FAULT TOLERANT ACTIVE CURRENT SHARING

ABSTRACT

A system and method for maintaining a balanced current level among multiple power supply modules (404, 404) within a parallel power supply (401) is disclosed. An external voltage is applied to an internal reference translator circuit (406, 408) within each of the parallel power supply modules (402, 404), such that an internal current-sharing voltage reference is generated within each power supply module (402. 408). An external reference translator circuit (407) is biased by an independent voltage level, such that the external reference translator circuit (407) generates an external current-sharing voltage refernce that acts as a master for the internal current-sharing voltage references. A current adjustment circuit in the power supply modules (402, 404) compares the internal current-sharing voltage reference with the master current share reference and generates a current adjustment signal in response to a voltage differential, such that load-sharing is provided among the parallel power supply modules (402, 404).

Fig. 4