

# HOMELAN MAGNETICS

## 10Mbps Filter Modules



LM00100

- Designed to work with Broadcom BCM4210
- UL/IEC950 approved, supplementary insulation, file number E150991
- Operating temperature -40° to +85° C
- Designed to withstand 225° C peak IR reflow temperature
- Minimum interwinding breakdown voltage of 1500 Vrms
- Optimized low frequency impedance

### ELECTRICAL SPECIFICATIONS AT 25° C

| Part Number  | Turns Ratio       |                   | Insertion Loss             | Cut-off Frequency MHz |            | Return Loss dB min | Attenuation dB min |        |        | Common to Differential Mode Rejection dB min |
|--------------|-------------------|-------------------|----------------------------|-----------------------|------------|--------------------|--------------------|--------|--------|----------------------------------------------|
|              | TX<br>1-3 : 20-18 | RX<br>5-7 : 20-18 | 4.25MHz to 9.75MHz         | Lower Band            | Upper Band | 4.75MHz to 9.25MHz | @1.1MHz            | @22MHz | @54MHz | 200kHz to 22MHz                              |
| S556-5000-14 | 0.667 : 1         | 2 : 1             | -1.0 dB min<br>-2.2 dB max | 4.25                  | 9.75       | -12                | -60                | -35    | -60    | -40                                          |
| S556-5000-15 | 0.667 : 1         | 2 : 1             | -1.0 dB min<br>-2.2 dB max | 4.25                  | 9.75       | -12                | -60                | -35    | -60    | -40                                          |

### INPUT IMPEDANCE

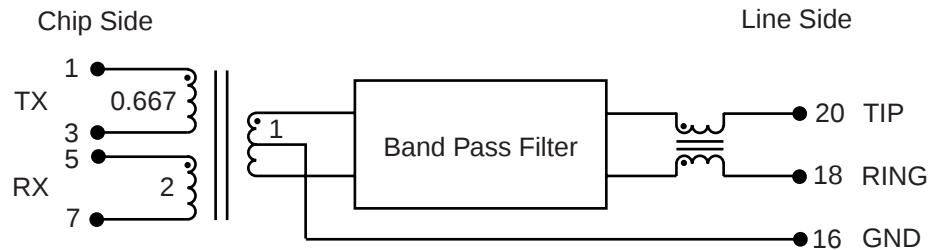
| Frequency Range kHz | Minimum Impedance $\Omega$ |
|---------------------|----------------------------|
| 0 < f <= 0.285      | 1M                         |
| 0.285 < f <= 2.85   | 100k                       |
| 2.85 < f <= 28.5    | 10k                        |
| 28.5 < f <= 95      | 8.9k                       |
| 95 < f <= 190       | 4.0k                       |
| 190 < f <= 285      | 3.0k                       |
| 285 < f <= 380      | 2.0k                       |
| 380 < f <= 475      | 1.6k                       |
| 475 < f <= 570      | 1.4k                       |
| 570 < f <= 665      | 1.2k                       |
| 665 < f <= 760      | 1.0k                       |
| 760 < f <= 855      | 950                        |
| 855 < f <= 950      | 850                        |
| 950 < f <= 1000     | 800                        |

| Frequency Range kHz | Minimum Impedance $\Omega$ |
|---------------------|----------------------------|
| 1000 < f <= 1400    | 500                        |
| 1400 < f <= 2300    | 280                        |
| 2300 < f <= 2850    | 50                         |
| 2850 < f <= 3085    | 25                         |
| 3085 < f <= 3725    | 10                         |
| 3725 < f <= 3935    | 25                         |
| 3935 < f <= 4000    | 50                         |
| 10000 < f <= 10450  | 40                         |
| 10450 < f <= 10925  | 25                         |
| 10925 < f <= 13125  | 10                         |
| 13125 < f <= 14175  | 25                         |
| 14175 < f <= 16800  | 50                         |
| 16800 < f <= 21000  | 100                        |
| 21000 < f <= 30000  | 50                         |

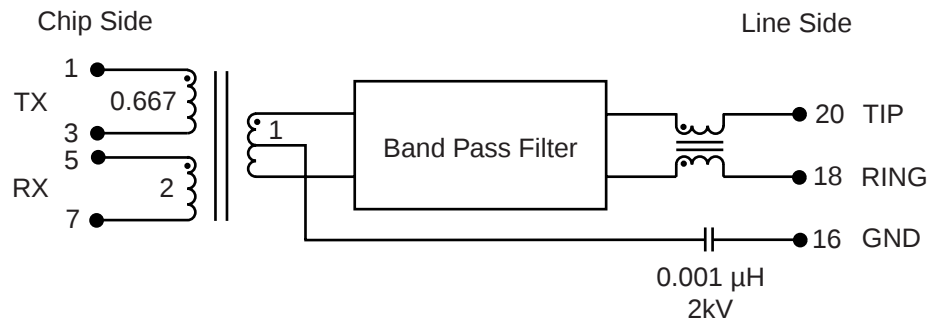
LM00100

### SCHEMATICS

S556-5000-14

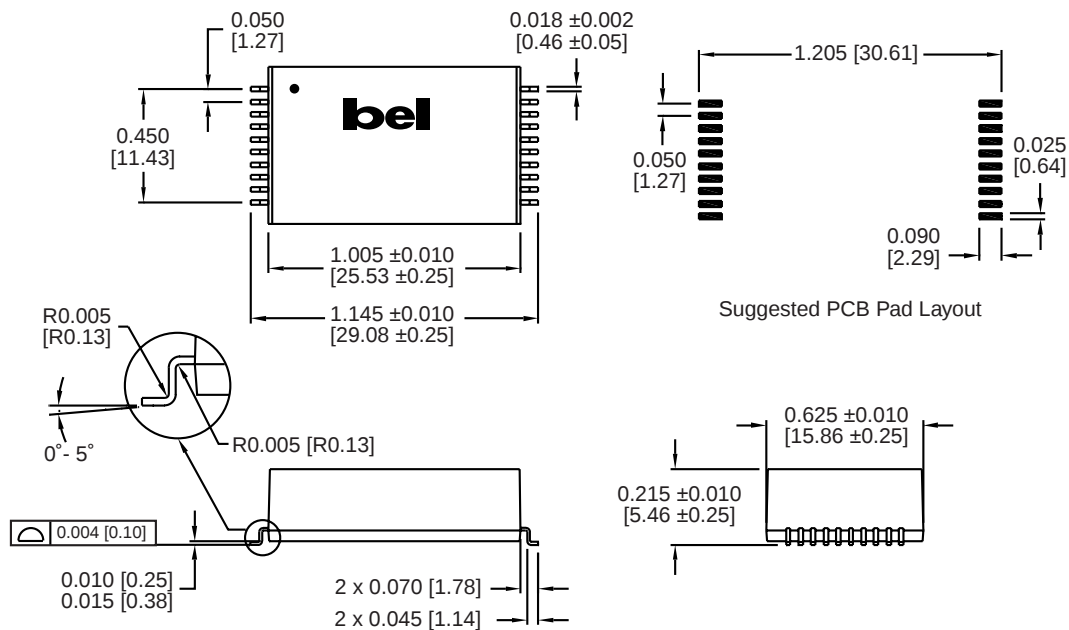


S556-5000-15



### MECHANICAL

S556-5000-14  
S556-5000-15



Dimensions are in inches [millimeters].  
Standard dimension tolerance is  $\pm$ 0.005 [0.13] unless otherwise noted.

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