

# Wideband Transformers for Critical Applications



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

**Core material** Ferrite

**Terminations** Tin-silver-copper over silver-platinum-glass frit. Other terminations available at additional cost.

**Ambient temperature**  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

**Maximum part temperature**  $+95^{\circ}\text{C}$  (ambient + temp rise).

**Storage temperature** Component:  $-55^{\circ}\text{C}$  to  $+95^{\circ}\text{C}$ .  
Tape and reel packaging:  $-55^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$

**Resistance to soldering heat** Max three 40 second reflows at  $+260^{\circ}\text{C}$ , parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at  $<30^{\circ}\text{C}$  / 85% relative humidity)

**Packaging** 750/7" reel Plastic tape: 12 mm wide, 0.3 mm thick, 8 mm pocket spacing, 2.9 mm pocket depth

Part number <sup>1</sup>	Schem.	Impedance ratio <sup>2</sup> pri:sec	Bandwidth (MHz)	Insertion loss max (dB)	Pins 1-3 (primary)		Pins 4-6 (secondary)		DC imbalance <sup>5</sup> max (mA)
					L min <sup>3</sup> ( $\mu\text{H}$ )	DCR max <sup>4</sup> (mOhm)	L min <sup>3</sup> ( $\mu\text{H}$ )	DCR max <sup>4</sup> (mOhm)	
ST458RFW01A1LZ	A	1:1	0.400–600	0.40	10	120	10	120	—
ST458RFW01B1LZ	B	1:1	0.250–750	0.58	9.5	75	9.5	75	36
ST458RFW02B1LZ	B	1:2	0.200–500	0.50	10	120	20	150	8.5
ST458RFW03B1LZ	B	1:3	0.300–900	0.60	9.0	100	27	150	8.5
ST458RFW04B1LZ	B	1:4	0.250–750	1.0	9.0	55	36	120	30
ST458RFW04B2LZ	B	1:4	1.500–1200	2.0	2.0	50	8.0	100	15
ST458RFW04B3LZ	B	1:4	0.500–1000	0.90	5.0	80	20	120	10
ST458RFW04B4LZ	B	1:4	0.300–700	0.65	9.0	80	36	200	7.5
ST458RFW08B1LZ	D	1:8	0.150–600	0.60	22	120	176	310	17
ST458RFW09B1LZ	B	1:9	0.300–500	0.54	9.0	80	81	230	5.0
ST458RFW16B1LZ	B	1:16	0.600–300	0.80	5.0	80	80	230	5.0
ST458RFW04C1LZ	C	1:4	0.250–800	1.0	9.0	60	36	120	30

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

**ST458RFW04C1LZ**

**Termination:** L = Tin-silver-copper (95.5/4/0.5) over silver palladium-platinum-glass frit.

**Special order:** S = Tin-lead (63/37).

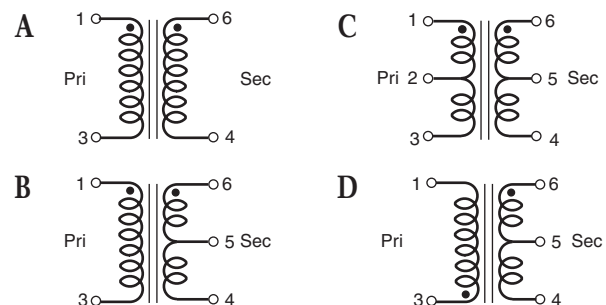
**Testing:** Z = Unscreened

H = Group A screening per Coilcraft CP-SA-10001

All screening performed to the document's latest revision  
Custom screening also available

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 4 and 6 with the source at pin 5. Inductance drop is 15% at maximum imbalance.
6. Electrical specifications at  $25^{\circ}\text{C}$ . Measurements are referenced to 50 Ohms. Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

## Schematics



**Coilcraft CPS**  
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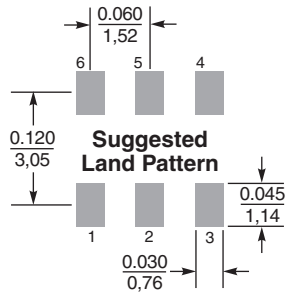
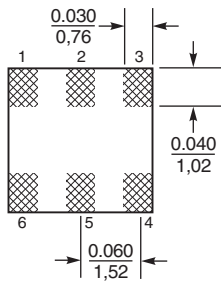
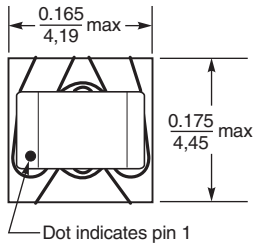
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Document ST424-1 Revised 10/23/17

