SMT Mini Wideband Transformers



- Smallest wideband transformer: 4 mm square 3 mm high
- 300 V interwinding isolation, 1/4 Watt RF input power
- 250 mA max current rating.

Designer's Kit C393 contains three of each part

Core material Ferrite

Terminations RoHS compliant tin-silver-copper over silver-platinum-glass frit. Other terminations available at additional cost.

Weight 68.0 – 88.8 mg

Ambient temperature –40°C to +85°C

Storage temperature Component: –40°C to +85°C. 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 750/7″reel; 3000/13″ reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 2.9 mm pocket depth

PCB washing Only pure water or alcohol recommended

Part number[1]	Schematic	Impedance ratio[2] pri : sec	Bandwidth (MHz)	Insertion loss max (dB)	Pins 4–6 (primary) L min[3] (µH)	Pins 4–6 (primary) DCR max[4] (mOhm)	Pins 1–3 (secondary) L min[3] (µH)	Pins 1–3 (secondary) DCR max[4] (mOhm)	DC imbalance[5] max (mA)	Color dot
WBC1-1L_	A	1 : 1	0.400 – 600	0.40	10	120	10	120	—	Brown
WBC1-1TL_	B	1 : 1	0.250 – 750	0.58	11	75	11	75	36	Brown
WBC2-1TL_	B	1 : 2	0.200 – 500	0.50	10	120	20	150	8.5	Red
WBC3-1TL_	B	1 : 3	0.300 – 900	0.60	9	100	27	150	8.5	Orange
WBC4-1TL_	B	1 : 4	0.250 – 750	1.0	12	55	48	120	30	Yellow
WBC4-14L_	B	1 : 4	1.500 – 1200	2.0	2	50	8	100	15	Green
WBC4-1WL_	B	1 : 4	0.500 – 1000	0.90	5	60	20	120	10	White
WBC4-6TL_	B	1 : 4	0.300 – 700	0.65	9	80	36	200	7.5	Blue
WBC8-1L_	B	1 : 8	0.150 – 600	0.60	22	120	176	310	17	Gray
WBC9-1L_	B	1 : 9	0.300 – 500	0.54	9	80	81	230	5	White
WBC16-1TL_	B	1 : 16	0.600 – 300	0.80	5	60	80	230	5	Violet
WBC4-4L_	C	1 : 4	0.250 – 800	1.0	12	60	48	120	30	Yellow

1. When ordering, please specify **termination** and **packaging** codes:

WBC4-4L C

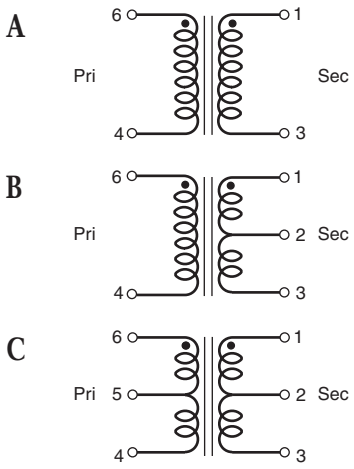
Termination: **L** = RoHS compliant tin-silver-copper (95.5/4/0.5) over silver-palladium-platinum
Special order: **S** = non-RoHS tin-lead (63/37).

Packaging: **C** = 7″ machine-ready reel. EIA-481 embossed plastic tape (750 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 C instead.
D = 13″ machine-ready reel. EIA-481 embossed plastic tape. Factory order only, not stocked (3000 parts per full reel).

