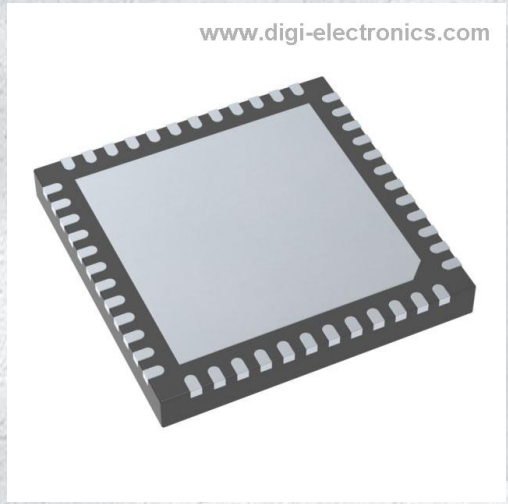
SI4629-A10-GMR Datasheet



DiGi Electronics Part Number	SI4629-A10-GMR-DG
Manufacturer	Skyworks Solutions Inc.
Manufacturer Product Number	SI4629-A10-GMR
Description	RF RX AM/FM 520KHZ-1.71MHZ 48QFN
Detailed Description	- RF Receiver AM, FM, RBDS/RDS 520kHz ~ 1.71MHz , 76MHz ~ 108MHz, 168MHz ~ 240MHz PCB, Surface Mount 48-QFN (7x7)

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Manufacturer Product Number:	Manufacturer:
SI4629-A10-GMR	Skyworks Solutions Inc.
Series:	Product Status:
-	Active
Frequency:	Sensitivity:
520kHz ~ 1.71MHz, 76MHz ~ 108MHz, 168MHz ~ 240MHz	-
Data Rate (Max):	Modulation or Protocol:
-	AM, FM, RBDS/RDS
Applications:	Current - Receiving:
General Purpose	-
Data Interface:	Memory Size:
I2C, SPI	-
Antenna Connector:	Features:
PCB, Surface Mount	-
Voltage - Supply:	Operating Temperature:
1.71V ~ 2V	-
Mounting Type:	Package / Case:
Surface Mount	48-VFQFN Exposed Pad
Supplier Device Package:	Base Product Number:
48-QFN (7x7)	SI4629

Environmental & Export classification

HTSUS:
0000.00.0000

Si4629-A10

High-Performance, Single-Chip AM/FM/HD/DAB/DAB+/RDS/ RDBS Data Receiver

Description

The Si4629 single-chip digital receiver is a 100% CMOS digital radio broadcast receiver IC from Skyworks. It provides significant advances in size, power consumption, and performance to enable HD Radio/DAB/DAB+ services reception in automotive infotainment systems and car radios.

The Si4629 data receiver offers a complete and cost-effective platform to support global analog and digital AM, FM, and VHF band III radio standards by integrating multiband RF tuner, demodulator, and channel decoder on a single die. The high level of integration and complete system production test simplifies design-in, increases system quality, and improves reliability and manufacturability.

The Si4629 supports worldwide analog AM and FM radio reception and incorporates a fully integrated decoder for the European Radio Data System (RDS) and the North American Radio Broadcast Data System (RDBS), including all required symbol decoding, block synchronization, error detection, and error correction functions.

