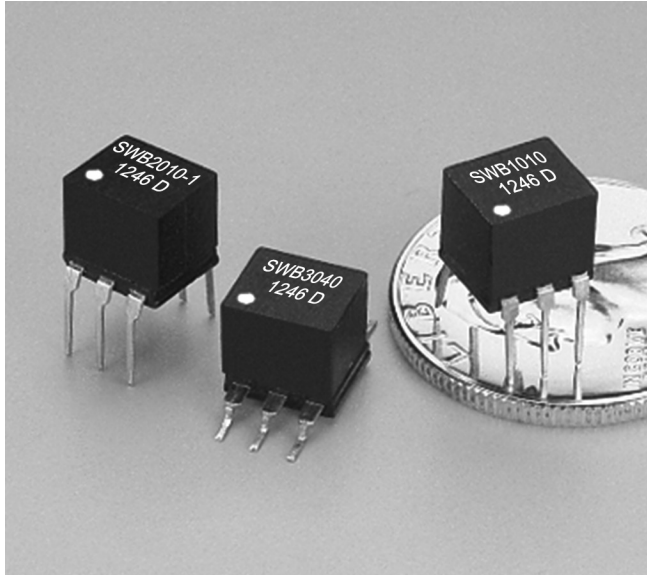




# Wideband RF Transformers – SWB



- [Surface mount](#) and [through hole](#) versions
- 500 Vrms, one minute interwinding isolation (hipot)
- 250 mA max current rating; 1/4 Watt RF input power
- For a smaller package size, see our PWB Series

**Core material** Ferrite

**Terminations** RoHS compliant matte tin over nickel over phos bronze. Other terminations available at additional cost.

**Weight** 0.37 – 0.39 g

**Ambient temperature** –40°C to +85°C

**Maximum part temperature** +85°C (ambient + temp rise)

**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)**

60 per billion hours / 16,666,667 hours, calculated per Telcordia SR-332

**Packaging** (SM version): 500 per 13" reel;

Plastic tape: 24 mm wide, 0.45 mm thick, 20 mm pocket spacing, 6.6 mm pocket depth; (TH version): 70 per tube

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

| Schematic | Part number   |                            | Impedance ratio <sup>2</sup> pri : sec | I <sub>DC</sub> max (mA) | Frequency (MHz) | Pins 1-3                |                | Pins 6-4                |                |
|-----------|---------------|----------------------------|--|--------------------------|-----------------|-------------------------|----------------|-------------------------|----------------|
|           | Through-hole  | Surface mount <sup>1</sup> |  |                          |                 | L min <sup>3</sup> (µH) | DCR max (Ohms) | L min <sup>3</sup> (µH) | DCR max (Ohms) |
|           | SWB1010-PCL   | SWB1010-SML_               | 1 : 1                                  | 250                      | 0.005-100       | 780                     | 0.320          | 780                     | 0.320          |
|           | SWB1010-1-PCL | SWB1010-1-SML_             | 1 : 1                                  | 250                      | 0.04-175        | 95                      | 0.200          | 95                      | 0.200          |
|           | SWB1015-PCL   | SWB1015-SML_               | 1.5 : 1                                | 250                      | 0.1-150         | 80                      | 0.145          | 51                      | 0.130          |
|           | SWB1040-PCL   | SWB1040-SML_               | 4 : 1                                  | 250                      | 0.2-300         | 95                      | 0.160          | 25                      | 0.115          |
|           | SWB2010-PCL   | SWB2010-SML_               | 1 : 1                                  | 250                      | 0.005-100       | 780                     | 0.320          | 780                     | 0.320          |
|           | SWB2010-1-PCL | SWB2010-1-SML_             | 1 : 1                                  | 250                      | 0.04-175        | 95                      | 0.200          | 95                      | 0.200          |
|           | SWB2040-PCL   | SWB2040-SML_               | 4 : 1                                  | 250                      | 0.2-300         | 95                      | 0.160          | 25                      | 0.115          |
|           | SWB3010-PCL   | SWB3010-SML_               | 1 : 1                                  | 250                      | 0.005-100       | 780                     | 0.320          | 780                     | 0.320          |
|           | SWB3010-PCL   | SWB3010-SML_               | 1 : 1                                  | 250                      | 0.005-100       | 780                     | 0.320          | 780                     | 0.320          |
|           | SWB3010-1-PCL | SWB3010-1-SML_             | 1 : 1                                  | 250                      | 0.04-175        | 95                      | 0.200          | 95                      | 0.200          |
|           | SWB3015-PCL   | SWB3015-SML_               | 1.5 : 1                                | 250                      | 0.1-150         | 80                      | 0.145          | 51                      | 0.130          |
|           | SWB3040-PCL   | SWB3040-SML_               | 4 : 1                                  | 250                      | 0.2-300         | 95                      | 0.160          | 25                      | 0.115          |

