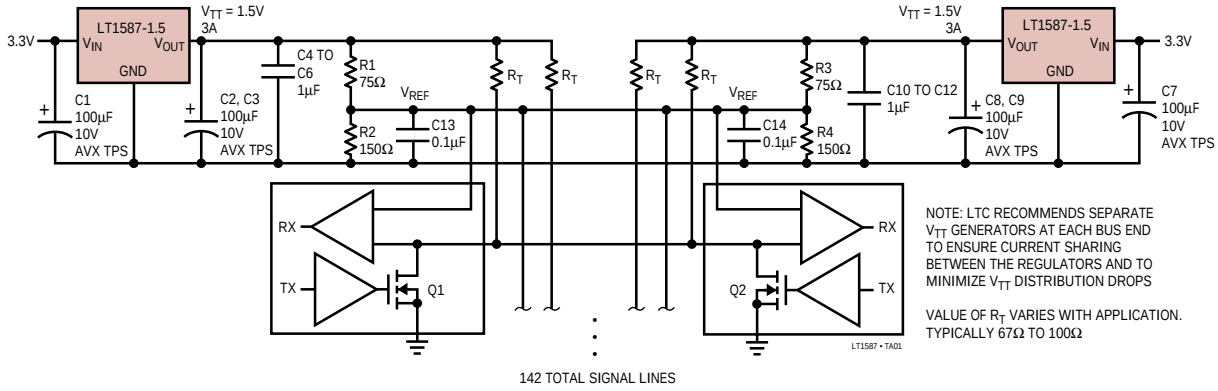
Termination Supply for High Speed Long GTL+ Bus

The dual LT1587-1.5 circuit below provides the active GTL+ termination required supply with a maximum current capacity of 6A. One regulator is placed at each end of the GTL bus. To minimize resistive losses and inductance, the ground and supply traces should be as wide as possible, with 1cm a minimum width. The regulator outputs are not tied together. This is because the internal reference voltage tolerance of each regulator results in slightly different output voltages. If both outputs were tied to a common power plane, the regulator with the higher output voltage will supply 100% of the load up to the point where it current limits. Only after that will the second regulator begin to take its share of the load. The termination resistors are equally split between the two regulators so each will take on half of the load current. Resistor dividers R1/R2 and R3/R4 are connected together at their midpoints to form a supply-balanced switching threshold approximately 1V. This circuit provides 1.50V ±30mV bus voltage with 120mV of transient response headroom. The LT1587-1.5 is available in 3-lead TO-220 and 3-lead surface-mount DD packages in the commercial (0°C to 100°C) temperature range.



Source: LT1587-1.5 Data Sheet
www.linear-tech.com/desktop.html