

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°C to $+85^{\circ}\text{C}$

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

Storage temperature Component: -55°C to $+95^{\circ}\text{C}$.

Tape and reel packaging: -55°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 ¹	Schem.	Impedance ratio ² pri:sec	Bandwidth (MHz)	Insertion loss max (dB)	Pins 1-3 (primary)		Pins 4-6 (secondary)		DC imbalance ⁵ max (mA)
					L min ³ (μH)	DCR max ⁴ (mOhm)	L min ³ (μH)	DCR max ⁴ (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

Screening:

Z = Unscreened

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

2 = EEE-INST-002 level 2

3 = EEE-INST-002 level 3

4 = MIL-STD-981 Class B

5 = MIL-STD-981 Class S

F = Screening per ESCC 3201

All screening performed to the document's latest revision

Custom screening also available

Note: Screening T and U have been replaced with more detailed codes 4, 5, and 1, 2, 3, respectively. Codes T and U can still be used, if necessary.

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.

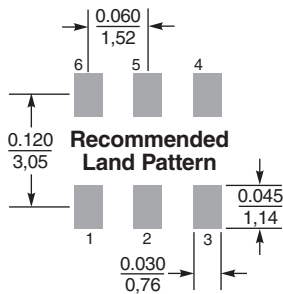
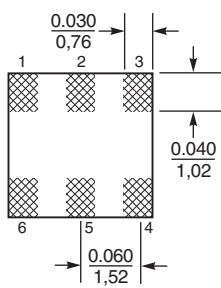
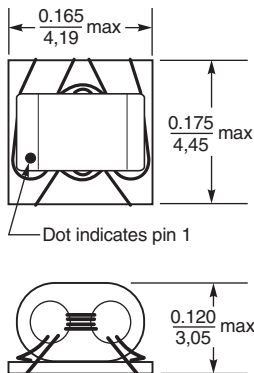
5. DC imbalance is the maximum difference in current measured at pins 4 and 6 with the source at pin 5. Inductance drop is 15% at maximum imbalance.

6. Electrical specifications at 25°C . Measurements are referenced to 50 Ohms.

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

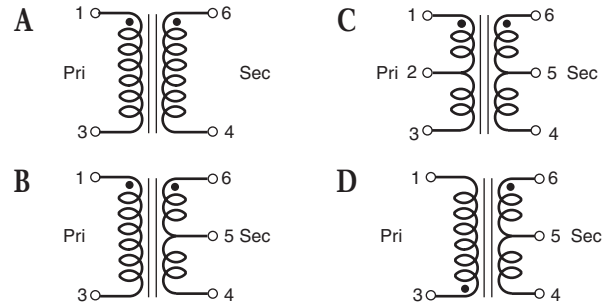
AE458RFW Outgassing Compliant Wideband Transformers

