VITESSE
Semiconductor Corporation

Product Brief

VSC8141

Features

- Multi-rate Transceiver for SONET OC-48, OC-24, OC-12, OC-3, and Gigabit Ethernet Rates.
- 16-bit LVPECL Low Speed Interface
- On-chip PLL Based Clock Generator
- High-Speed Clock Out Power Down Option
- Parity at the Transmit and Receive Interfaces
- Equipment, Facility and Split Looback Modes

- Loss of Signal (LOS) Detect Input
- Meets Bellcore Jitter Performance Specifications
- Single 3.3V Power Supply
- 2.1 W Max (1.5 W Typ) Power Dissipation
- 128-pin PQFP 14x20x2mm or 208-pin TBGA 23 x 23 x 1.55mm

General Description and Block Diagram

The VSC8141 is a SONET/SDH compatible 3.3V multi-rate transceiver with integrated clock generator for use in SONET/SDH systems operating at OC-48, OC-24, OC-12, OC-3, or Gigabit Ethernet data rates. The internal clock generator uses a phase locked loop (PLL) to multiply either a 77.76MHz or 155.52MHz reference clock for internal logic and output retiming. The 16-bit parallel LVPECL interface incorporates an on-board FIFO to address loop timing design issues. Facility and Equipment Loopbacks can be configured separately or simultaneously. The VSC8141 support 3.3V operation with 2.1 Watts maximum power (1.5 Watts Typical) and is packaged in a thermally enhanced 128-pin PQFP or 208-pin TBGA package.
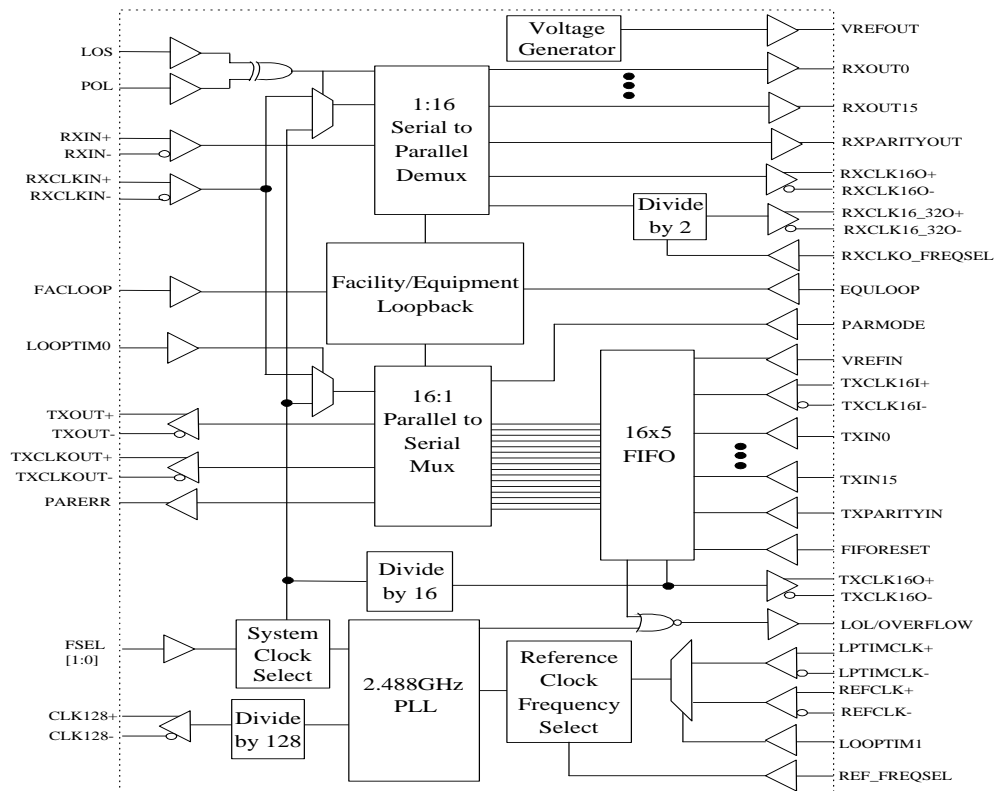
Ordering Information

The order number for this product is formed by a combination of the device number and package type.

VSC8141   xx

Part Number
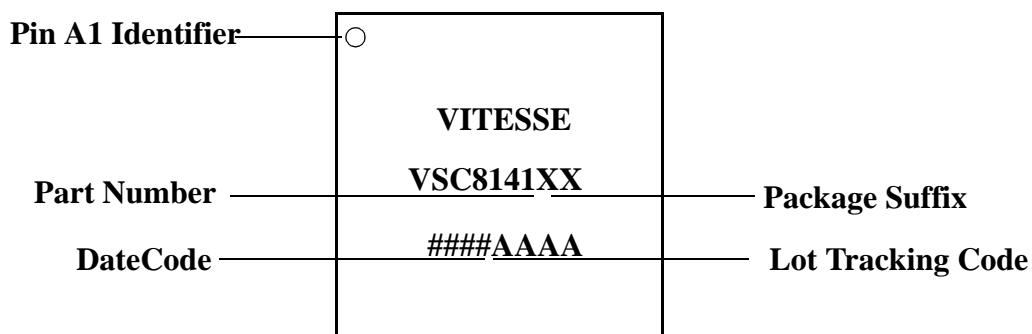VSC8141 - Multi-Rate SONET/SDH Transceiver

Package Suffix
QR = 128 PQFP 14x20mm
TW = 208BGA 23x23mm

Marking Information

The package is marked with three lines of text as shown below.

Figure 1: Package Marking Information

Pin A1 Identifier

VITESSE

Part Number — VSC8141XX — Package Suffix

DateCode — ####AAAA — Lot Tracking Code

Notice

This document contains preliminary information about a new product in the preproduction phase of development. The information in this document is based on initial product characterization. Vitesse reserves the right to alter specifications, features, capabilities, functions, manufacturing release dates, and even general availability of the product at any time. The reader is cautioned to confirm this datasheet is current prior to using it for design.

Warning

Vitesse Semiconductor Corporation's product are not intended for use in life support appliances, devices or systems. Use of a Vitesse product in such applications without written consent is prohibited.

Contact Information

To obtain device samples, eval-boards, application notes, or detailed techniclal product data sheets on the above product, please email prodinfo@vitesse.com.