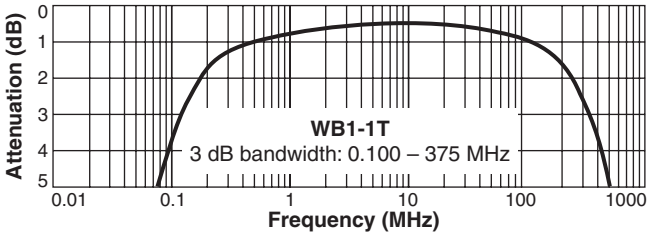
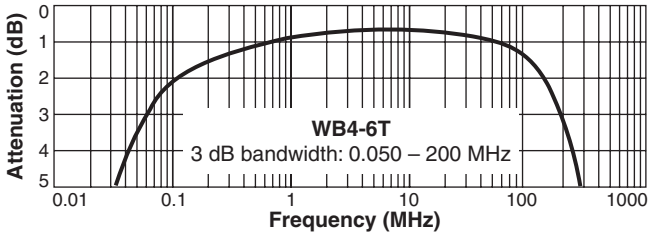
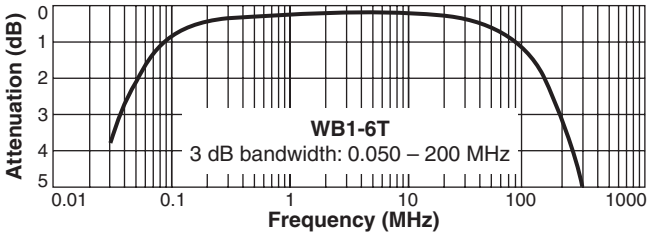
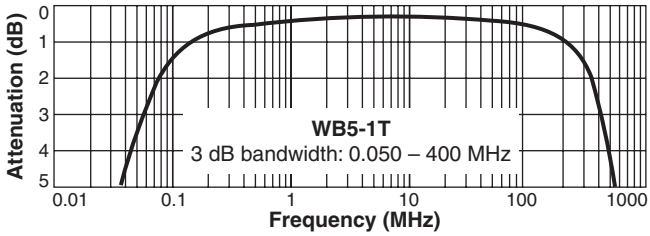
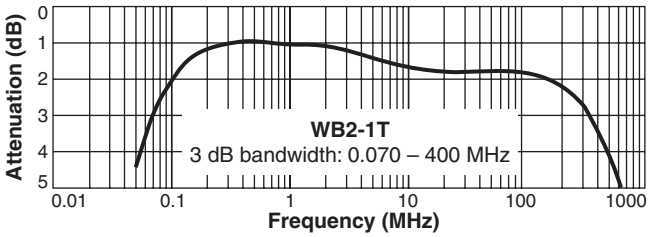
## Transformers with secondary center tap