Dimensions

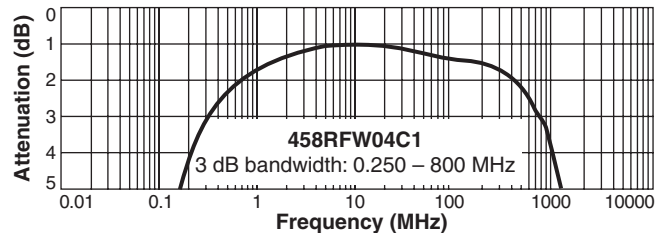
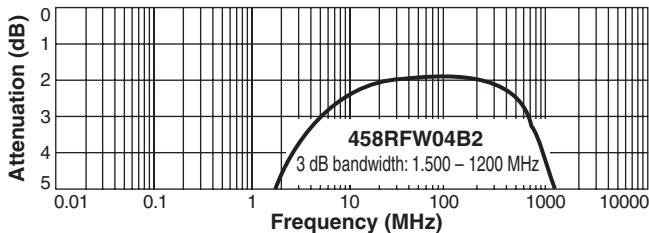
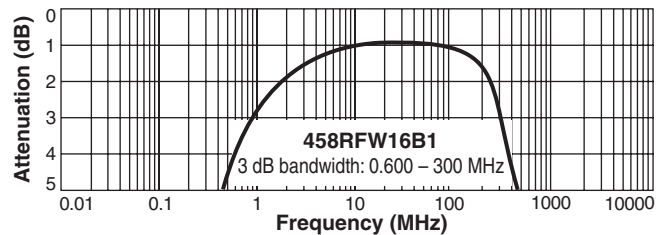
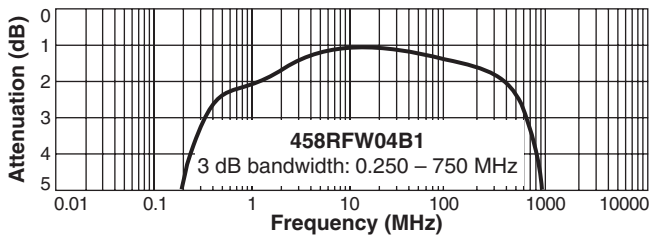
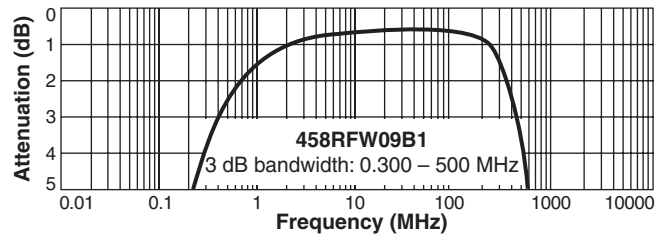
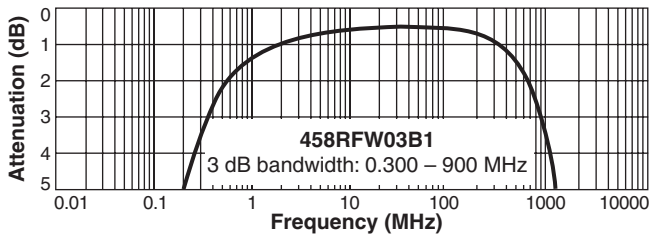
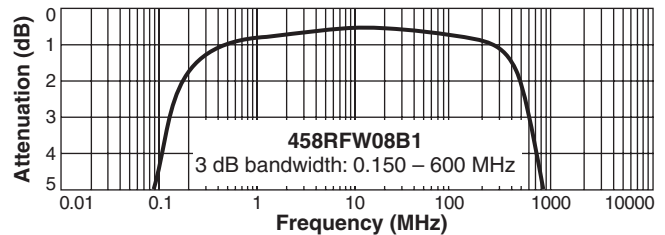
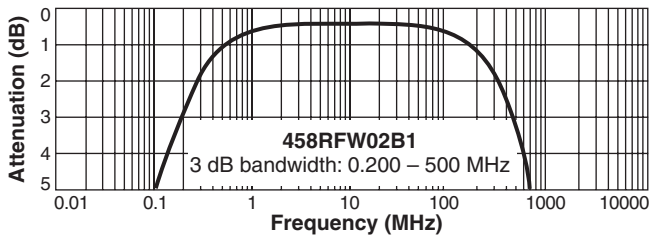
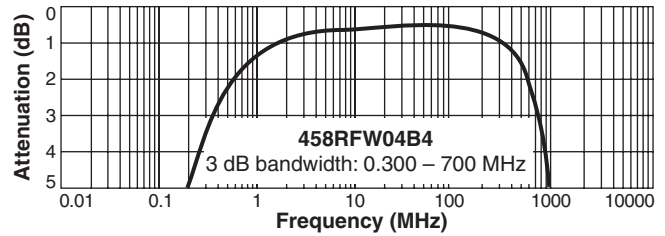
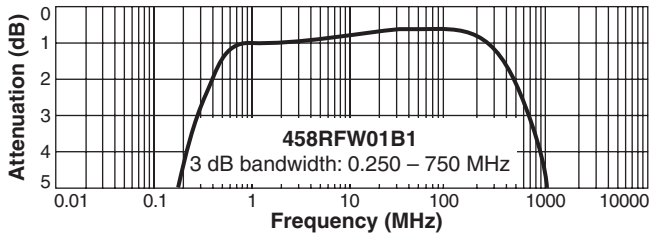
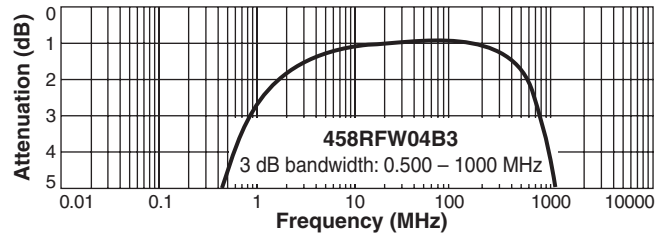
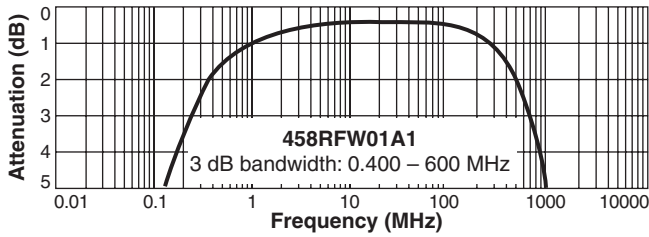


Dimensions are in inches/mm

Schematics



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