

### Description

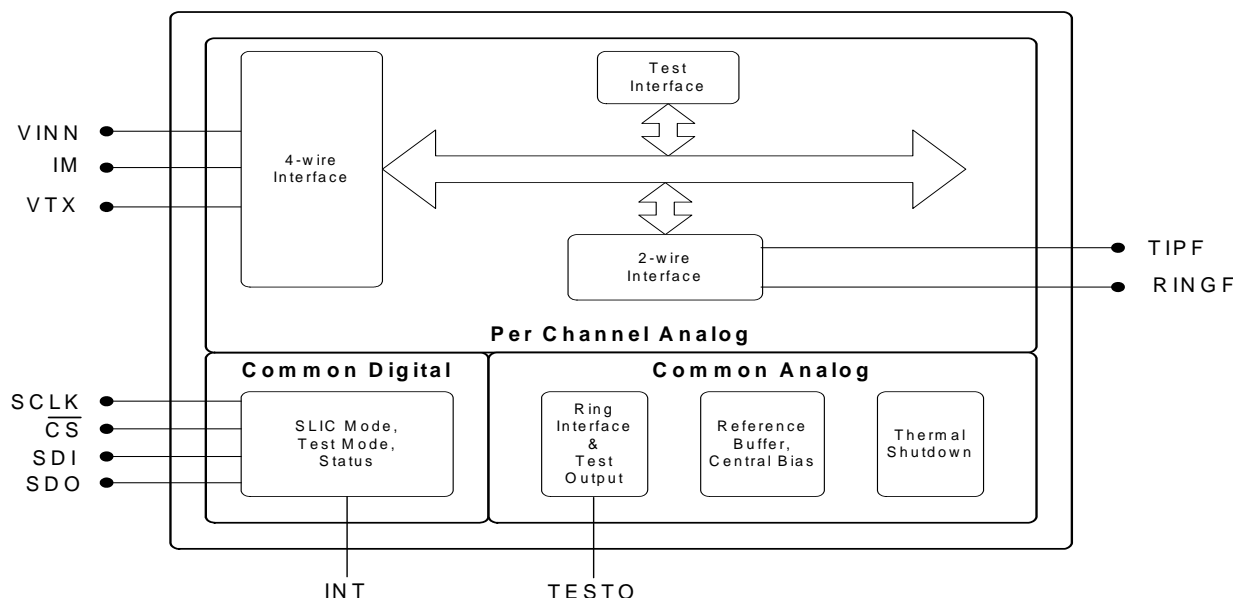
The Si32391 is a single channel analog interface SLIC solution that is ideal for customer premise equipment, such as voice-over-IP-capable embedded multimedia terminal adaptors (EMTAs) and GPON or EPON optical network terminal (ONT) gateways. The device's ringing and dc feed voltages are designed to support short and medium loop lengths with a battery supply voltage rating of up to -136 V. Additionally, it enables key line-test functions for remote diagnostics.

### Features

- Monolithic high-voltage subscriber line interface circuit
- Direct interface to Broadcom Devices: BCM337x, BCM338x, and BCM68xx
- Supports BORSCHT functions
- Advanced GR-909 line test and diagnostic support
- Optimized for short and medium loop applications
- Supports wideband (50 Hz–7 kHz) and narrow-band (200 Hz–3.4 kHz) audio codecs for enhanced audio quality as well as standard telephony audio compatibility
- Supports polarity reversal and ground start
- Built-in thermal overload protection
- Integrated test loads
- Pb-free and ROHS-compliant
- Programmable and trimmable dc open circuit voltage
- Programmable dc loop current
- Low-power standby operation
- Supports both balanced ringing and low-power ringing (LPR)

### Applications

- Customer premises equipment (CPE)
- Embedded Media Terminal Adapters (EMTA)
- Fiber-to-the-Home (FTTH) gateways including GPON ONTs and EPON ONUs



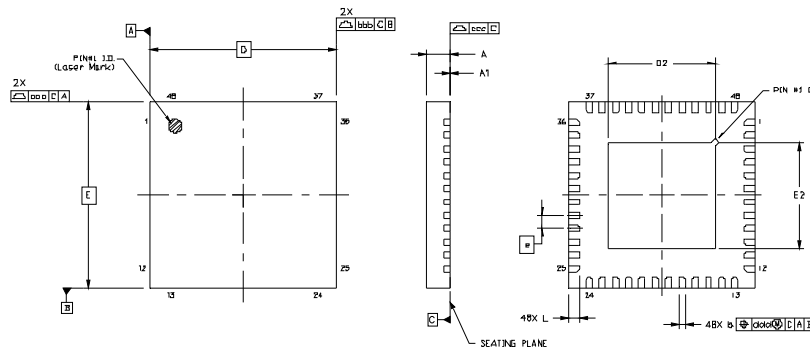
### Selected Electrical Specifications

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Positive Analog & I/O Supply Voltage	$V_{CC}$		3.15	3.3	3.45	V
High Voltage Battery	$V_{BAT}$		-136	-98	—	V
Battery Ground	$V_{BGND}$		—	0	—	V
Ambient Temperature	$T_A$	F-grade	0	—	70	°C
		G-grade	-40	—	85	°C
2-wire Return Loss		Zac set using external resistor values. Zac = 686 $\Omega$	26	40	—	dB
Idle Channel Noise	ICN	C-message Weighted	—	10	12	dBrnC
		Psophometric Weighted	—	-80	-78	dBmP
Power Supply Rejection Ratio	PSRR	$V_{CC}$ to $V_{OUT}$ , Forward Active Mode, 200 Hz to 3.4 kHz	50	—	—	dB
		$V_{BATn}$ to $V_{OUT}$ , Forward Active Mode, 200 Hz to 3.4 kHz	—	50	—	dB
		$V_{CC}$ to $V_{OUT}$ , Reverse Active Mode, 200 Hz to 3.4 kHz	50	—	—	dB
		$V_{BAT}$ to $V_{OUT}$ , Reverse Active Mode, 200 Hz to 3.4 kHz	—	50	—	dB
Longitudinal to Metallic Balance		200 Hz to 3.4 kHz	48	66	—	dB
Metallic to Longitudinal Balance		200 Hz to 3.4 kHz	40	60	—	dB

### Ordering Guide

Device	Package	Pb-Free and RoHS Compliant	Voltage Rating	Temp Range
Si32392-B-FM	QFN-48	Yes	-136 V	0 to 70 °C
Si32392-B-GM	QFN-48	Yes	-136 V	-40 to 85 °C

### Package Information



Dimension	Min	Nom	Max
A	0.80	0.85	0.90
A1	0.00	0.02	0.05
b	0.18	0.25	0.30
D	7.00 BSC		
D2	3.85	4.00	4.15
e	0.50 BSC		
E	7.00 BSC		
E2	3.90	4.00	4.10
L	0.30	0.40	0.50
aaa	—	—	0.15
bbb	—	—	0.15
ccc	—	—	0.08
ddd	—	—	0.10