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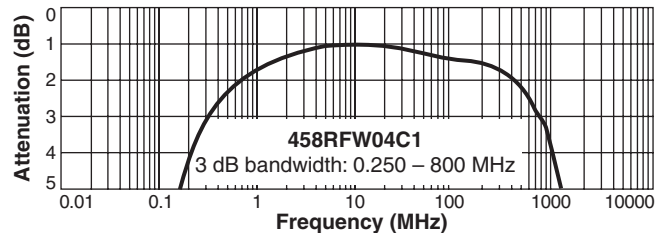
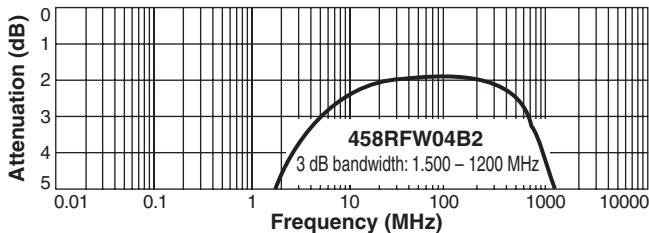
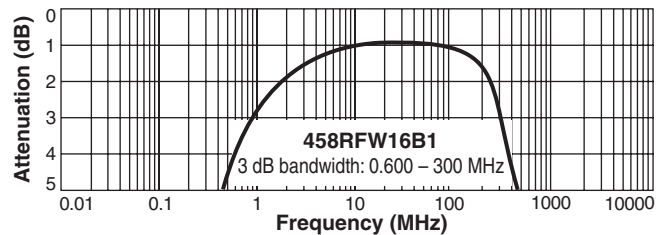
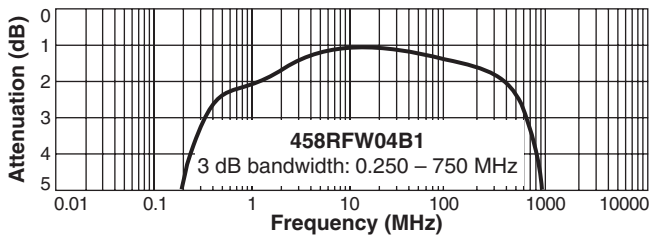
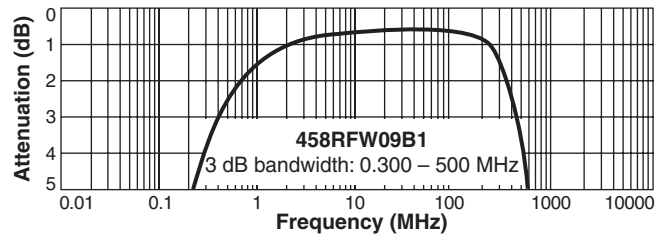
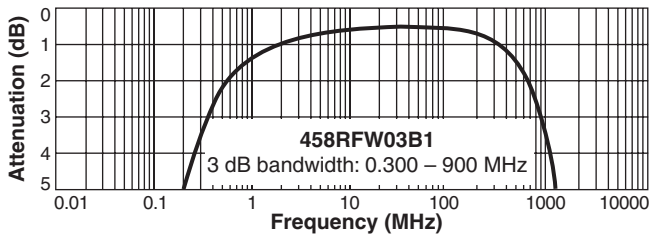
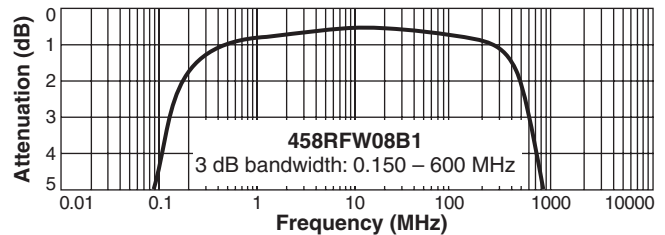
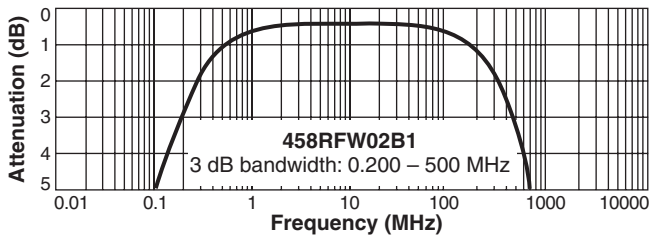
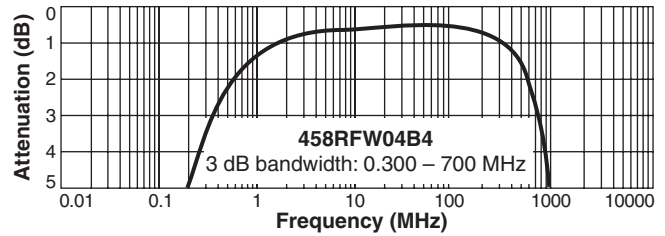
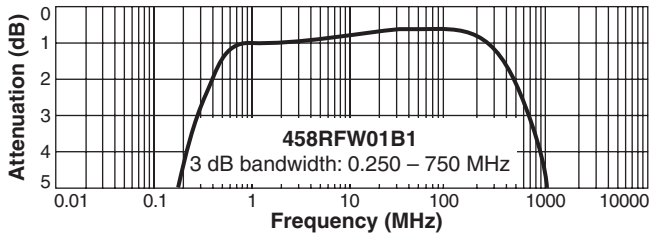
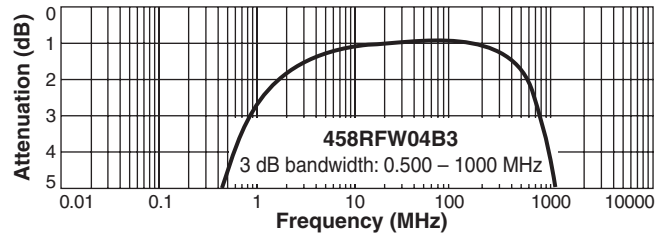
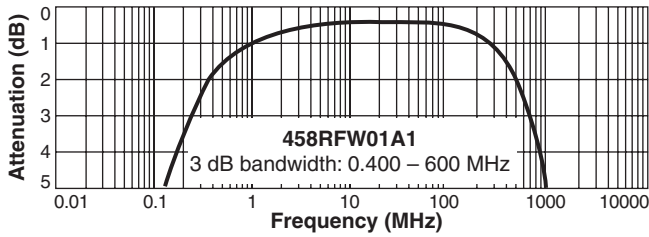
# ST458RFW Wideband Transformers for Critical Applications

## Dimensions



Dimensions are in  $\frac{\text{inches}}{\text{mm}}$

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

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Document ST424-3 Revised 10/23/17

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