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

**SWB3040-SMLD**

**Packaging:** **D** = 13" machine ready reel. EIA-481 embossed plastic tape (500 parts per full reel). 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 D.

2. Impedance ratio is for the full primary winding to the full secondary winding.

3. Inductance tested at 130 kHz, 0.1 Vrms, 0 Adc.

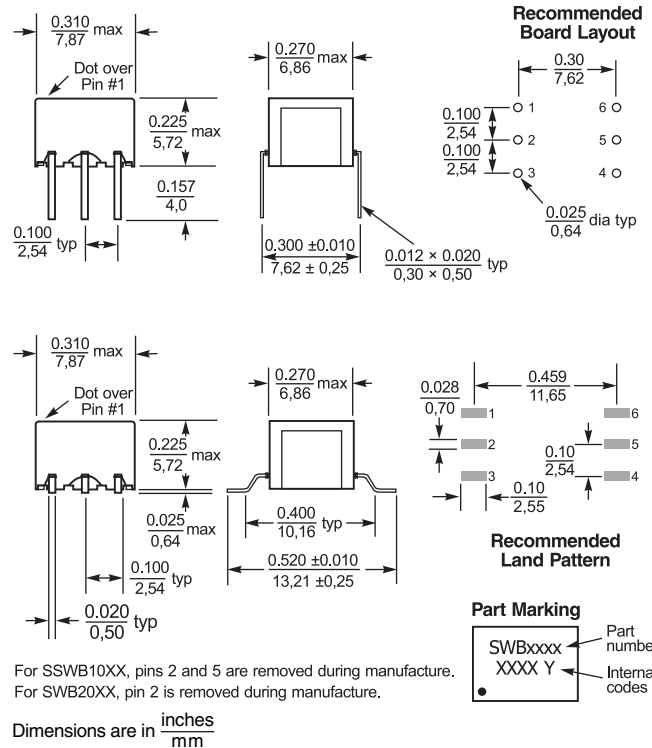
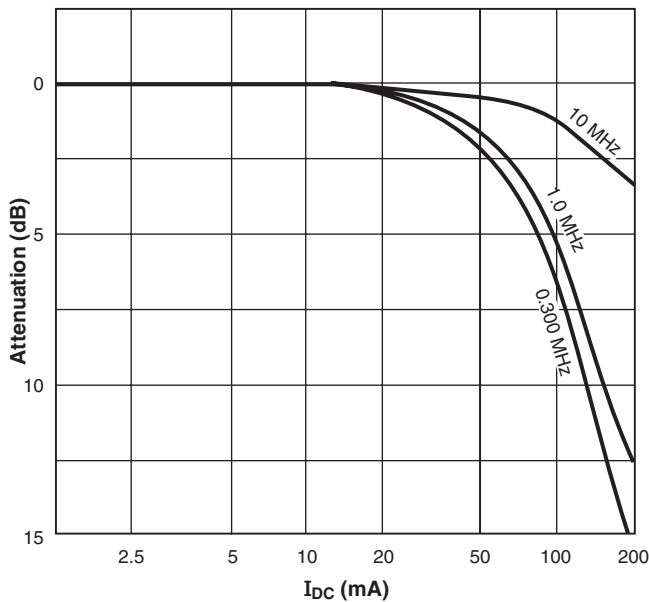
4. Electrical specifications at 25°C. Measurements are referenced to 50 Ohms.