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 maximum imbalance.
6. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Schematics



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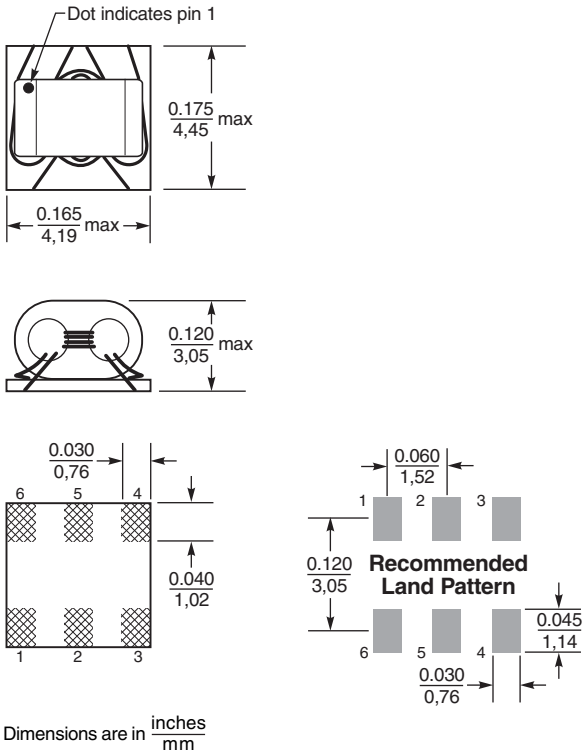
1102 Silver Lake Road Cary, Illinois 60013 **Phone** 847/639-6400 **Fax** 847/639-1469
E-mail info@coilcraft.com **Web** http://www.coilcraft.com

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Dimensions

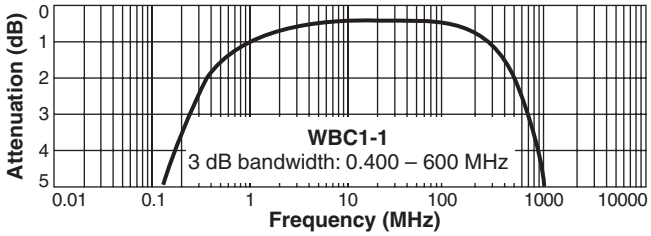


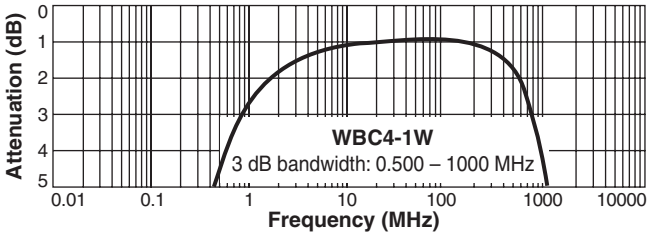
Dimensions are in inches / mm

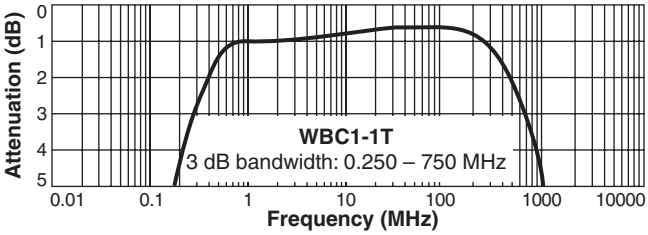
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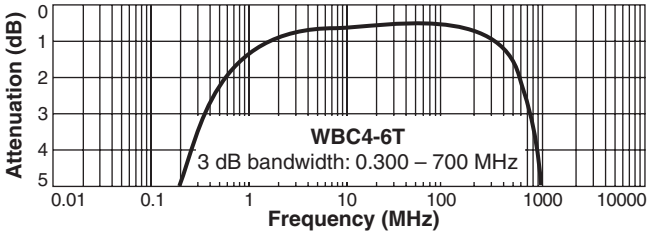
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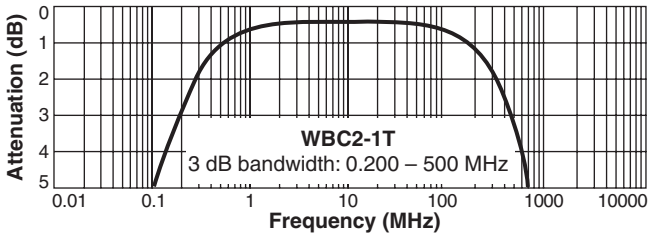
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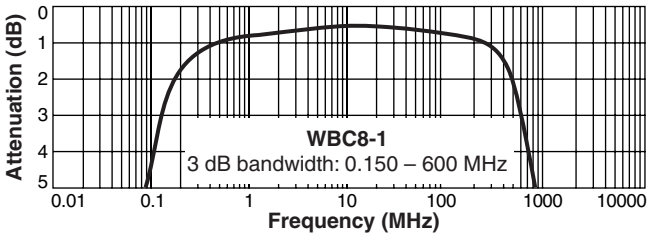


