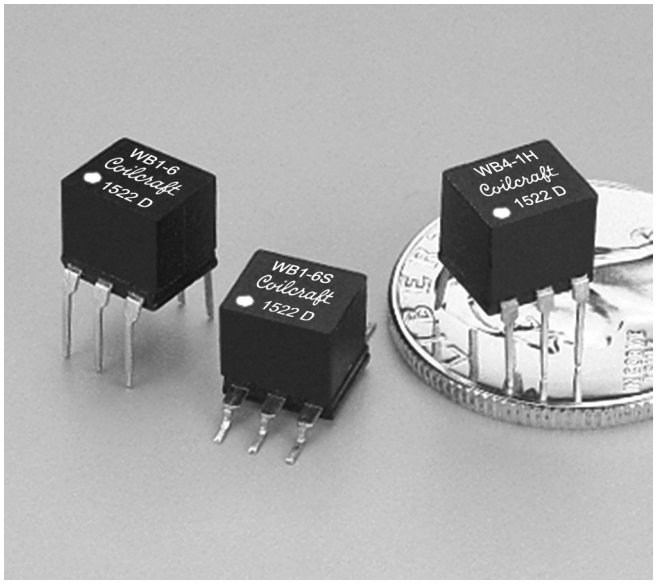
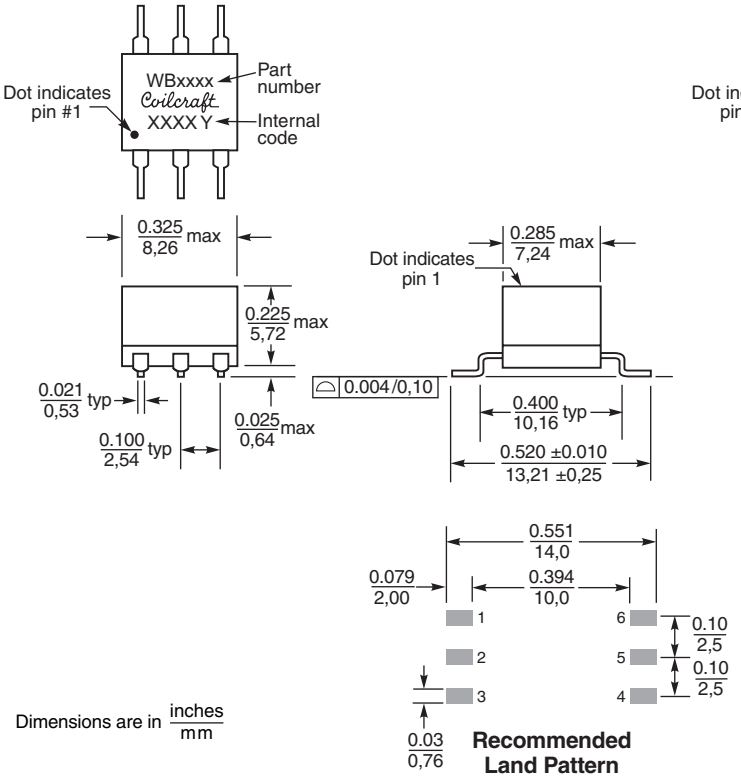
Wideband Transformers



