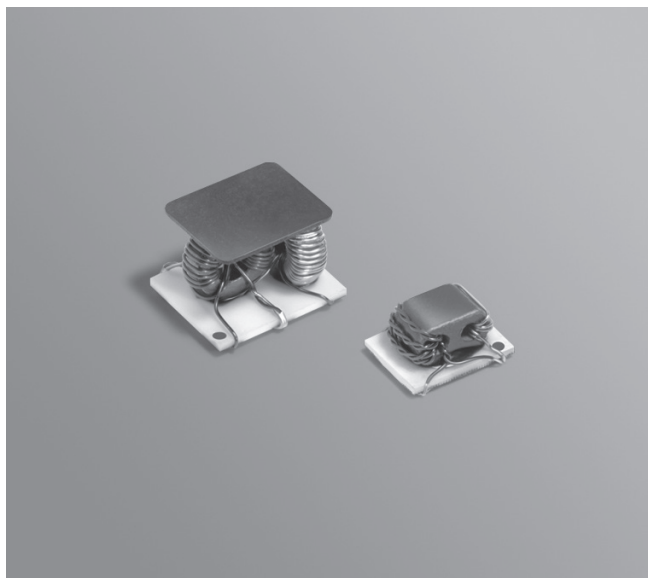




SMT Balun and Coupler for DOCSIS 3.1 and 4.0



- Designed for DOCSIS 3.1/4.0 Broadband or Cable TV (CATV) network
- Compact and low-profile surface mount package
- 1:1 transmission line balun and 23 dB coupling ratio coupler

Core material Ferrite

Environment RoHS compliant, halogen free

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

Weight ZB1200 0.106 g, ZB1201 0.189 g

Ambient temperature -40°C to +125°C

Maximum part temperature +140°C

Storage temperature Component: -40°C to +140°C.

Tape and reel 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)

PCB washing Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787_PCB_Washing.pdf](#).

Part number ¹	Impedance ratio pri:sec	Bandwidth (MHz)	Insertion loss max (dB)	L min ² (μH)	DCR max ³ (mOhm)	Input Power max (W)
ZB1200-DE_	1:1	0.1 – 2500	0.6	30	65	1.5

Part number ¹	Coupling ratio (dB)	Bandwidth (MHz)	Insertion loss max (dB)	Pins 1-6, Pins 3-4		Pins 2-4, Pins 2-6		Input Power max (W)
				L min ² (μH)	DCR max ³ (mOhm)	L min ² (μH)	DCR max ³ (mOhm)	
ZB1201-CE_	23	1.2 – 2500	0.3	0.012	23	2.7	145	1.5

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

ZB1201-CEC

Termination: **E** = RoHS compliant tin-silver-copper over silver-platinum-glass frit.

Special order: **S** = non-RoHS tin-lead (63/37).

Packaging: **C** = 7" machine-ready reel. EIA-481 embossed plastic tape (ZB1200: 700 parts per full reel, ZB1201: 250 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

D = 13" machine-ready reel. EIA-481 embossed plastic tape (ZB1200: 2500 parts per full reel, ZB1201: 1000 parts per full reel). Factory order only, not stocked.

2. Inductance measured per winding (ZB1200 pins 1-6, 1-4, 3-6) at 100 kHz, 0.1 V, 0 A_{dc} on an Agilent/HP 4192 or equivalent.

