

**NEW!**

# SMT Broadband Conical Inductors



- Full-length cap fully protects the coil and provides a large surface for pick and place.
- The self positioning mounting bracket has four soldered pads for excellent board adhesion.
- Designed specifically for broadband and high frequency applications.
- Operates as a series of narrow-band inductors throughout an operating frequency range of 10 MHz to 40 GHz.
- Ideal for use in ultra-wideband bias T's, where the conical inductor provides the path for the DC bias injection or extraction while isolating the power source from the active device.
- For a "flying lead" version that allows adjustment of the mounting angle consider the BCL series

Part number <sup>1</sup>	Inductance <sup>2</sup> ±5% (µH)	DCR max (Ohms)	I <sub>rms</sub> <sup>3</sup> (mA)
BCR-531JL_	0.53	0.15	830
BCR-122JL_	1.20	1.05	200
BCR-652JL_	6.5	0.70	510
BCR-802JL_	8.0	3.39	150

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

↓  
**BCR-802JL C**

**Packaging: C** = 7" machine-ready reel. EIA-481 embossed plastic tape  
(BCR-122JL: 500 parts per full reel;  
BCR-531JL and BCR-802JL: 300 parts per full reel;  
BCR-652JL: 200 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.

2. Inductance measured at 10 MHz, 0.1 V<sub>rms</sub>, 0 A<sub>dc</sub> using an Agilent/HP 16092A fixture in an Agilent/HP 4291A impedance analyzer.  
3. Current that causes a 40°C temperature rise from 25°C ambient.  
4. Electrical specifications at 25°C.

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

**Terminations** Tin-silver-copper over silver-platinum-glass frit

**Weights** BCR-122: 34 mg; BCR-531: 101 mg; BCR-802: 107 mg;  
BCR-652: 472 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)**

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging**

**BCR-122L:** 500/7" reel; 2000/13" reel Plastic tape: 12 mm wide,  
0.36 mm thick, 8 mm pocket spacing, 3.51 mm pocket depth

**BCR-531L:** 300/7" reel; 1500/13" reel Plastic tape: 12 mm wide,  
0.36 mm thick, 8 mm pocket spacing, 4.83 mm pocket depth

**BCR-652L:** 200/7" reel; 750/13" reel Plastic tape: 24 mm wide,  
0.33 mm thick, 12 mm pocket spacing, 6.45 mm pocket depth

**BCR-802L:** 300/7" reel; 1500/13" reel Plastic tape: 12 mm wide,  
0.36 mm thick, 8 mm pocket spacing, 4.83 mm pocket depth

**PCB washing** Only pure water or alcohol recommended

## Coilcraft®

Specifications subject to change without notice.  
Please check our website for latest information.

Document 334R-1 Revised 01/29/10

1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>



**NEW!**

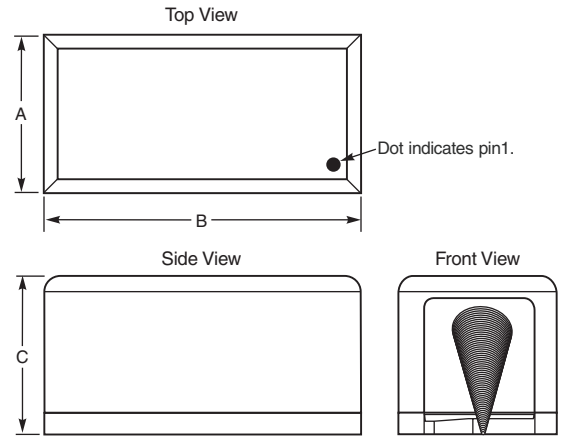
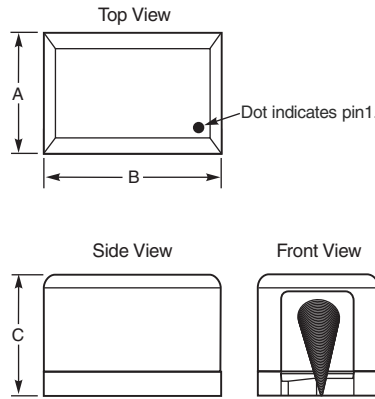
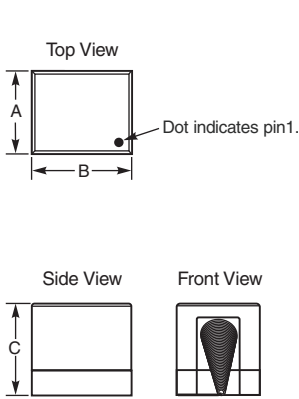
# SMT Broadband Conical Inductors