- 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

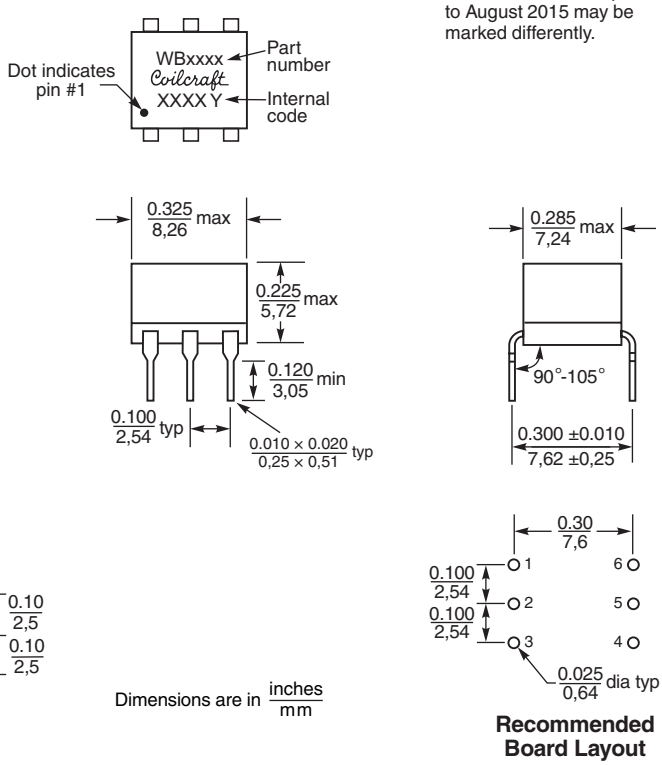


Dimensions are in inches / mm

Recommended Land Pattern

Dimensions – through hole parts

Parts manufactured prior to August 2015 may be marked differently.



Dimensions are in inches / mm

Recommended Board Layout

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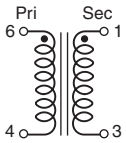
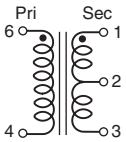
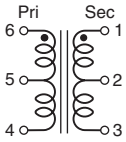
Wideband Transformers

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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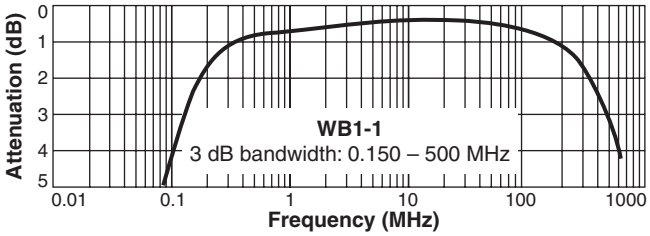
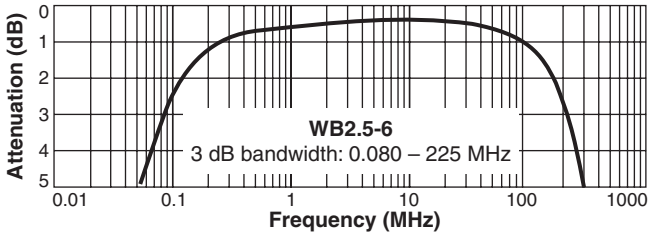
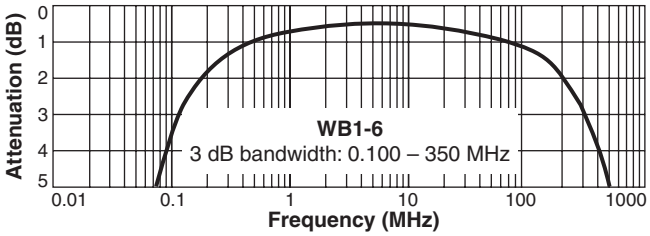
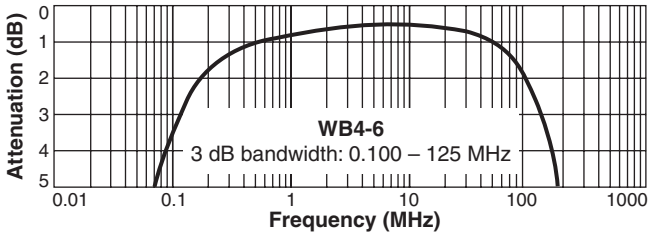
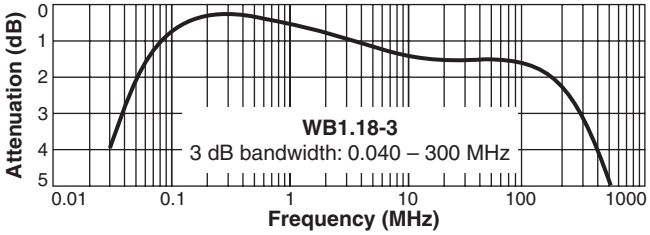
Transformers with no center taps