3. DCR measured per winding on a micro-ohmmeter.

4. 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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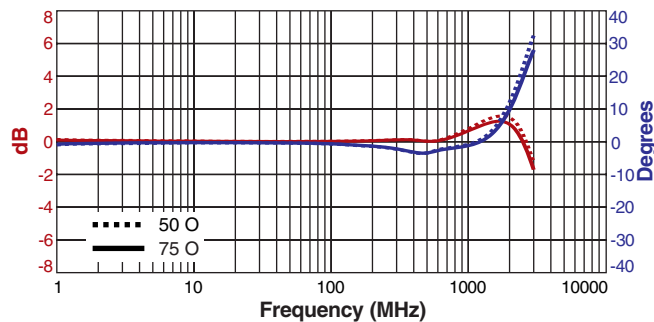
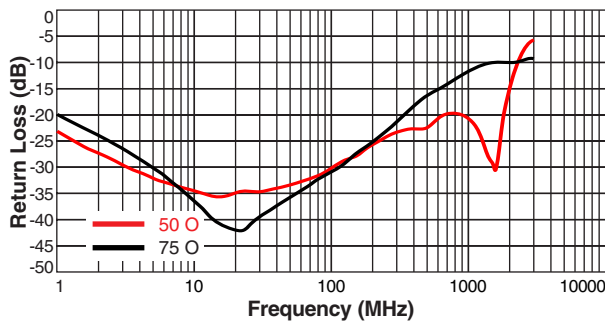
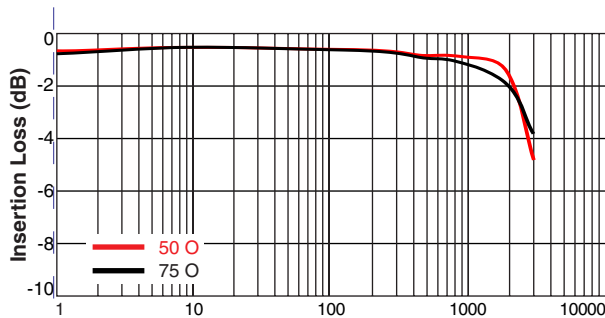
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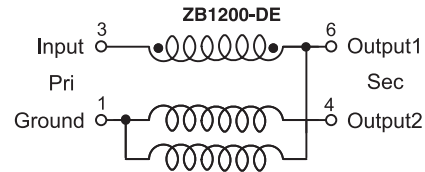
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.



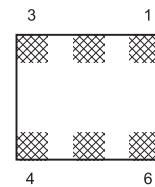
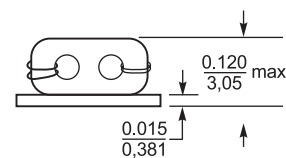
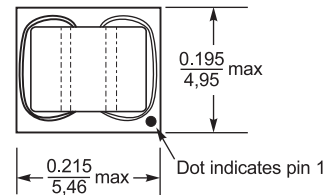
SMT Balun for DOCSIS 3.1 and 4.0 – ZB1200-DE



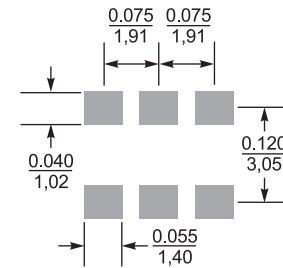
Schematic



Dimensions



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



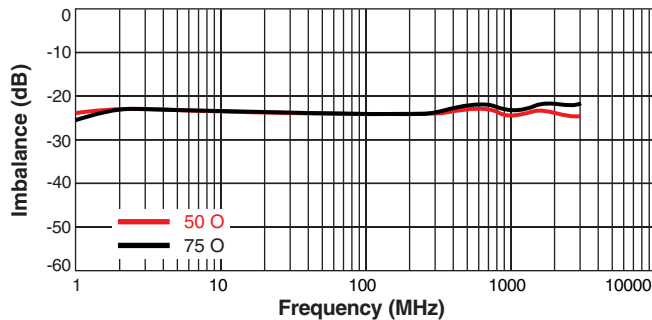
Recommended Land Pattern

Packaging 700/7" reel; 2500/13" reel Plastic tape: 12 mm wide, 0.40 mm thick, 8 mm pocket spacing, 3.1 mm pocket depth

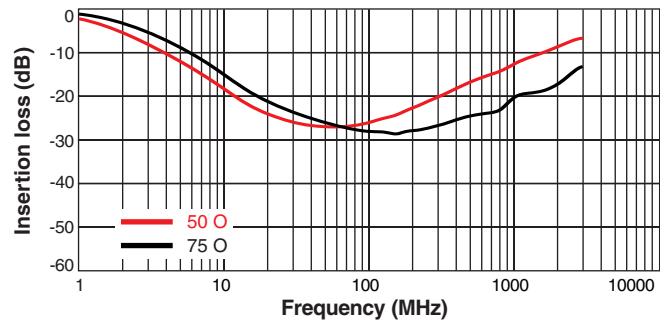


SMT Balun and Coupler for DOCSIS 3.1 and 4.0 – ZB1201-CE

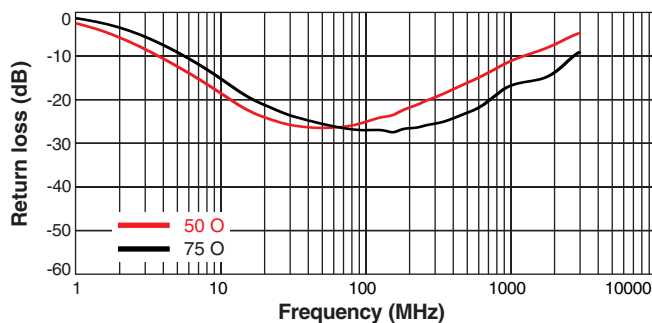
Coupling (Pin 1 - 3)



