

Features

- **Next Generation ZL880 VoicePort Family with Enhanced Features and Performance**
 - Low BOM cost shared power supplies
 - Optional low BOM cost shared protection circuitry
 - Same API interface as the VE880 Series
- **Complete BORSCHT Functions for Two FXS Channels in a Single 64-Pin 9x9 QFN Package**
- **Choice of Low cost, Energy Efficient Switching Regulator Architectures**
 - Patent-pending Shared Buck-Boost Automatic Battery Switching (BBABS)
 - Shared Tracking Battery (STB)
- **Integrated Power Management**
 - STB switching regulator tracks line voltage minimizing active power dissipation
 - Low Power Idle Mode
 - Integrated real-time power monitoring tool
- **Ringing**
 - 50 V_{RMS} open circuit with 5 REN load (BBABS)
 - 60 V_{RMS} open circuit with 3 REN load (STB)
 - Adaptive ringing for power management
- **Worldwide Programmability**
 - Narrowband or Wideband mode
 - Input impedance, balance impedance, gain
 - DC feed voltage and current limit
 - Ringing frequency, voltage and current limit
 - G.711 μ -law, A-law, or 16-bit linear coding
 - Call progress tone and Caller ID generation
 - Sample coefficients for more than 50 countries
- **Pin-Selectable PCM/MPI or ZSI Interfaces**
 - MPI Mode with support for SPI Mode 3 and no inter byte chip select off time
 - ZSI Mode for a smaller number of interface signals to the host and less expensive isolation
- **VoicePath™ SDK and VP-API-II Software Available to Implement FXS Functions**
- **VeriVoice™ Software Suites Available for Manufacturing and Subscriber Loop Testing**
 - Utilizes integrated test tool box

Document ID#: 145681

Version 3

October 2013

Ordering Information

Device OPN ⁽¹⁾	Device Type	Package	Packing
ZL88801LDF1	100V-Tracker	64-pin QFN (9x9)	Tape & Reel
ZL88801LDG1	100V-Tracker	64-pin QFN (9x9)	Tray

1. The Green package meets RoHS Directive 2002/95/EC of the European Council to minimize the environmental impact of electrical equipment.

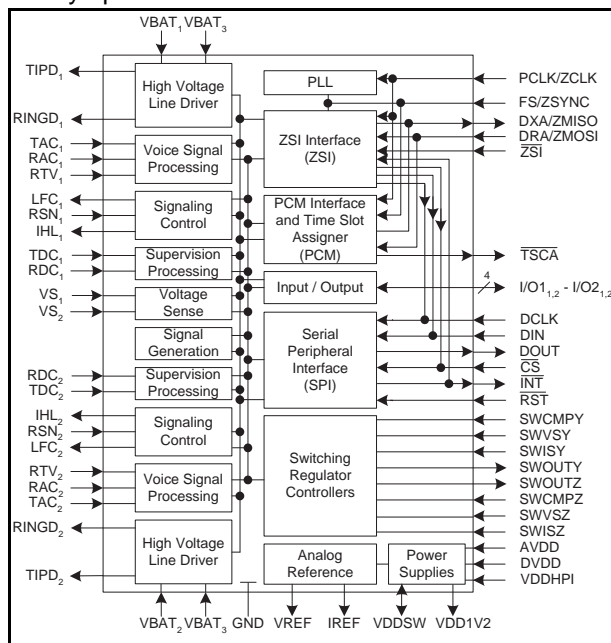
Applications

- **DSL Residential Gateways and Integrated Access Devices (IADs)**
- **PON Single Family Units (SFUs)**

Description

The Microsemi® ZL88801 Dual Channel Shared Battery Wideband VoicePort Device provides complete BORSCHT functions for two telephone line FXS ports. This device is a part of the new *ZL880 Series* featuring enhanced functionality, lower BOM cost, and greater power efficiency. The *ZL880 Series* maintains software compatibility with the industry leading *VE880 Series*.

The ZL88801 uses energy efficient shared power supply topologies for reduced BOM cost. The ZL88801 can be configured for patent-pending inverting Buck-Boost Automatic Battery Switching or Shared Tracking Battery operation.



