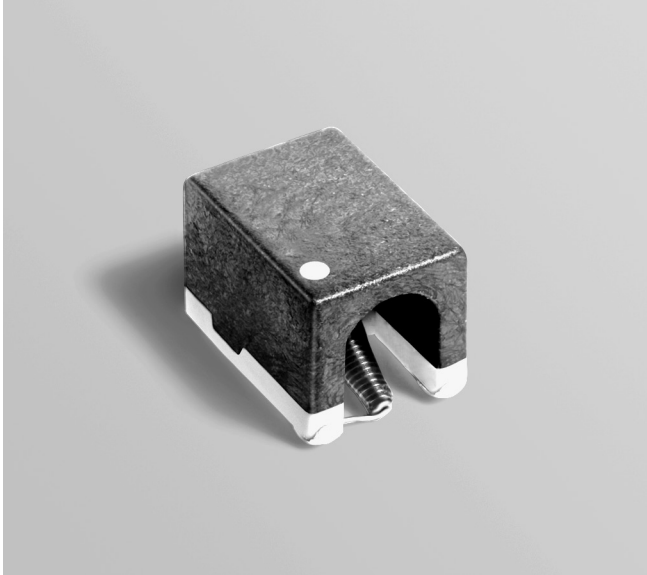


# SMT Broadband Conical Inductors



- 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-221JL_	0.22	0.10	1200
BCR-531JL_	0.53	0.15	1060
BCR-122JL_	1.20	1.05	270
BCR-162JL_	1.65	0.60	490
BCR-232JL_	2.35	1.61	270
BCR-272JL_	2.75	0.40	675
BCR-632JL_	6.35	0.92	480
BCR-652JL_	6.50	0.70	650
BCR-802JL_	8.00	3.39	230

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

BCR-802JLC

**Termination:** L = Tin-silver-copper over silver-platinum-glass frit

**Special order, added cost:**

S = Tin-lead over silver-platinum-glass frit

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

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to C.

2. Inductance measured at 10 MHz, 0.1 V<sub>rms</sub>, 0 Adc using an Agilent/HP 16193A fixture in an Agilent/HP 4287A LCR meter or equivalents.

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  
Other terminations available at additional cost.

**Weights** BCR-122: 34 mg  
BCR-221, BCR-162, BCR-232, BCR-531: 101 mg  
BCR-272, BCR-632, BCR-652: 472 mg  
BCR-802: 107 mg

**Ambient temperature** -40°C to +85°C with I<sub>rms</sub> current, +85°C to +125°C with derated current

**Storage temperature** Component: -40°C to +125°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)

#### Packaging

##### BCR-122:

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-162, BCR-221, BCR-232, BCR-531, BCR-802:

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-272, BCR-632, BCR-652:

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

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

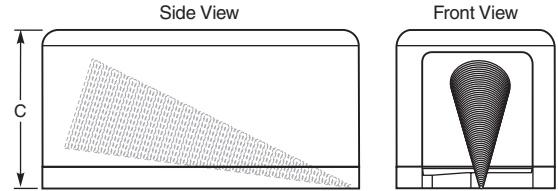
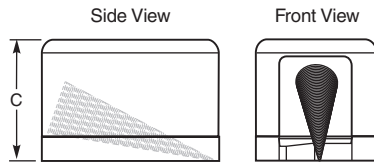
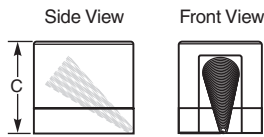
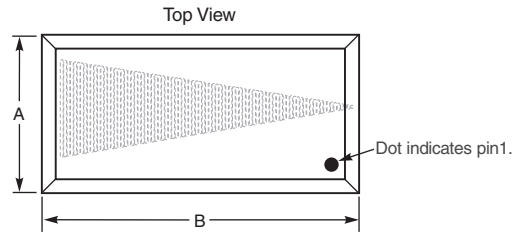
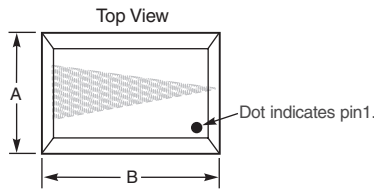
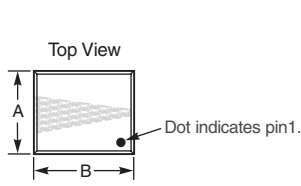


