THE DATASHEET OF

SI4634-A10-GMR

www.win-source.net 0086-755-83957316

Si463x-A10
Data Short

Single-Chip, AM/FM/HD/DAB/DAB+ Radio Receiver Family

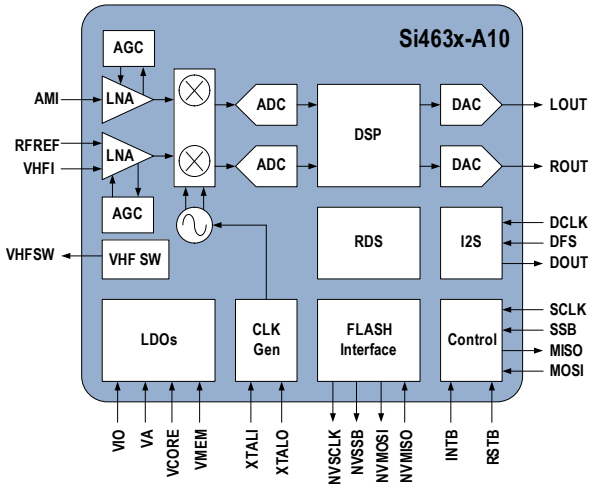
The Si463x single-chip digital receiver is a family of 100% CMOS digital radio broadcast receiver ICs from Silicon Labs. The Si463x family offers a complete and cost-effective digital radio solution integrating the RF tuner, baseband, and audio processing on a single die. The high level of integration provides significant customer benefits compared to traditional digital radio solutions, including a reduction in system implementation complexity, validation and testing, and improved reliability and manufacturability. The Si463x is compatible with the iBiquity Digital and NRSC-5 standards for In-Band-On-Channel (IBOC) digital radio broadcasting, integrating digital channel demodulation and decoding functions, along with audio decoding and IBOC analog-digital blend. The Si463x supports IBOC multicasting, as well as the full range of HD Radio data services, such as PSD, Artist Experience, iTunes® Tagging, Bookmark and real-time Traffic, with the appropriate external decoders.

The Si463x also offers VHF Band III (168-240 MHz) reception capability and is fully compliant with ETSI EN 300 401 and ETSI TS 102 563. The Si463x delivers DAB and DAB+ via an integrated source decoder that supports both MPEG Audio Layer 2 (DAB) and HE-AAC V2 (DAB+). The Si463x supports data services such as Dynamic Labels, Intellitext, Electronic Program Guide (EPG), Slideshow, and Journaline® with the appropriate external decoders.

For more information, visit the Si463x Digital Radio Receivers web page.

Features

- Worldwide FM band support (76-108 MHz)
- Worldwide AM band support (520-1710 kHz)
- LW band support (144-288 kHz)
- SW band support (2.3-30 MHz)
- Advanced RDS/RBDS decoder
- FM HD Radio™ support with on-chip IBOC blend
- DAB, DAB+ Band III support (168-240 MHz)
- Integrated OFDM channel demodulator
- Integrated de-interleaving SRAM
- I^2S digital audio out with ASRC
- Integrated 97 dB stereo audio DAC
- Concurrent I^2S /L-R stereo audio out
- Full range of signal quality metrics
- Fully-integrated VCO /PLL /synthesizer
- SPI and I2C host control interfaces
- QFN 48-pin, 7x7x0.85 mm



Applications

- Aftermarket car audio systems

Table 1.1. Selected Electrical Specifications

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Ambient Temperature	T_A		-40	25	85	°C
Analog Supply Voltage	V_A		1.71	1.8	2.0	V
Interface Supply Voltage	V_{IO}		1.62	1.8	3.6	V
Core Digital Supply Voltage	V_{CORE}		1.62	1.8	2.0	V
Memory Supply Voltage	V_{MEM}		1.62	1.8	2.0	V
Analog FM						
Input Frequency	F_{rf}		76	—	108	MHz
Seek/Tune Time			—	—	60	ms/ch
FM HD						
Input Frequency	F_{rf}		87.5	—	108	MHz
Seek/Tune Time			—	—	160	ms/ch
Analog AM						
Input Frequency	F_{rf}		520	—	1710	kHz
AM HD						
Input Frequency	F_{rf}		520	—	1710	kHz
DAB/DAB+						
Input Frequency	F_{rf}		168	—	240	MHz
Ensemble Acquisition Time		For a valid channel, after power-up RF level = -47 dBm	—	710	—	ms

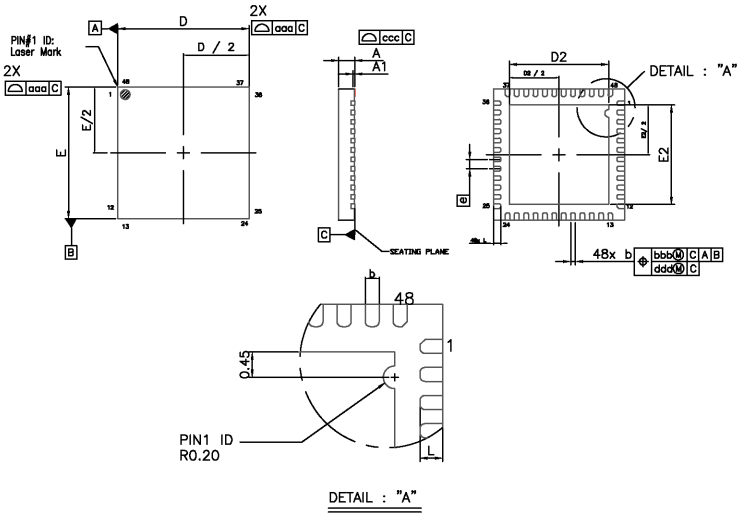


Figure 1.1. Si463x-A10-GM

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	5.20	5.30	5.40
e		0.50 BSC	
E		7.00 BSC	
E2	5.20	5.30	5.40
L	0.30	0.40	0.50
aaa		0.15	
bbb		0.10	
ccc		0.10	
ddd		0.05	

Note:

1. All dimensions are shown in millimeters (mm) unless otherwise noted.
2. Dimensioning and tolerancing per ASME Y14.5M-1994.
3. This drawing conforms to JEDEC Outline MO-220, Variation VKKD-4.
4. Recommended card reflow profile is per the JEDEC/IPC J-STD-020 specification for Small Body Components.

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