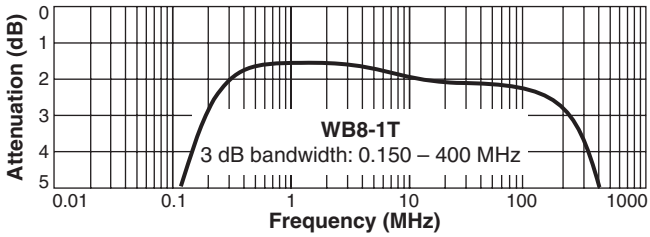


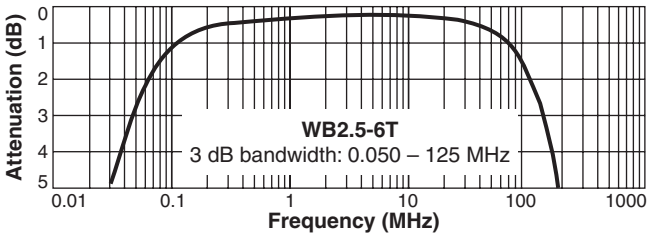



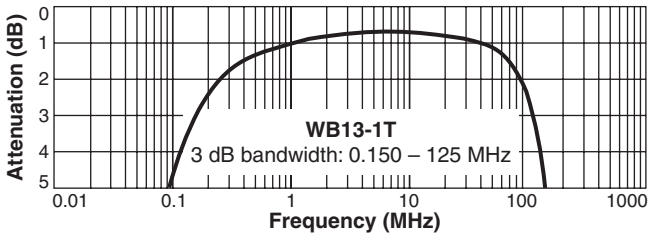



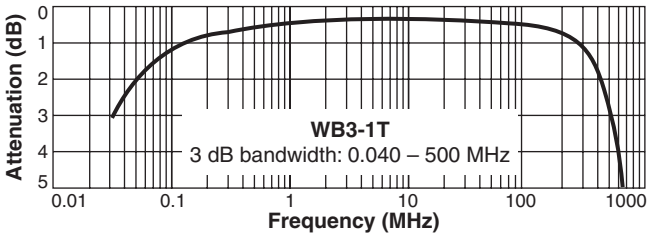



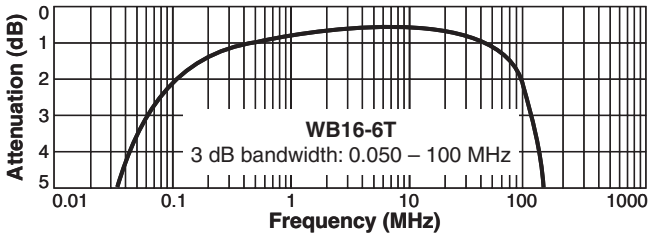



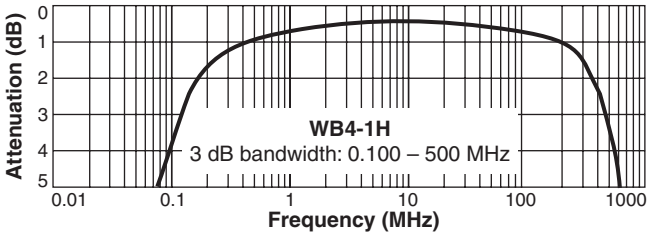

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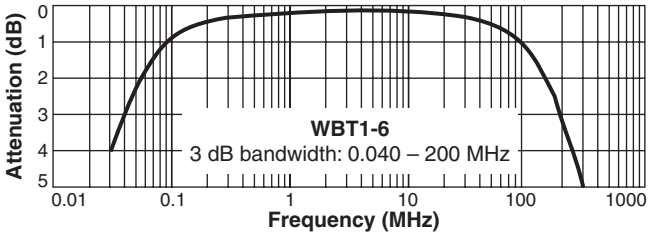
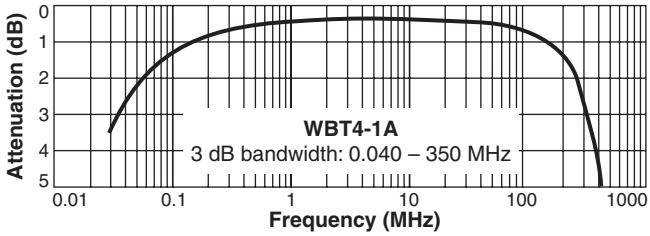
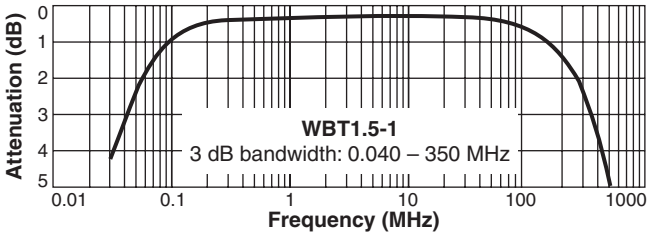
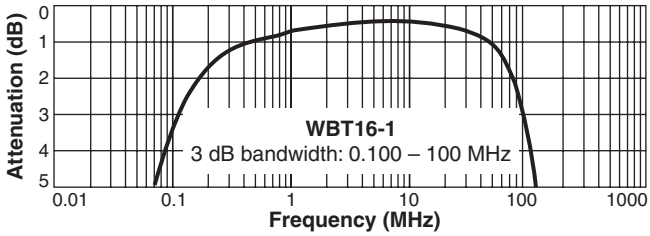
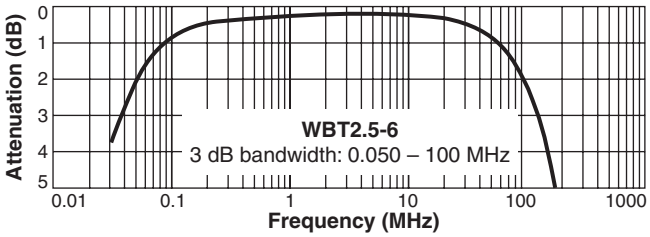
## Transformers with primary and secondary center taps

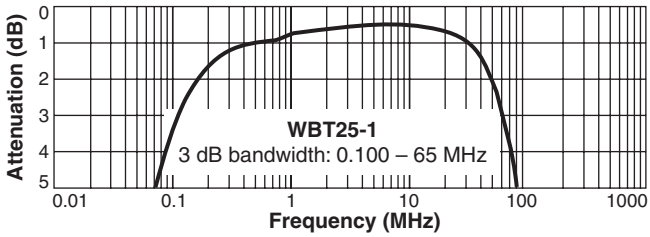


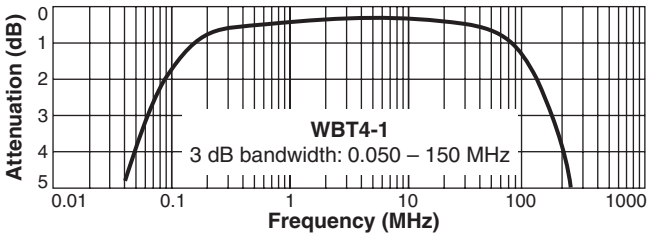

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