

# S3056

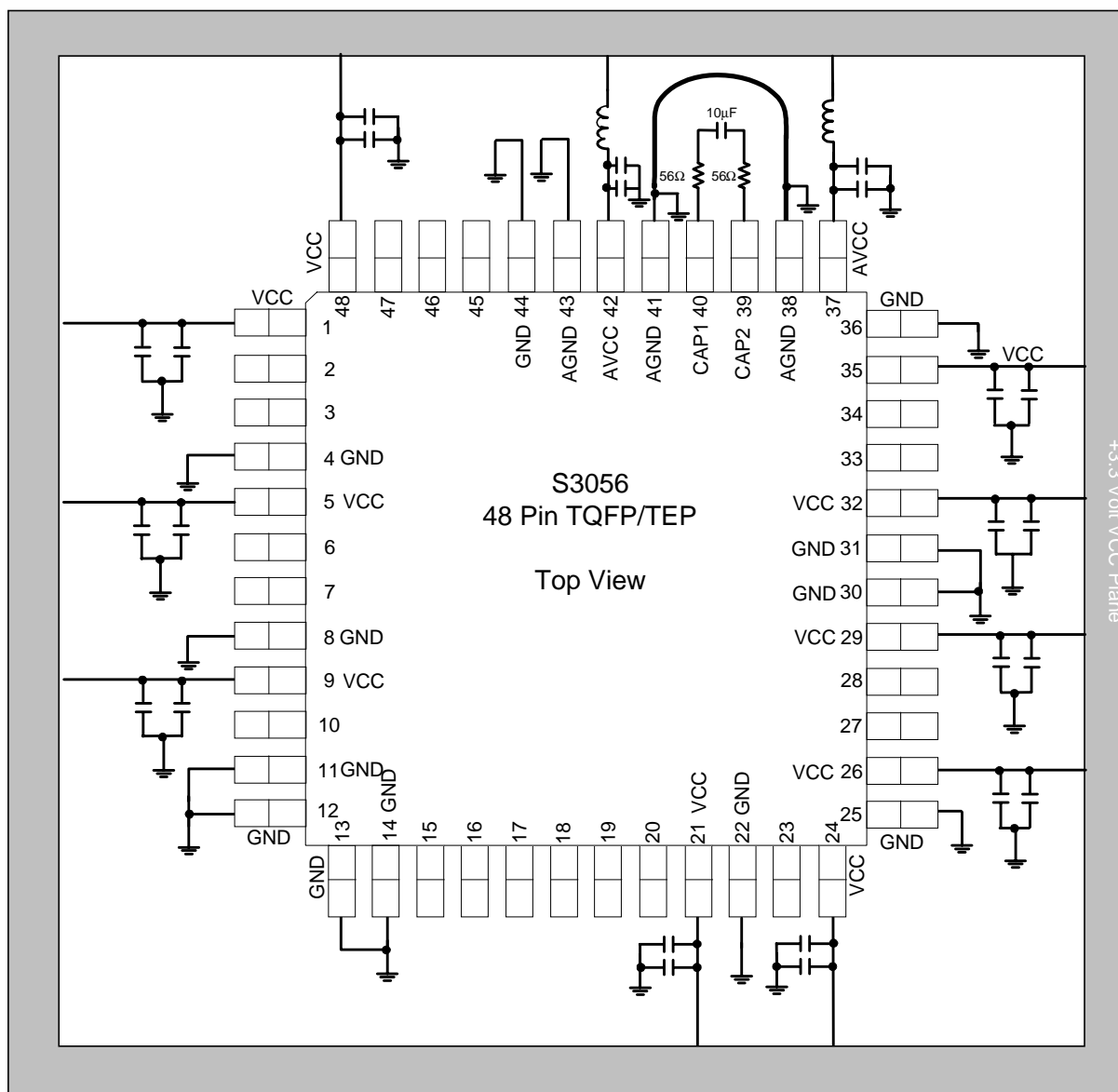
## PRELIMINARY APPLICATION NOTE

### Board Decoupling Guidelines

#### MULTI-RATE SONET/SDH/CLOCK RECOVERY UNIT

The S3056 supports clock recovery for the OC-48, OC-24, Gigabit Ethernet, OC-12, or OC-3 data rates. The CAP1/CAP2 capacitor should be 10  $\mu$ F in series with 56  $\Omega$  resistors. Figure 1 illustrates the connections for the S3056 device. The ground ring is shown around the loop filter capacitor. The ring should be attached to pin 38 and pin 41. Please note that the ring should be directly connected to the ground plane as close as possible to pin 41 to avoid current through the ground ring. The values of the decoupling components are 0.1  $\mu$ F paralleled with 100 pF, X7R dielectric, EIA sizes 0603 or 0805. Ferrite Bead Inductors are Murata BLM31B601S, BLM11B601SPB, or equivalent. All grounds must be tied directly to the ground plane. (Note: Do not daisy chain grounds together.) AGND should be tied to ground directly.

Figure 1.





***Applied Micro Circuits Corporation***  
***6290 Sequence Dr., San Diego, CA 92121***

***Phone: (858) 450-9333 — (800) 755-2622 — Fax: (858) 450-9885***

***<http://www.amcc.com>***

AMCC reserves the right to make changes to its products or to discontinue any semiconductor product or service without notice, and advises its customers to obtain the latest version of relevant information to verify, before placing orders, that the information being relied on is current.

AMCC does not assume any liability arising out of the application or use of any product or circuit described herein, neither does it convey any license under its patent rights nor the rights of others.

AMCC reserves the right to ship devices of higher grade in place of those of lower grade.

AMCC SEMICONDUCTOR PRODUCTS ARE NOT DESIGNED, INTENDED, AUTHORIZED, OR WARRANTED TO BE SUITABLE FOR USE IN LIFE-SUPPORT APPLICATIONS, DEVICES OR SYSTEMS OR OTHER CRITICAL APPLICATIONS.

AMCC is a registered trademark of Applied Micro Circuits Corporation. Copyright © 2000 Applied Micro Circuits Corporation.

D186/R309