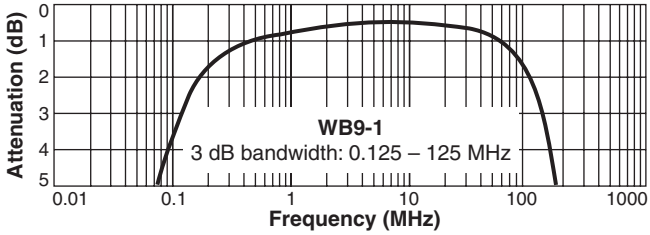


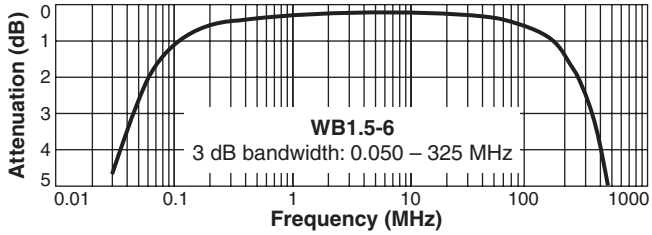


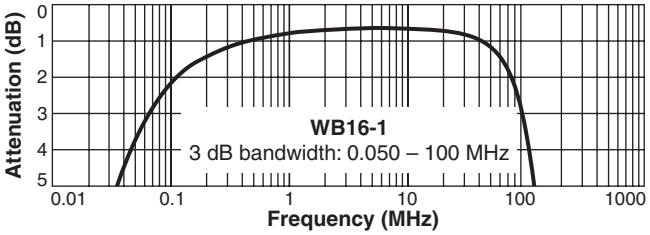


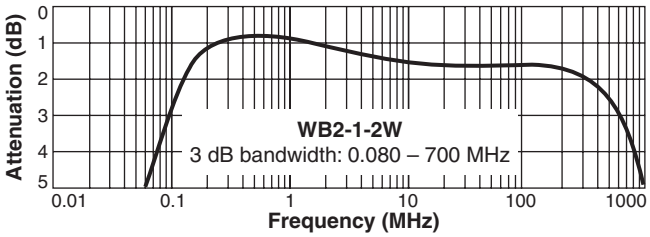


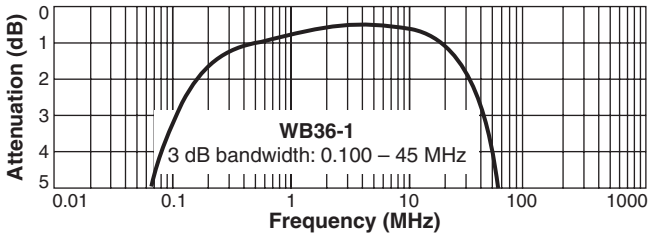












Attenuation measured on a network analyzer (re: 50 Ohms)

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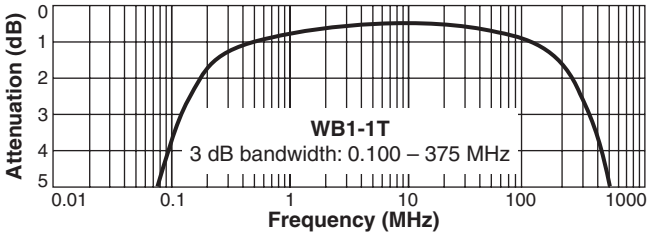
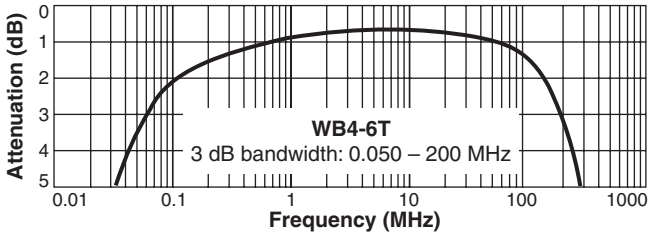
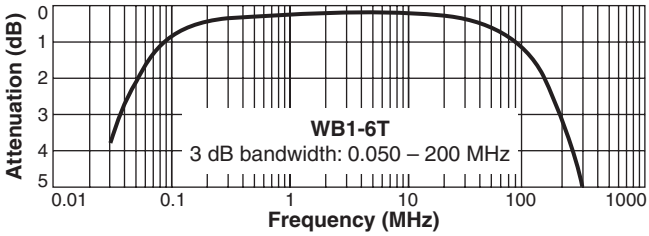
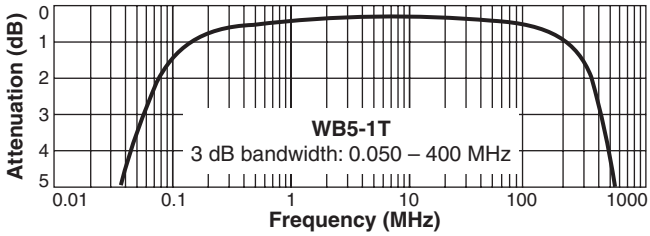
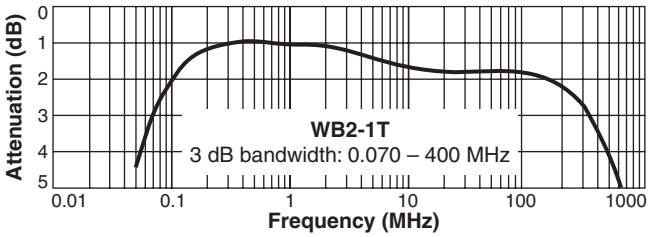
Transformers with secondary center tap

