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ZL88701/702 Dual Channel Tracking Battery Wideband VoicePort Device - ZL880 Series

Product Brief

Features

- Next Generation ZL880 VoicePort Family with Enhanced Features and Performance
 - Same API interface as the VE880 Series
 - 35% lower BOM cost than previous generation
- Complete BORSCHT Functions for Two FXS Channels in a Single 64-Pin QFN Package
 - Battery feed, Over-voltage support, integrated Ringing, line Supervision, Codec, Hybrid (2W/4W), and Test
- Integrated Power Management
 - Switching power supply tracks line voltage minimizing active and ringing power dissipation
 - Low Power Idle Mode with 45 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 (ZL88701) and 150-V (ZL88702) devices
 - Up to 140-V_{PK} internal sinusoidal or trapezoidal ringing with programmable DC offset
 - Adaptive ringing for lower power
- 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 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

142170	

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Ordering Information

Device OPN ¹	Device Type	Package	Packing				
ZL88701LDF1	100V-Tracker	64-pin QFN (9x9)	Tape & Reel				
ZL88702LDF1	150V-Tracker	64-pin QFN (9x9)	Tape & Reel				
ZL88/02LDG1	150V-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 equ	uipment.						

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[®] ZL88701/702 Dual Channel Tracking Battery Wideband 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.	Тур.	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}
Battery Voltages						
For the ZL88701	VDAT		-12	-90	-105	M
For the ZL88702	VDA1 _{1,2}	VBAI _{1,2}	-12	-130	-150	V _{DC}
Line Current	I _{LA}		18	26	49	mA
Ringing Voltage				I.		I
For the ZL88701	VRING	Flyback Switcher into 5 REN			65	V
For the ZL88702		(Tracking)			99 VRMS	
Two-Wire Return Loss	RL	200 to 3400 Hz		30		dB
Longitudinal Balance		1 kHz		58		dB
Device Power Consumption (Per Channel)						
Disconnect	– P _D	Switcher on, but no DC feed to line		23		
Low Power Idle (On-Hook)		$VBAT = -52 V_{DC}$		43		
ldle (On-Hook)			-	85		mvv
Talk (Off-Hook)		300 Ω, ILA = 25mA	-	435		
Ringing		65 V _{RMS} into 3 REN (Tracking)		480		
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 ZL88701/702 Data Sheet for test circuits and additional details

Device Pinout



Package Drawings



Related Collateral

- ZL88701/702 Dual Channel Tracking Battery Wideband VoicePort Device ZL880 Series Data Sheet, Document ID# 141606
- ZL880 VP-API-II Reference Guide, Document ID#: 143271