

Features

- **Next Generation ZL880 VoicePort Family with Enhanced Features and Performance**
 - Same API interface as the *VE880 Series*
 - Lowest Bill of Materials (BOM) cost for 2 to 8 channel applications
- **Complete BORSCHT Functions for Two FXS Channels in a Single 64-Pin 9x9 QFN Package**
 - Battery feed, Over-voltage support, integrated Ringing, line Supervision, Codec, Hybrid (2W/4W), and Test
- **Integrated Power Management**
 - Single power supply using integrated battery switches for lowest BOM cost
 - Low Power Idle Mode with 60 mW consumption
 - Internal FET drive circuit for lower BOM count
 - Integrated real-time power monitoring tool
- **Ringing**
 - 5 REN with pin for pin compatible 100-V (ZL88601) and 120-V (ZL88602) devices
 - Internally generated sinusoidal or trapezoidal ringing with programmable DC offset
- **Worldwide Programmability**
 - 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 70 countries
- **Pin-Selectable PCM/MPI or ZSI Interfaces**
 - SPI Mode 0 and 3 support and no inter byte $\overline{CS}$ off time. Also supports legacy MPI Interface.
 - 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

142176

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Ordering Information

Device OPN ¹	Device Type	Package	Packing
ZL88601LDF1	100V-ABS	64-pin QFN (9x9)	Tape & Reel
ZL88601LDG1	100V-ABS	64-pin QFN (9x9)	Tray
ZL88602LDF1	120V-ABS	64-pin QFN (9x9)	Tape & Reel
ZL88602LDG1	120V-ABS	64-pin QFN (9x9)	Tray

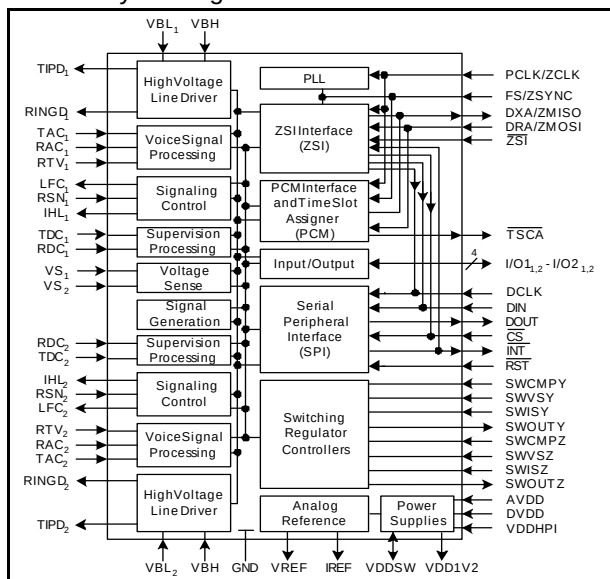
1. The Green package meets RoHS Directive 2002/95/EC of the European Council to minimize the environmental impact of electrical equipment.

Applications

- DSL Residential Gateways and Integrated Access Devices (IADs)
- Cable eMTAs
- PON Single Family Units (SFUs)
- Fiber to the Premise/Home/Building (FTTx) Multiple Dwelling Units (MDUs)

Description

The Microsemi® ZL88601/602 Dual Channel Wideband Automatic Battery Switching (ABS) VoicePort Device provides complete BORSCHT functions for two telephone line FXS ports. This device is part of the new *ZL880 Series* featuring enhanced functionality, lower BOM cost, and greater power efficiency, while maintaining software compatibility with the industry leading *VE880 Series*.



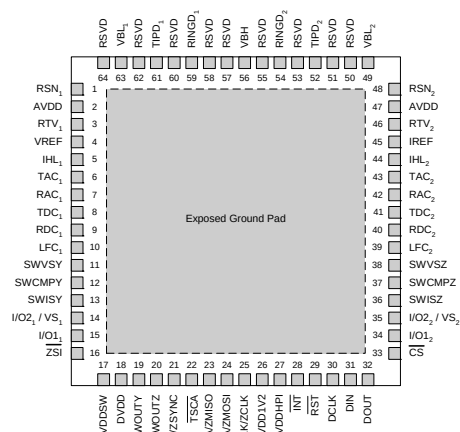
VoicePort Device Block Diagram

Selected Electrical Specifications

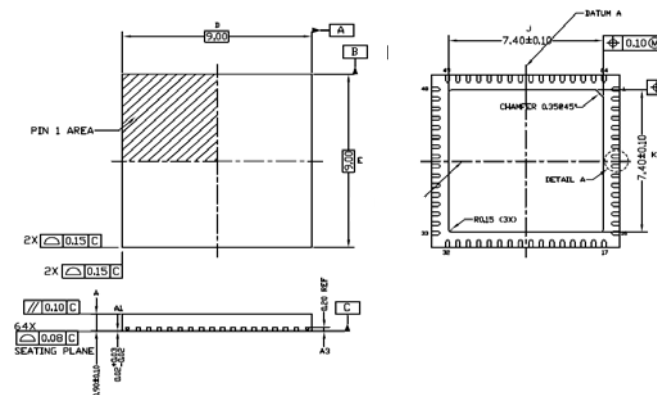
Description	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Ambient Temperature, under Bias	T_A		-40°C		+85	°C
Digital and Analog Supply Voltages	DVDD, AVDD		3.135	3.3	3.465	V_{DC}
Host Port Interface Supply Voltage	VDDHPI		1.71	3.3	DVDD	V_{DC}
High Battery Voltage						
For the ZL88601	VBH		-15	-81	-100	V_{DC}
For the ZL88602			-15	-105	-120	
Line Current	I_{LA}		18	25	45	mA
Ringing Voltage						
For the ZL88601	VRING	ABS Flyback, 5 REN			57	V_{RMS}
For the ZL88602					67	
Two-Wire Return Loss	R_L	200 to 3400 Hz		30		dB
Longitudinal Balance		1 kHz		58		dB
Device Power Consumption (Per Channel)	P_D	VBH = -81 V_{DC} , VBL = -27 V_{DC}				mW
Disconnect		Switcher on, no DC feed to line		31		
Low Power Idle (On-Hook)		Switcher on, limited feed to line		60		
Idle (On-Hook)		Normal feed to line		128		
Talk (Off-Hook)		300 Ω , I_{LA} = -25 mA, VBL feed		650		
Ringing		50 V_{RMS} into 3 REN		625		
Maximum Device Power Dissipation Capability, Continuous	$P_{D(max)}$	T_A = 85°C		2.1		W
Junction to Ambient Thermal Resistance	θ_{JA}			26		°C/W

Note: Refer to the ZL88601/602 Data Sheet for test circuits and additional details

Device Pinout



Package Drawings



Related Collateral

- ZL88601/602 Dual Channel Wideband Auto Battery Switching (ABS) VoicePort Device - ZL880 Series Data Sheet, Document ID# 141956
- ZL880 VP-API-II Reference Guide, Document ID#: 143271