# CPE Splitter with EMI Suppression

Model CPE-01V-EMI

| NAME | ORDER NUMBER |
| --- | --- |
| CPE-01V-EMI | SA-2214-0001 |

The CPE-01V-EMI is a low-pass filter designed to enable POTS service to coexist with ADSL2+ and VDSL2 data signals up to 30MHz and has the added benefit of a built in Common Mode EMI Filter. As networks speed up and the microfilters typically used for xDSL connectivity hit their limitations, carriers need alternative, high-bandwidth CPE solutions that take them to their preferred demarcation point.

Differential signaling is used in telecommunication utilizing twisted pairs. One of the main advantages of differential signaling is increased resistance to electromagnetic noise which is achieved only if twisted pairs are well balanced. Both Tip and Ring receive interfering signals with the same amplitude and phase. Due to the fact that twisted pairs are transferring signals in differential mode (signal on Tip minus single on Ring), the perfect balance will result in any couple signals on tip and ring being cancelled.

In the real word, twisted pairs are not perfectly balanced and as a result, interfering signals on Tip and Ring are not the same in amplitude and phase. Coupled signals on Tip and Ring will not be cancelled. The Common Mode EMI Filter provides insertion loss of 30dB of couple signals (Electromagnetic interference signals) without adversely affecting the DSL signal (differential mode). This helps to reduce the effect of EMI on DSL signals.

## BENEFITS

- Insulation displacement connectors for quick connect, or Optional RJ11
- Small insertion loss in differential mode, typically less than 0.25dB
- High Common Mode Insertion Loss, typically higher than 30dB
- Secondary lightning/surge suppression
- Compliant to Telcordia and CSA/UL Standards

## SPECIFICATIONS

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| **DIMENSIONS** | 53mm(H) x 98mm(W) x 13mm(D) (2” x 3 7/8” x 1/2”) |
| **MOUNTING** | Wall mount (accepts two #8 or #10 wood screws) |
| **OPERATING TEMPERATURE** | -40 to +65 °C<br>-40 to +149 °F |
| **WEIGHT** | 70g (0.15lbs) |
| **CAPACITY** | 1 Subscriber loop per line unit |
| **COMMUNICATIONS INTERFACE** | Connects to xDSL, POTS service, and local Loop using either RJ-11 connectors or Gel-filled Insulation Displacement Connectors (22AWG, 24AWG or 26AWG solid conductor type) |

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