High Performance Bus Termination Network

Features

- Designed especially for High Performance computers/servers
- Provides high speed bus termination
- Reduces ground bounce with ground pin placement / Ultra low crosstalk
- Terminates 20 lines in a QSOP package

Applications

- High Performance servers
- High Performance desk top systems
- GTL, NTL, ECL terminator

Product Description

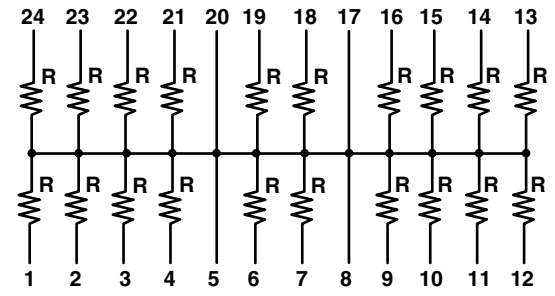
High speed microprocessors demand unique, high speed bus termination. The PACR4G Termination Network provides 20 terminations per package and meets the requirements for high speed terminations.

This Termination Network provides high performance, high reliability, and low cost through manufacturing efficiency. The termination resistor elements are fabricated using state-of-the-art thin film manufacturing.

This integrated solution is silicon-based and has the same reliability characteristics as any of today's microprocessor products. The thin film resistors have very high stability over temperature, over applied voltage and over life. In addition the QSOP industry standard packaging is easy to handle in manufacturing and yields a high reliability similar to other semiconductor components.

STANDARD SPECIFICATIONS	
Absolute Tolerance (R)	±1%
Operating Temperature Range	0°C to 70°C
Power Rating/Resistor	100mW
Storage Temperature	–65°C to 150°C
Package Power Rating	1.00w, Max
Crosstalk	<±2% typical

SCHEMATIC CONFIGURATION



STANDARD VALUES	
R (W)	Code
47	470
50	500
56	560
68	680
90	900

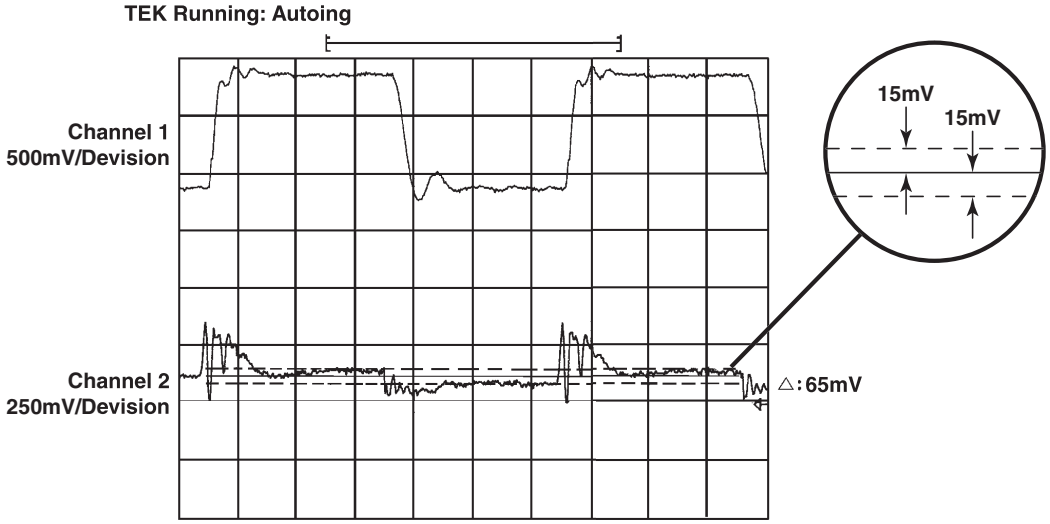
STANDARD PART ORDERING INFORMATION

	Package		Ordering Part Number		
R Code	Pins	Style	Tubes	Tape & Reel	Part Marking
470	24	QSOP	PAC470R4GQ/T	PAC470R4GQ/R	PAC470R4GQ
500	24	QSOP	PAC500R4GQ/T	PAC500R4GQ/R	PAC500R4GQ
560	24	QSOP	PAC560R4GQ/T	PAC560R4GQ/R	PAC560R4GQ
680	24	QSOP	PAC680R4GQ/T	PAC680R4GQ/R	PAC680R4GQ
900	24	QSOP	PAC680R4GQ/T	PAC680R4GQ/R	PAC680R4GQ

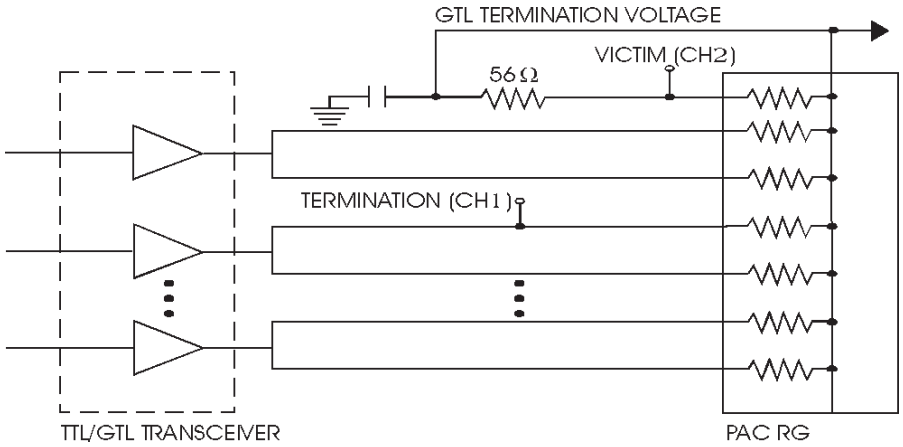
C0970500

Signal at Termination and Victim Line (TA = 25°C) (See Test Circuit)

Channel 1 (500mV/division) Termination Signal, Channel 2 (50mV/division) Victim Voltage. The victim voltage crosstalk measures 35mV in the critical areas around the system clock. The system clock occurs approximately 4ns before each data transition. The horizontal dashed lines are 35mV apart. The time scale is 5.0ns/division. (The signal voltage rise and fall times have been adjusted at the driver to conform to Intel specifications.) Measurements made using Tektronix TDS820 6 GHz Digitizing Oscilloscope with P6207 FET Probes.



Test Circuit Block Diagram



Test Circuit