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



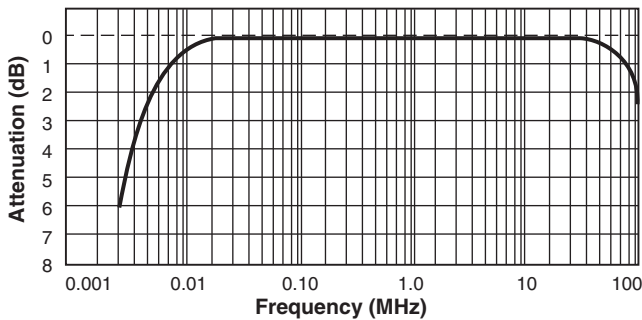
# Wideband RF Transformers – SWB

## Typical Attenuation vs Current

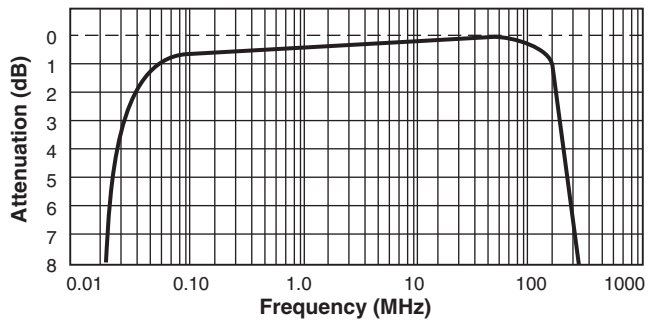


## Typical Frequency Response

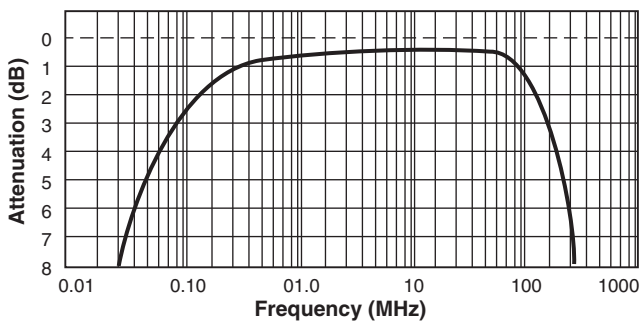
SWB1010, SWB2010, SWB3010  
3 dB bandwidth 0.005 – 100 MHz



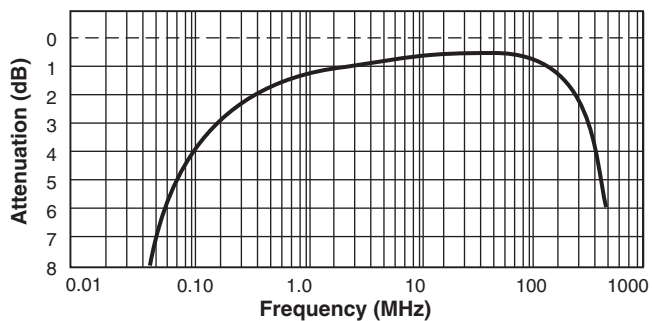
SWB1010-1, SWB2010-1, SWB3010-1  
3 dB bandwidth 0.04 – 175 MHz



SWB1015, SWB3015  
3 dB bandwidth 0.1 – 150 MHz



SWB1040, SWB2040, SWB3040  
3 dB bandwidth 0.2 – 300 MHz



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



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