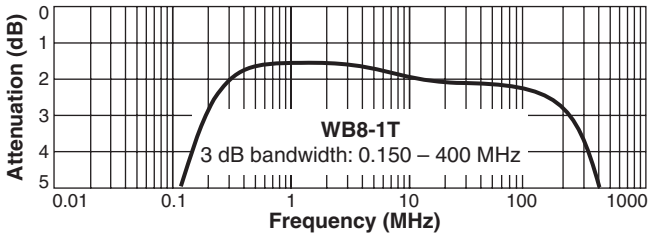


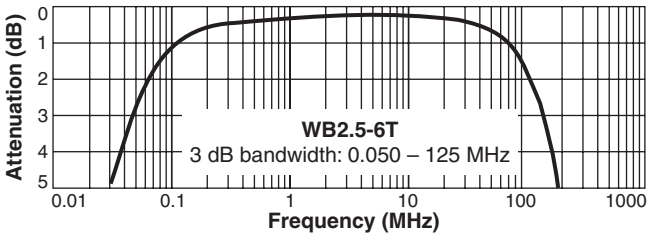


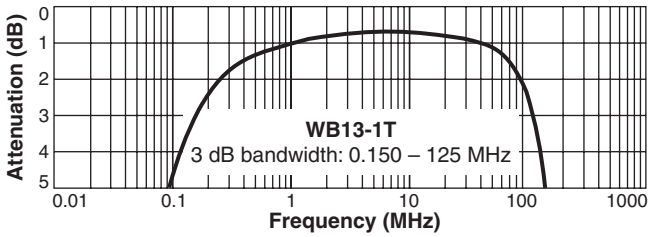


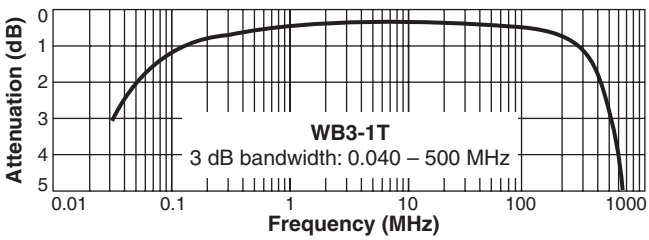


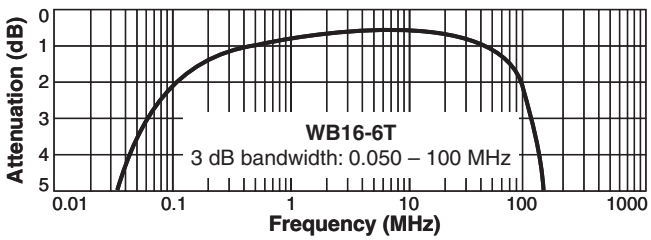


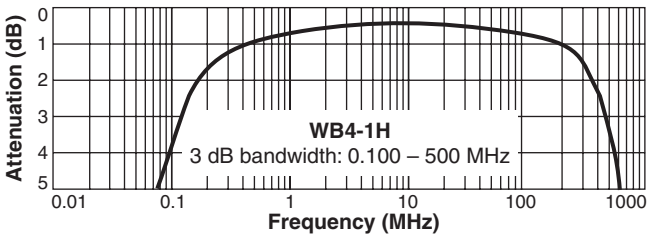












Attenuation measured on a network analyzer (re: 50 Ohms)