# SMT Broadband Conical Inductors

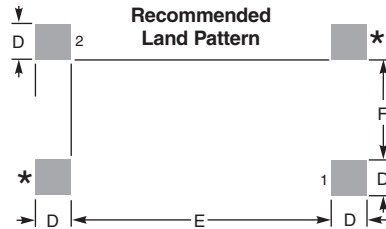
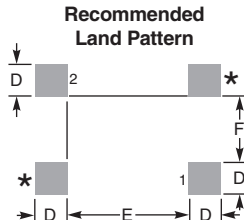
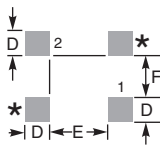
BCR-122

BCR-162, -221, -232, -531, -802

BCR-272, -632, -652



Recommended Land Pattern



\*Pad is for mounting stability only; do not connect to circuit. Connecting to circuit may adversely affect performance.

	A	B	C	D	E	F
BCR-122	0.105 ±0.010/2,67 ±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-162, -221, -232, -531, -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
BCR-272, -632, -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

Dimensions (inches/millimeters)



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Document 334R-2 Revised 12/10/21

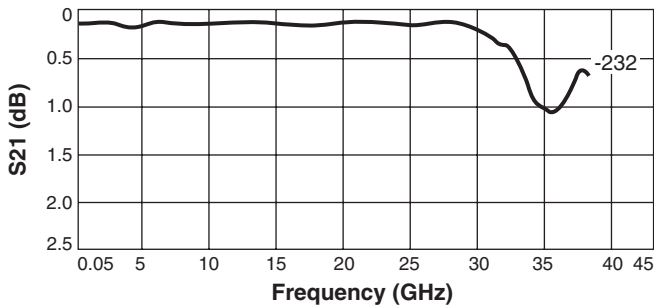
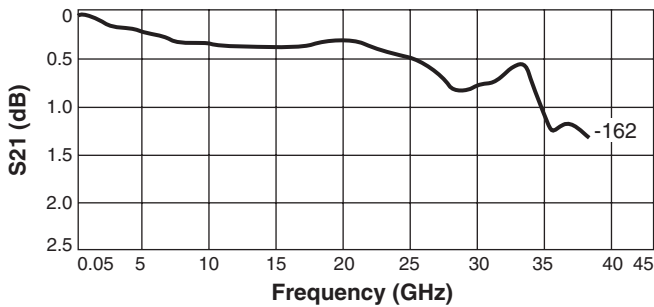
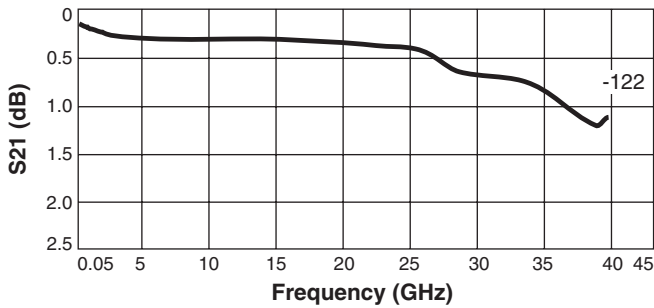
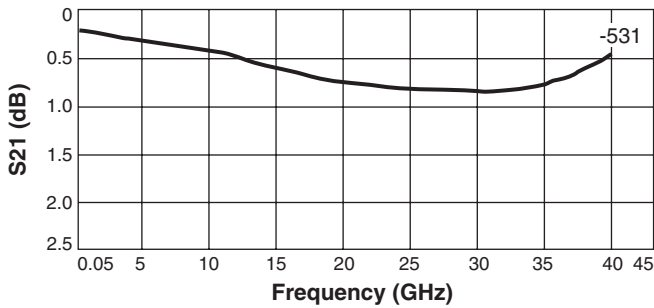
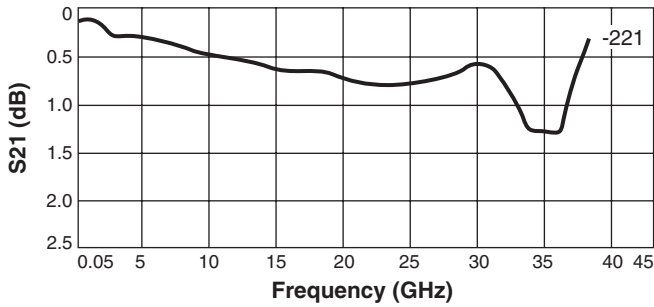
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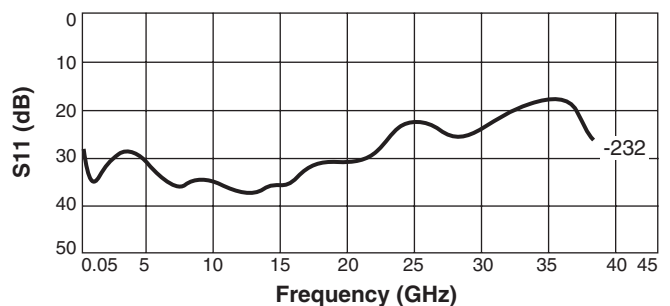
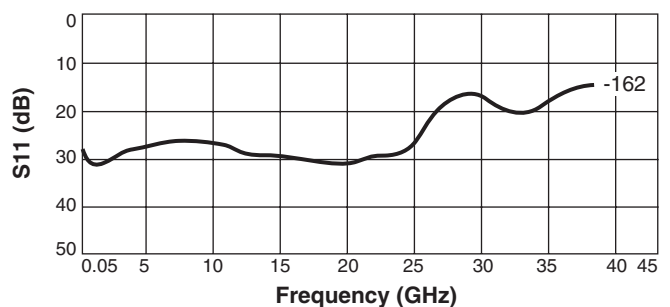
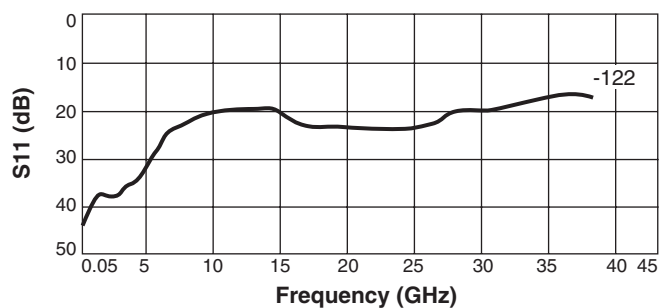
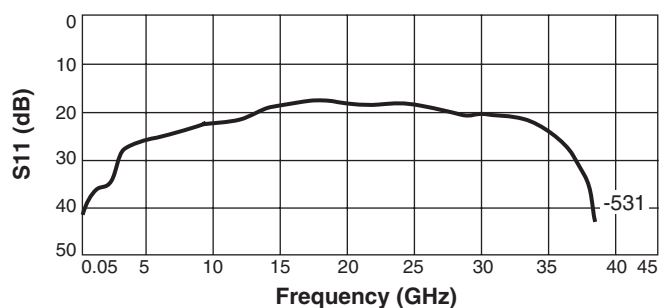
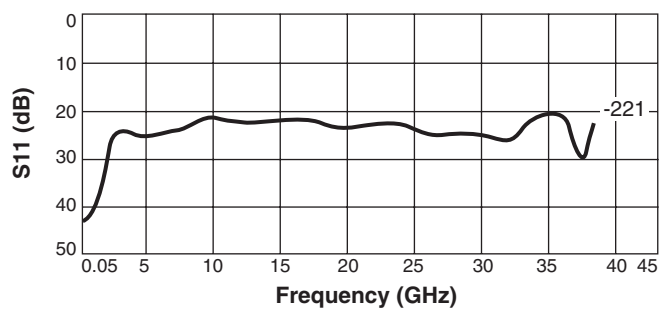


