Negative Battery Voltage SLIC Protection

**ITU-T Solution**

**Objective**

The SLIC (Subscriber Line Interface Circuit) provides all the BORSCHT functions such as battery, ringing and supervision between the codec and telephone handset. This PortNote® solution discusses negative battery voltage solutions against surge and power contact threats.

**Solution**

1 TBU® High-Speed Protector: TBU-PL085-200-WH
2 MOV Devices: MOV-10D391K

**Compliance**

- $230 \ V_{\text{rms}}$, 23 A, 900 seconds withstand.
- $600 \ V_{\text{rms}}$, 1 A, 0.2 seconds withstand.
- Increased surge withstand to $4 \ kV$ $10/700 \ \mu s$ without a primary protector.

**Alternate Recommendations**

Other PortNote® Solutions:
- Dual Supply Voltage SLIC Protection - ITU-T Solution
- Negative Battery Voltage SLIC Protection - GR-1089-CORE Intra-building Solution
- SLIC Protection - GR-1089-CORE Intra-building Solution

**Benefit**

This solution provides a high level of protection in a small PCB area.

*Note: The VE950 series (e.g. Le9500, Le9520, Le9530, Le9540) require a 200 mA $I_{\text{trigger}}$ TBU® High-Speed Protector for normal operation. All other SLICs may use 100 mA $I_{\text{trigger}}$ TBU® HSP devices.

**Design Kit**

PN-DESIGNKIT-42