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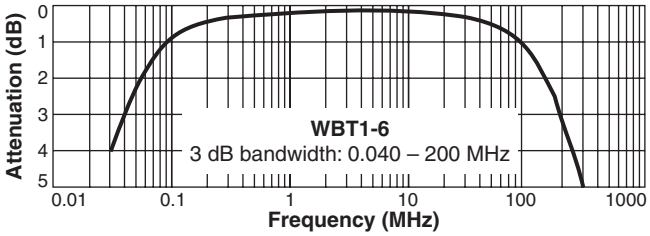
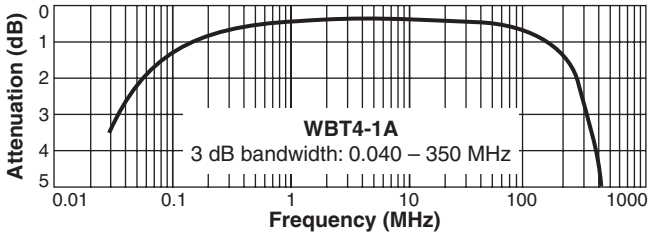
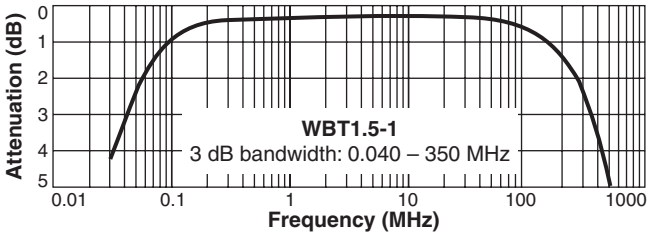
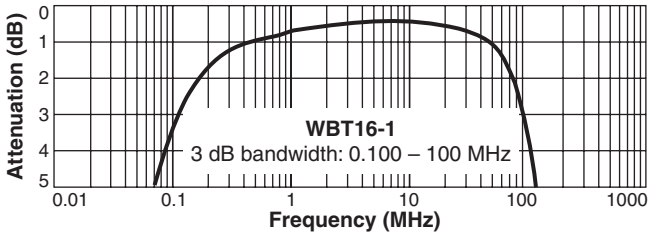
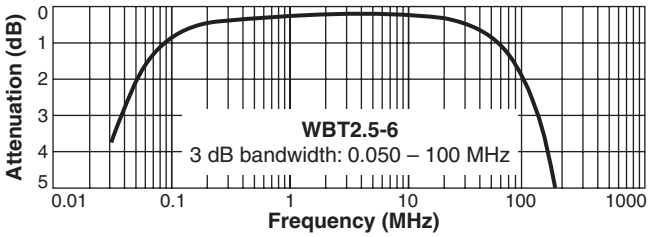
Transformers with primary and secondary center taps

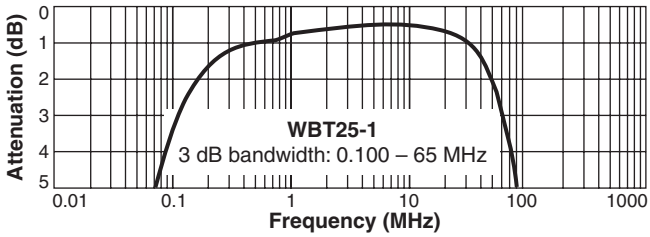


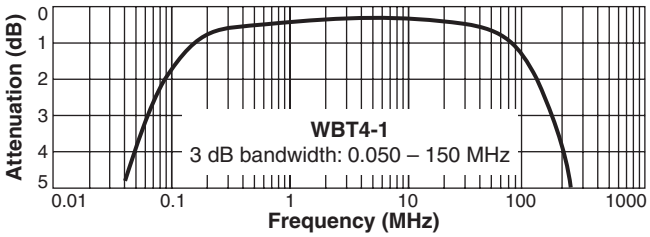












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