# SMT Broadband Conical Inductors

## Insertion Loss



## Return Loss



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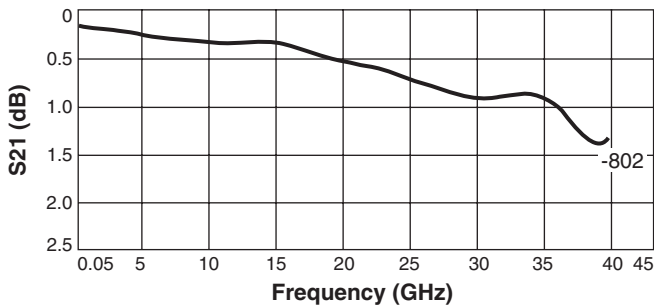
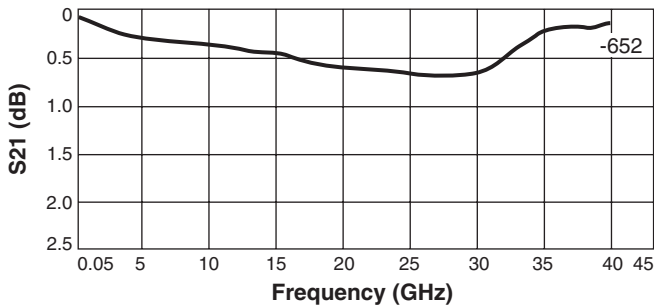
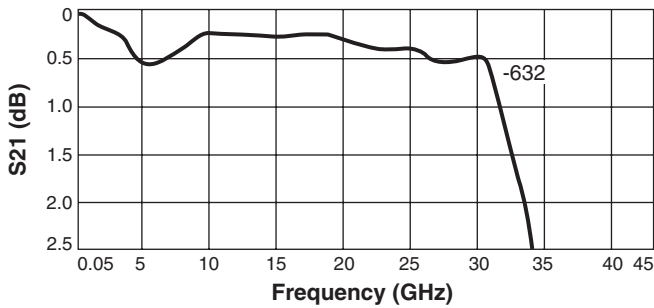
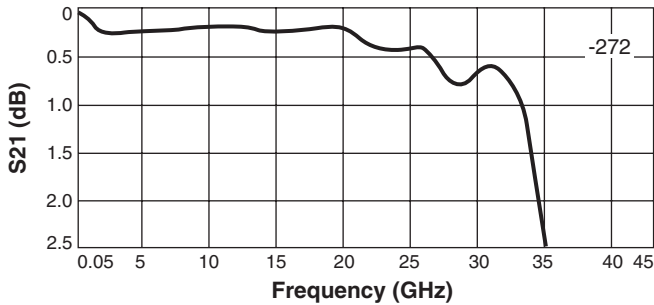
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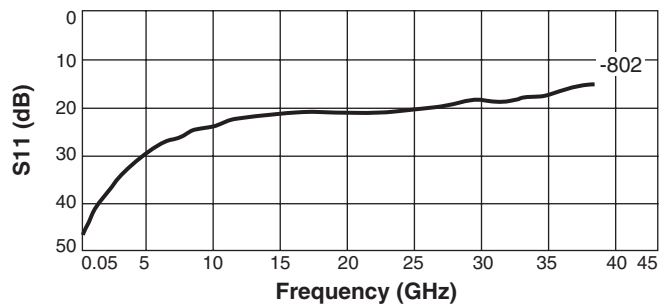
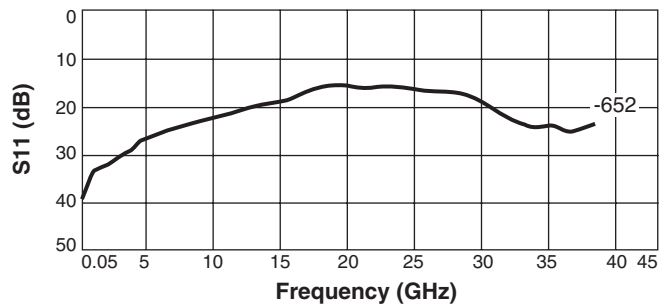
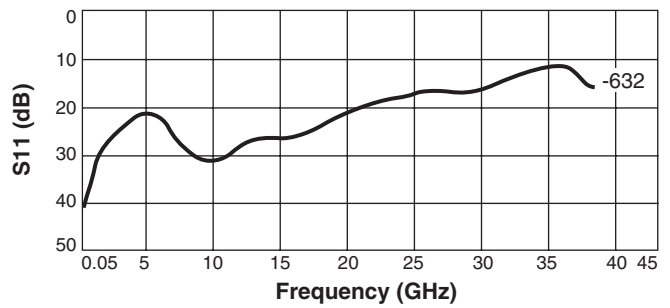
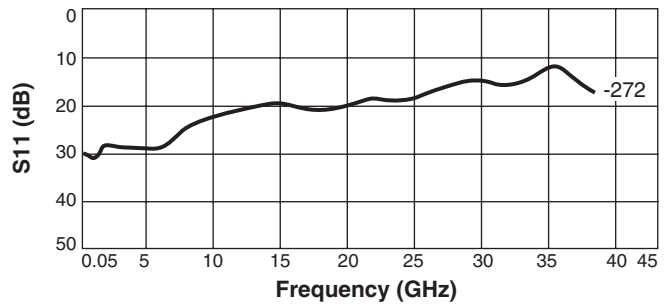


# SMT Broadband Conical Inductors

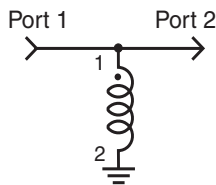
## Insertion Loss



## Return Loss



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



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