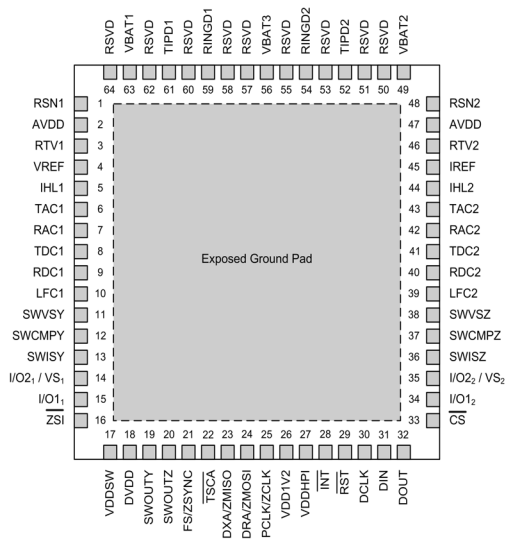
ZL88801 Device Block Diagram

Selected Electrical Specifications

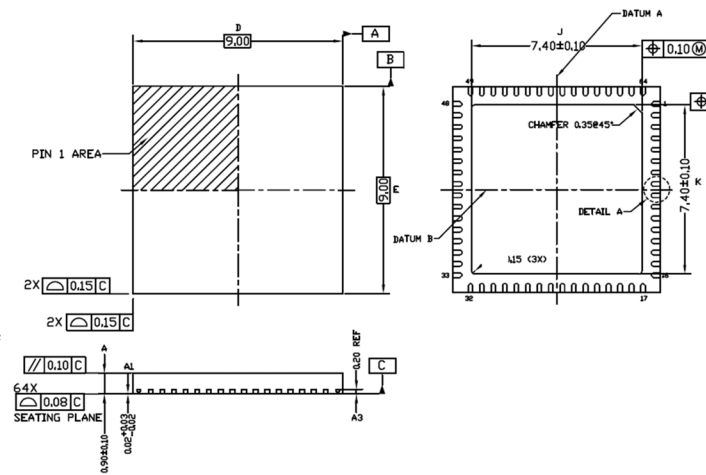
Description	Symbol	Switching Regulator / Test Condition	Min.	Typ.	Max.	Unit
Ambient Temperature, under Bias	T_A	BBABS operation STB operation	-40 0		+85 +45	$^{\circ}\text{C}$
Digital and Analog Supply Voltages	DVDD,AVDD		3.135	3.3	3.465	V_{DC}
Host Port Interface Supply Voltage	VDDHPI		1.71	3.3	DVDD	V_{DC}
High Battery Voltage	VBAT	BBABS operation, $V_{SW} = +12\text{ V}$ STB operation	-60 -12		-90 -105	V_{DC}
Line Current	I_{LA}	BBABS operation STB operation	18 18	20	30 25	mA
Ringing Voltage	V_{RING}	BBABS operation / 5 REN STB operation / 3 REN			50 60	V_{RMS}
Two-Wire Return Loss	R_L	200 to 3400 Hz		30		dB
Longitudinal Balance		1 kHz		58		dB
Maximum Device Power Dissipation Capability	$P_{D(max)}$	Continuous		2.1		W
Junction to Ambient Thermal Resistance	θ_{JA}			26		$^{\circ}\text{C/W}$

Device Power Consumption	Symbol	Test Conditions	BBABS	STB	Power	Unit
Shutdown	P_D	Switcher off	5	5	Per Channel	mW
Disconnect			25	–		
Low Power Idle Mode (LPIM)		On-Hook	47	39		
Idle		On-Hook	99	–		
Active		Off-Hook, 300 Ω , $I_{LA} = 25\text{ mA}$	520	470		
1 line LPIM, 1 line Ringing		BBABS: 50 V_{RMS} , 5 REN STB: 60 V_{RMS} , 3 REN	839	952	Both Channels	

Device Pinout



Package Drawings



Related Collateral

- ZL88801 Dual Channel Shared Battery Wideband VoicePort Device - ZL880 Series Data Sheet, Document ID# 146161
- ZL880 VP-API-II Reference Guide, Document ID# 143271

Looking for pricing, stock, or lifecycle information?

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