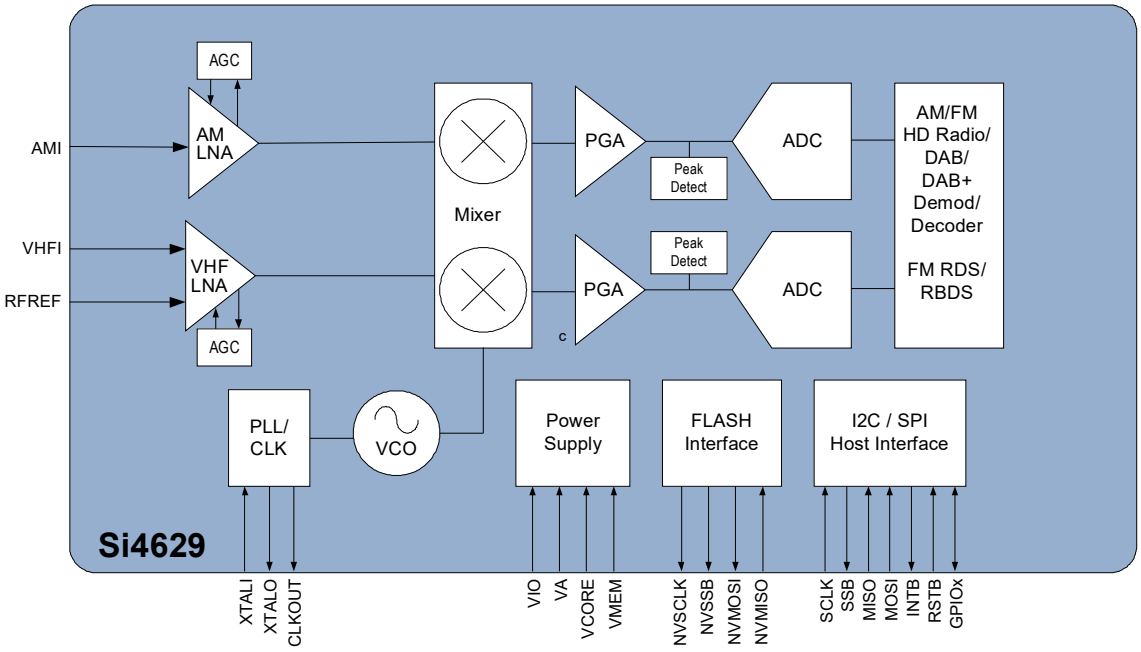
Leveraging Skyworks' proven and patented digital low intermediate frequency (Low-IF) receiver architecture, the Si4629 delivers superior RF performance and interference rejection. The solution offers auto-calibrated digital tuning, and proven AM/FM seek functionality based on multiple signal quality and band parameters. The Si4629 offers highly flexible and advanced audio FM stereo-mono blend. In addition, the Si4629 provides an integrated clock oscillator or accepts a reference clock and supports a selectable control interface (SPI or I^2C).

Features

- Worldwide FM band support (76–108 MHz)
- Worldwide AM band support (520–1710 kHz)
- LW band support (144–288 kHz)
- DAB/DAB+ Band III support (168–240 MHz)
- Advanced RDS/RDBS decoder
- AM/FM HD Radio™ support
- Integrated HD blend
- Supports WorldDMB Receiver Profiles I, II, III, and IV
- Integrated SRAM supporting time and frequency de-interleaving
- Advanced seek functionality
- Complete on-chip channel decode
- Full range of analog and digital signal quality metrics
- Fully-integrated VCO/PLL/synthesizer
- Fully-integrated advanced AGC and alignment
- SPI, I^2C control interfaces
- 7x7 mm 48-pin QFN package
- Pb-free/RoHS compliant
- AEC-Q100 qualified

Applications

- OEM automotive infotainment systems
- Aftermarket car radio systems
- OEM automotive PND docking systems



