

# Outgassing Compliant Wideband Transformers



- Miniature wideband transformer: 4 mm square 3 mm high
- 300 V interwinding isolation, 1/4 Watt RF input power
- 250 mA max current rating
- Passes NASA low outgassing specifications
- Leach-resistant base metalization with tin-lead (Sn-Pb) terminations ensures the best possible board adhesion.

**Core material** Ferrite

**Terminations** Tin-lead (63/37) over silver-platinum-glass frit.

**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)

**Enhanced crush-resistant 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)	
AE458RFW01A1SZ	A	1:1	0.400–600	0.40	10	120	10	120	—
AE458RFW01B1SZ	B	1:1	0.250–750	0.58	9.5	75	9.5	75	36
AE458RFW02B1SZ	B	1:2	0.200–500	0.50	10	120	20	150	8.5
AE458RFW03B1SZ	B	1:3	0.300–900	0.60	9.0	100	27	150	8.5
AE458RFW04B1SZ	B	1:4	0.250–750	1.0	9.0	55	36	120	30
AE458RFW04B2SZ	B	1:4	1.500–1200	2.0	2.0	50	8.0	100	15
AE458RFW04B3SZ	B	1:4	0.500–1000	0.90	5.0	80	20	120	10
AE458RFW04B4SZ	B	1:4	0.300–700	0.65	9.0	80	36	200	7.5
AE458RFW08B1SZ	D	1:8	0.150–600	0.60	22	120	176	310	17
AE458RFW09B1SZ	B	1:9	0.300–500	0.54	9.0	80	81	230	5.0
AE458RFW16B1SZ	B	1:16	0.600–300	0.80	5.0	80	80	230	5.0
AE458RFW04C1SZ	C	1:4	0.250–800	1.0	9.0	60	36	120	30

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

**AE458RFW04C1SZ**

**Testing:**

**Z** = Unscreened

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

**T** = Screening per MIL-STD-981

**U** = Screening per EEE-INST-002

**F** = Screening per ESCC 3201

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.

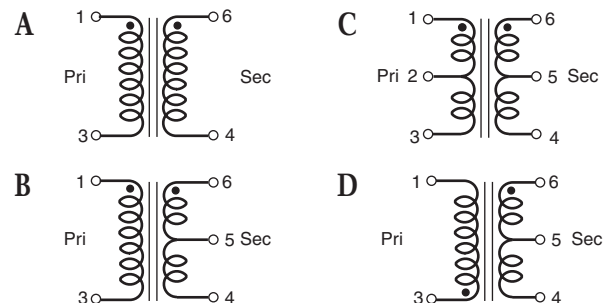
4. DCR measured on a micro-ohmmeter.

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.

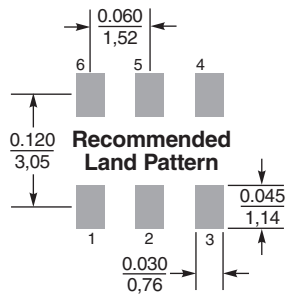
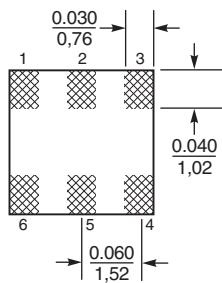
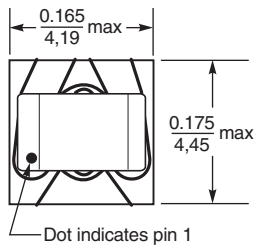
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