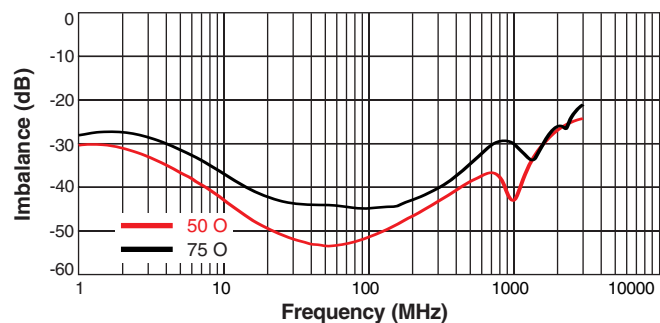
Return loss: Output (Pin 6)



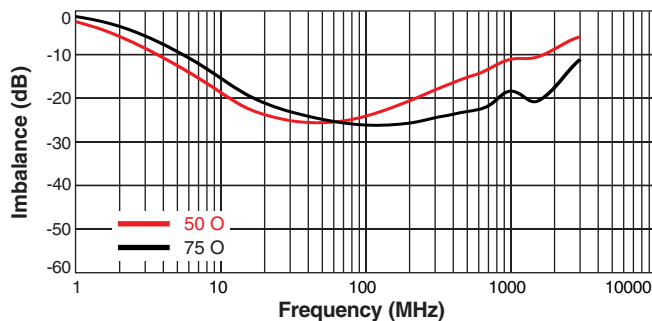
Return loss: Input (Pin 1)



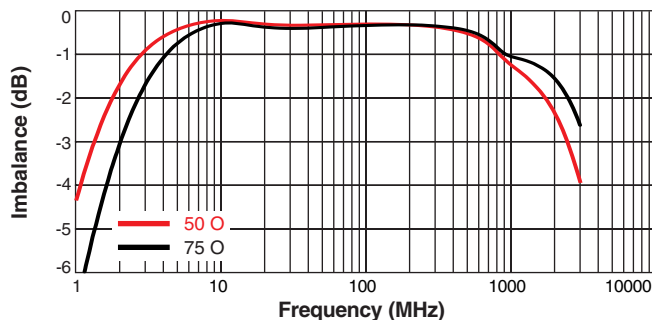
Isolation (Pin 1 - 4)



Return loss: Coupling (Pin 3)

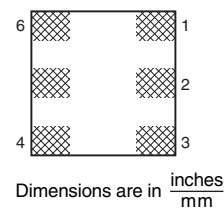
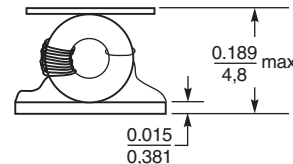
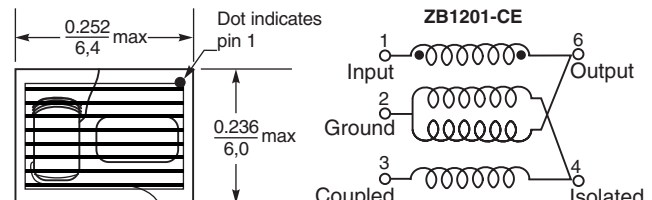


Main line loss (Pin 1 - 6)

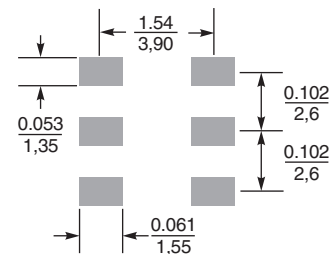


Note: Pins 1, 3, 4, and 6 terminated to reference impedance, pin 2 terminated to ground.

Dimensions



Dimensions are in inches/mm



Recommended Land Pattern

Packaging 250/7" reel; 1000/13" reel Plastic tape: 16 mm wide, 0.35 mm thick, 12 mm pocket spacing, 5.0 mm pocket depth