**S-Parameter files**  
ON OUR WEB SITE OR CD

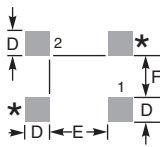
**BCR-122**

**BCR-531, BCS-802**

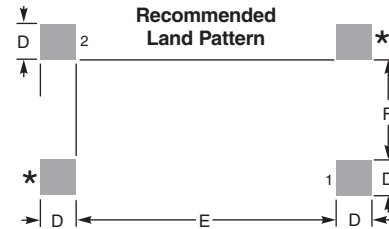
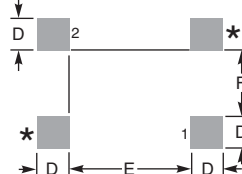
**BCR-652**



**Recommended Land Pattern**



**Recommended Land Pattern**

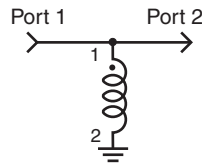


\*Pad is for mounting stability only. Do not connect to circuit.

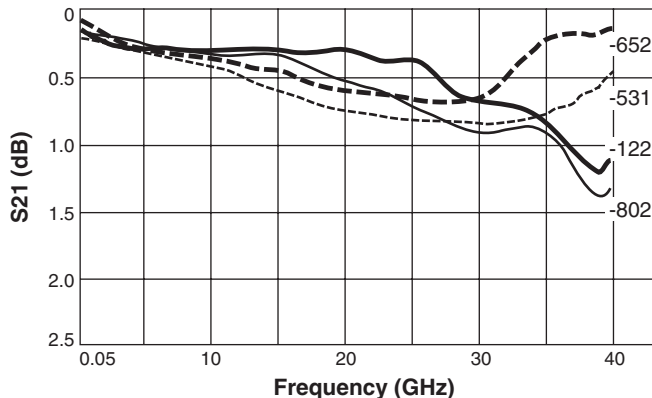
	A	B	C	D	E	F
BCR-531	0.150±0.010/3,81±0,25	0.220±0.010/5,59±0,25	0.160±0.010/4,06±0,25	0.040/1,02	0.150/3,81	0.080/2,03
BCR-122	0.100±0.010/2,54±0,25	0.120±0.010/3,05±0,25	0.110±0.010/2,79±0,25	0.030/0,76	0.070/1,78	0.050/1,27
BCR-652	0.220±0.010/5,59±0,25	0.440±0.010/11,18±0,25	0.220±0.010/5,59±0,25	0.050/1,27	0.360/9,14	0.140/3,56
BCR-802	0.150±0.010/3,81±0,25	0.220±0.010/5,59±0,25	0.160±0.010/4,06±0,25	0.040/1,02	0.150/3,81	0.080/2,03

Dimensions (inches / millimeters)

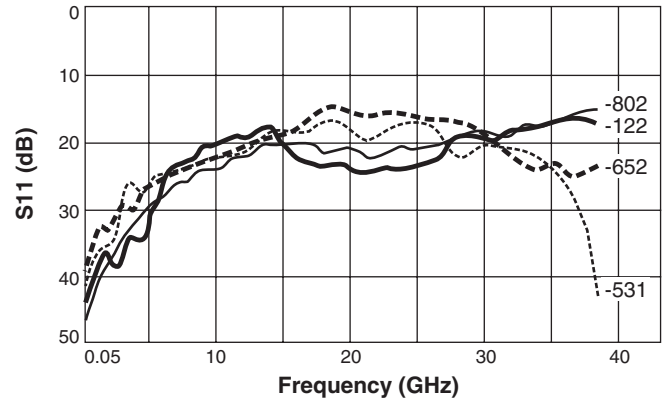
Response curves measured in a bias tee configuration with an Agilent/HP 8722ES network analyzer.



## Insertion Loss (BCL and BCR)



## Return Loss (BCL and BCR)



**Coilcraft®**

Specifications subject to change without notice.  
Please check our website for latest information.

Document 334R-2 Revised 01/29/10

1102 Silver Lake Road Cary, Illinois 60013 Phone 847/639-6400 Fax 847/639-1469

E-mail [info@coilcraft.com](mailto:info@coilcraft.com) Web <http://www.coilcraft.com>