## Schematics



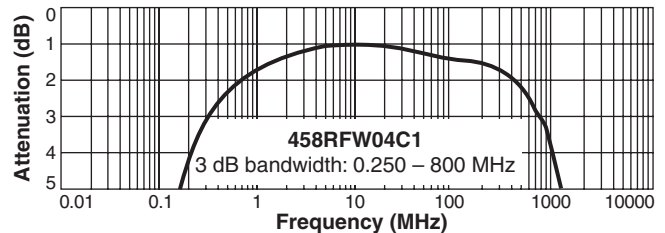
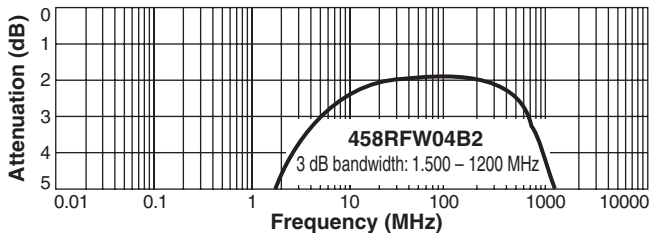
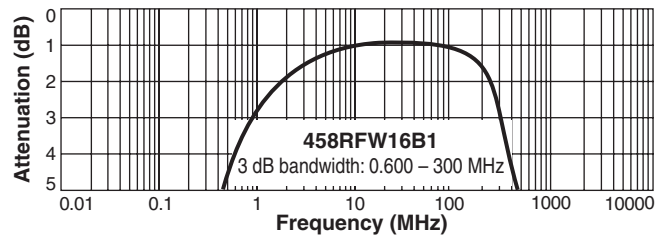
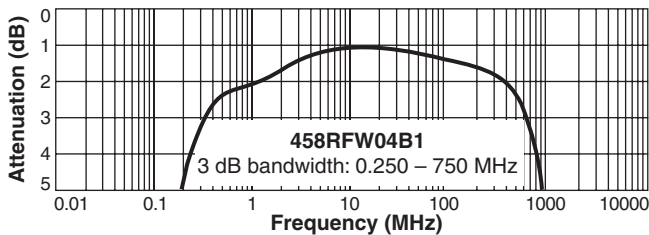
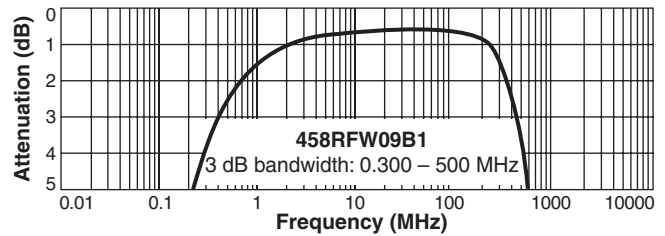
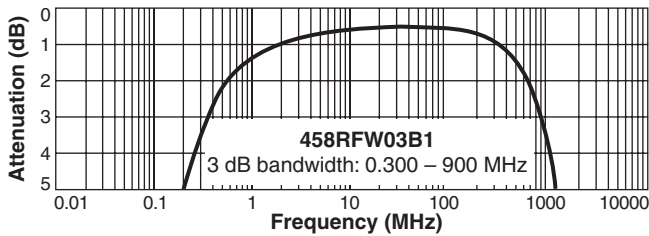
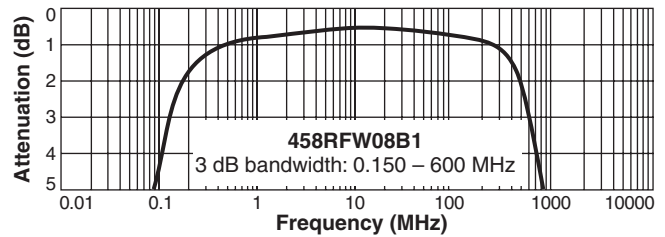
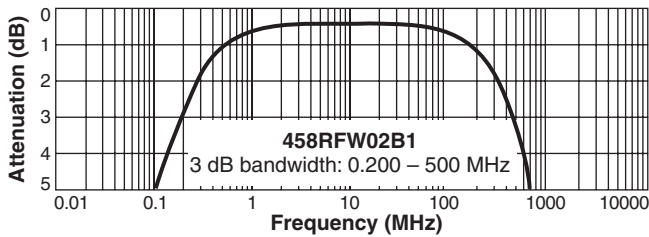
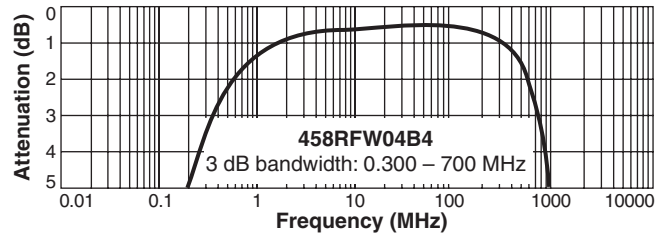
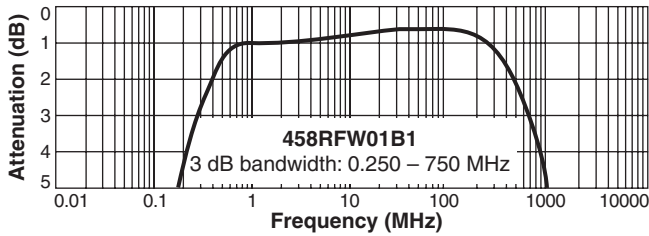
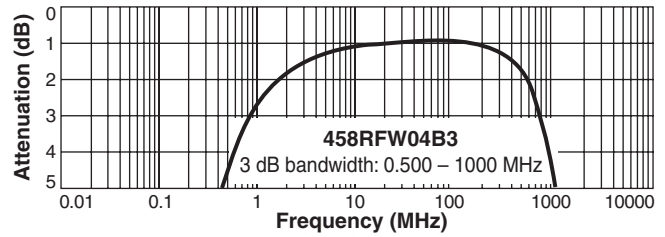
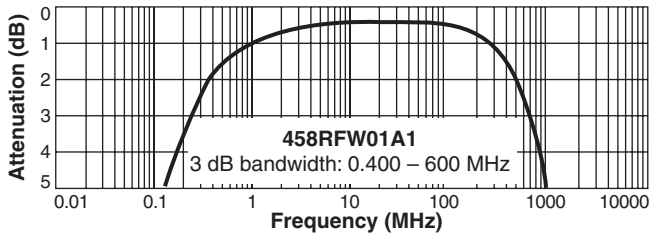
# AE458RFW Outgassing Compliant Wideband Transformers

## Dimensions



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

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