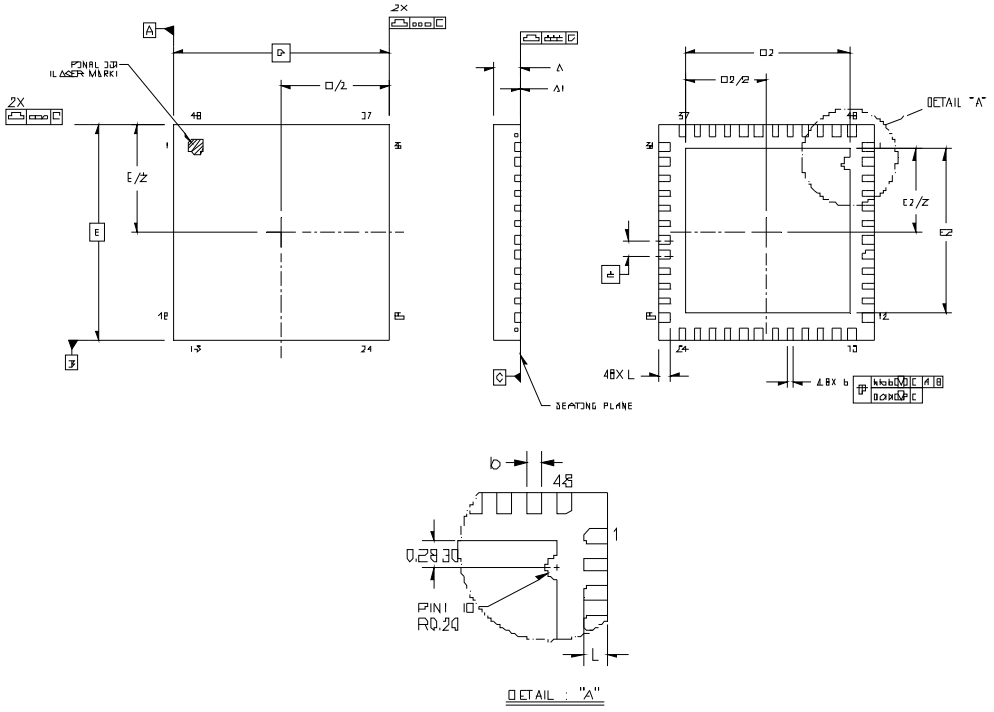
Si4629-A10

High-Performance, Single-Chip AM/FM/HD/DAB/DAB+/RDS/ RDBS Data Receiver

Table 1. Selected Electrical Specifications

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
AM Input Frequency	F_{rf}		520	—	1710	kHz
FM Input Frequency	F_{rf}		76	—	108	MHz
DAB Input Frequency			168	—	240	MHz
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

Si4629-A10



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	
ddd		0.05	
eee		0.08	

Notes:

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 the JEDEC Solid State 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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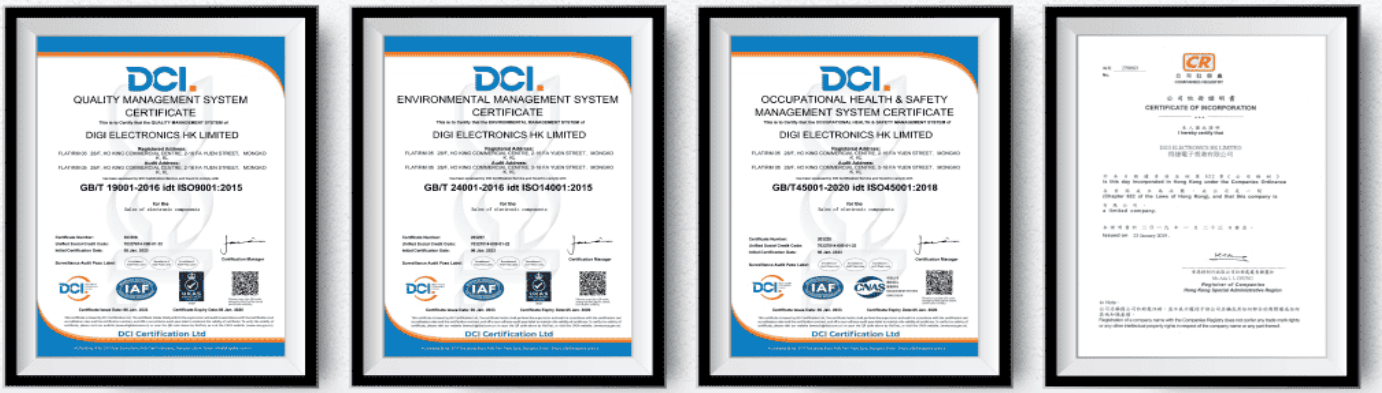

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