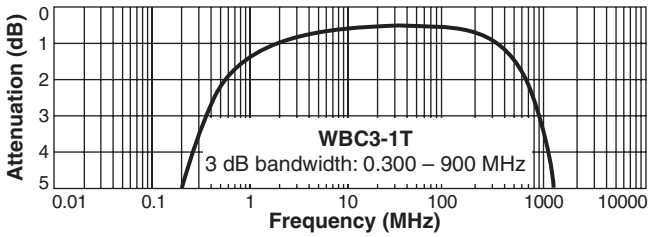


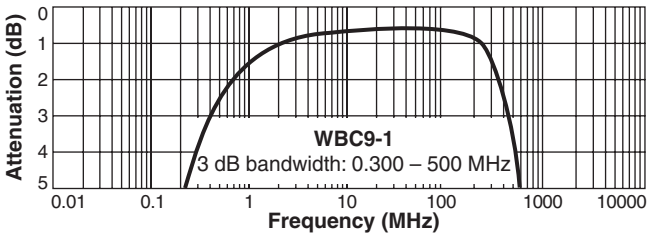


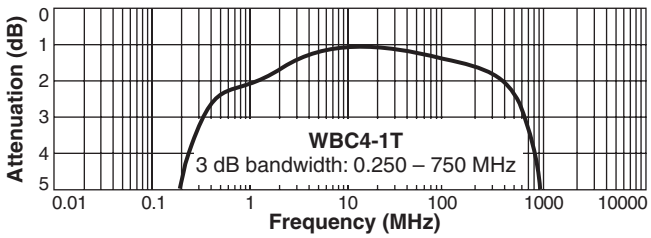


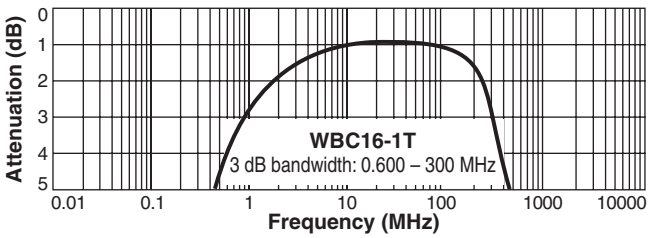


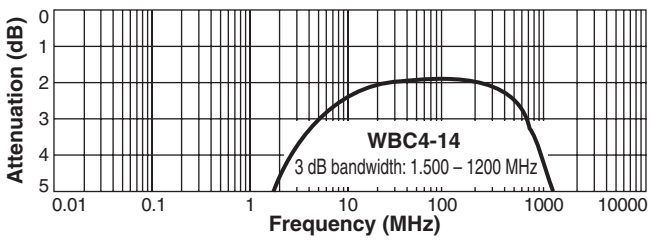


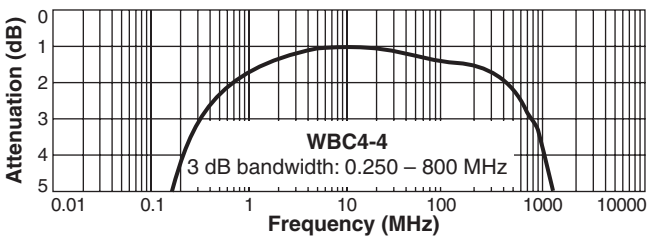












Attenuation measured on a network analyzer (re: 50 Ohms)

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